COMPTROLLER FILE No. 298740

COUNCIL CONDITIONAL USE PERMIT
APPLICATION of Childrens Hospital
for future use of an existing
surface helistop on U.W. Campus by
Children's Hospital Medical Center
at 2501 NE 45th Street. (#9106441)

NO SPONSOR REQUIRED

Filed January 3, 1992
Bruce Brooks, City Comptroller
By Margaret Carter
Deputy

ACTION OF THE COUNCIL

Referred JAN 21 1992	To Land Use
Referred	To
Referred	To
Reported SEP 28 1992	Disposition GRANTED
Re-referred	To
Reported	Disposition

Referable Position
Year Land Use
to which was referred this matter, C.F. 298740
would respectfully report that we
Do grant by a
Full Council

60

REPORT OF COMMITTEE

Honorable President:

Your Land Use Committee

to which was referred the within C.F 298740

would respectfully report that we have considered the same and respectfully recommend that

Do grant, by a vote of 2-0, on 9/23/92.

Full Council vote 7-1 (Regular Abstain)

Chairman

AFFIDAVIT OF SERVICE
BY MAILING

STATE OF WASHINGTON)
COUNTY OF KING)

Joan Marie Jones, BEING FIRST SWORN, UPON OATH DEPOSES & STATES:

THAT ON THE 1st DAY OF October 1992 AFFIANT DEPOSITED IN THE MAILS OF THE UNITED STATES AND THE MAIL MESSENGER SERVICE (used for City personnel only) A SEALED ENVELOPE CONTAINING THIS LETTER OF NOTIFICATION, A COPY OF WHICH IS ATTACHED, WITH POSTAGE PREPAID, ADDRESSED TO THE PERSONS LISTED ON THE MAILING LIST FOR THE APPEAL/APPLICATION/PETITION/REQUEST OF Council Conditional Use Application COMPTROLLER'S FILE # 297288.

Joan Marie Jones

SUBSCRIBED AND SWORN THIS 2nd DAY OF Oct., 1992.

Margaret Carter
NOTARY PUBLIC IN AND FOR THE STATE
OF WASHINGTON, RESIDING IN SEATTLE

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

AFFIDAVIT OF SERVICE
BY MAILING

STATE OF WASHINGTON)
COUNTY OF KING)

Joan Marie Joyner, BEING FIRST SWORN, UPON OATH DEPOSES & STATES:

THAT ON THE 1st DAY OF October 1992 AFFIANT DEPOSITED IN THE MAILS OF THE UNITED STATES AND THE MAIL MESSENGER SERVICE (used for City personnel only) A SEALED ENVELOPE CONTAINING THIS LETTER OF NOTIFICATION, A COPY OF WHICH IS ATTACHED, WITH POSTAGE PREPAID, ADDRESSED TO THE PERSONS LISTED ON THE MAILING LIST FOR THE APPEAL/APPLICATION/PETITION/REQUEST OF Council Conditional Use Permit, COMPTROLLER'S FILE # 298740.

Joan Marie Joyner

SUBSCRIBED AND SWORN THIS 2nd DAY OF Oct, 1992.

Margaret Carter
NOTARY PUBLIC IN AND FOR THE STATE
OF WASHINGTON, RESIDING IN SEATTLE

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Office of the Comptroller
City of Seattle

[redacted]
Rufino R. Moraleja, Comptroller and City Clerk

September 29, 1992

Mr. Rick Krochalis
Dept. of Construction & Land Use
710 Second Avenue, Suite 700
Dexter Horton Building
Seattle, WA 98104-1703

Dear Mr. Krochalis:

The City Council at its meeting on September 28, 1992, adopted the recommendation of its Land Use Committee on Comptroller's File No. 297288, entitled:

> Council Conditional Use Application of Children's Orthopedic Hospital and Medical Center to build a helistop at the hospital at 4800 San Point Way N.E.

The Committee recommendation is as follows:

> The Council Conditional Use application be granted.

Pursuant to Seattle Municipal Code Section 23.76.56C, this decision shall be final and conclusive unless within 15 calendar days of September 28, 1992, the date the decision is filed with the City Clerk, a party of record makes application to King County Superior Court for a writ of review, provided that application for a writ of review of a decision approving or disapproving a subdivision preliminary plat shall be made within thirty days of September 28, 1992, the date of filing of the decision with the City Clerk.

Sincerely,

Rufino R. Moraleja, CPA
City Comptroller

NST1/JMJ273.2

Enclosure

cc: Parties of Record
Hearing Examiner

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Office of the Comptroller
City of Seattle

Rufino R. Moraleja, Comptroller and City Clerk

September 29, 1992

Mr. Rick Krochalis
Dept. of Construction & Land Use
710 Second Avenue, Suite 700
Dexter Horton Building
Seattle, WA 98104-1703

Dear Mr. Krochalis:

The City Council at its meeting on September 28, 1992, adopted the recommendation of its Land Use Committee on Comptroller's File No. 298740, entitled:

> Council Conditional Use Permit Application of Children's Hospital for future use of an existing surface helistop on U. W. Campus by Children's Hospital Medical Center at 2501 N.E. 45th Street (#910644).

The Committee recommendation is as follows:

> The Council Conditional Use application be granted.

Pursuant to Seattle Municipal Code Section 23.76.56C, this decision shall be final and conclusive unless within 15 calendar days of September 28, 1992, the date the decision is filed with the City Clerk, a party of record makes application to King County Superior Court for a writ of review, provided that application for a writ of review of a decision approving or disapproving a subdivision preliminary plat shall be made within thirty days of September 28, 1992, the date of filing of the decision with the City Clerk.

Sincerely,

Rufino R. Moraleja, CPA
City Comptroller

NST1/JMJ273.3

Enclosure

cc: Parties of Record
Hearing Examiner

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FINDINGS, CONCLUSIONS AND DECISION
OF THE CITY COUNCIL OF THE CITY OF SEATTLE

Council Conditional Use Application of Children's Orthopedic Hospital and Medical Center to build a helistop at the hospital at 4800 Sand Point Way N.E.	)	C.F. #297288 Appl. #8405870 FINDINGS, CONCLUSIONS AND DECISION
Council Conditional Use Permit Application of Children's Hospital for future use of an existing surface helistop on U.W. Campus by Children's Hospital and Medical Center at 2501 N.E. 45th Street.	)	C.F. #298740 Appl. #9106441 FINDINGS, CONCLUSIONS AND DECISION

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Introduction

The applicant has requested Council conditional use permits to allow helistops accessory to Children's Hospital and Medical Center on the campus of Children's Hospital and Medical Center and on the University of Washington campus. On May 14, 1992, DCLU recommended that the proposal be approved, with conditions. On July 16, 1992, the Hearing Examiner issued a recommendation that the Council grant the proposal, subject to revised conditions proposed by DCLU and revisions recommended by the Hearing Examiner.

This matter came before the City Council Land Use Committee on September 18, 1992 and September 23, 1992. The Committee voted 2-0 on September 23, 1992 to recommend to the full Council that the applicant's request for Council conditional use permits be granted, subject to the conditions set forth in the Hearing Examiner's

recommendation.

Findings and Conclusions

The Council hereby adopts the Hearing Examiner's Findings of Fact and Conclusions as stated in the Findings and Recommendation of the Hearing Examiner dated July 16, 1992, as its own Findings and Conclusions.

Decision

The applicant's request for Council conditional use permits is granted, subject to the revised conditions proposed by DCLU and the revisions recommended by the Hearing Examiner, as stated in the Findings and Recommendation of the Hearing Examiner dated July 16, 1992.

Dated this 28th day of September, 1992.

Geo. G. Benson
City Council President

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FINDINGS, CONCLUSIONS AND DECISION
OF THE CITY COUNCIL OF THE CITY OF SEATTLE

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297288 and 298740

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FINDINGS AND RECOMMENDATION

OF THE HEARING EXAMINER

FOR THE CITY OF SEATTLE

FILED
CITY OF SEATTLE
1992 JUL 16 AM 11:12

In the Matter of the Petition of

CHILDREN'S HOSPITAL and MEDICAL CENTER

Application No. 8405870 and 9106441
C.F. NO: 297288 and 298700

for Council Conditional Use permits

Introduction

The applicant has requested council conditional use permits to allow a helistop accessory on the campus of Children's Hospital and Medical Center (CHMC) and at the Intramural Activities Field on the campus of the University of Washington.

For purposes of this recommendation, all section numbers refer to the Seattle Municipal Code (SMC), as amended, unless otherwise indicated.

The Director's report, submitted by the Department of Construction and Land Use (DCLU), recommended that the conditional use permits be granted with certain conditions.

The hearing on this matter was held on June 23, and June 24, 1992. The record was left open for additional public comment, for the applicant to submit proposed findings of fact and conclusions and for the Deputy Hearing Examiner (Examiner) to conduct a site inspection. The Examiner visited the CHMC campus, the surrounding neighborhood, the IMA field, and toured AIRLIFT NW II and the fixed-wing aircraft. The record closed on July 1, 1992.

Parties present at the proceeding were: John Keegan and Craig Gannett, attorneys at law for the applicant CHMC; and Faith Lumsden, Land Use Specialist, for the Director.

After due consideration of the information presented by the applicant and provided by the DCLU report, and all evidence submitted during the hearing process, and as a result of the personal inspection of the subject property and the surrounding area by the Examiner, the following shall constitute the findings of fact, conclusions and recommendation of the Hearing Examiner.

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Findings of Fact

1. The applicant, CHMC submitted an initial application or November 13, 1984, for a helistop on the CHMC campus. The proposed location for the helistop would be north of the emergency room on a site known as the Kitchen Garden. DCLU issued a Determination of Significance on January 13, 1986. A draft Environmental Impact Statement was published on September 2, 1986. The Final Environmental Impact Statement (EIS) was published on April 25, 1991. No appeal was filed to the Final EIS.

2. During the course of public hearings on the draft EIS and during the written comment period, alternative locations for the helistop were recommended. One of the alternative locations involved landings at the University of Washington Intramural Athletic (IMA) Field also known as Graves Field. As a result of the public comments a new proposal emerged which became known as the "Preferred Alternative". Under the preferred alternative, only the most critical patients would land at the Kitchen Garden site on the CHMC campus. The less critical patients would land at the IMA location and be transported by ground to CHMC. On December 5, 1991, CHMC submitted a new application to include the IMA field site.

3. The CHMC campus is a 25-acre site located in the Laurelhurst neighborhood in north Seattle. The CHMC campus is located approximately one-mile east of the University of Washington. The campus is situated on a west facing hillside. The campus consists of several interconnected buildings, ranging from one to five stories above grade, that generally follow the site topography.

4. The IMA site is located south of the golf course driving range near the northwest corner of the sports field. The site is relatively flat. The site is northeast of the north parking lot for Hec Edmundson Pavilion and Husky Stadium.

5. The neighborhood surrounding the CHMC campus is primarily zoned single-family and developed with single family homes. To the east of the CHMC campus is the Laurelhurst Elementary School, the Laurelhurst Playfield, the Battell Memorial Institute and Villa Academy. The area to the north and west of the campus is developed with multi-family residences. Across Sand Point Way is a large Planned Unit Development. There are commercial uses along Sand Point Way.

The Proposal

6. CHMC proposes to construct a helistop which would be a 40 ft. X 40 ft. concrete pad surrounded by 48-foot radius of unobstructed grass area. The center of the pad would be marked with a white cross with arms 30 ft. long by 10 ft. wide. A 6 ft. by 10 ft. red "H" would be in the center to designate the helicopter landing site from the air. A 30-inch tall fence with a locked gate would surround the circular area.

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Ground light, which would "glow" rather than emanate direct light, would surround the site and would be turned on for nighttime landings. Other safety light features will be included for safe night landings on the target. (EIS p. 48) The proposed site would be 142 feet away from the entrance of the emergency room. Several trees on the site and along Penny Lane will be removed.

7. The IMA Field referenced in the preferred alternative is the existing site for the University of Washington's Medical Center helistop. The IMA field helipad would have a 76 ft. diameter circular pad centered in a 150 ft. asphalt apron. The lighting would be similar to the proposed lighting for the CHMC campus helipad.

8. There would be significantly more landings at the IMA Field than at the CHMC campus, if the proposal is adopted as recommended by DCLU, because of the limitation placed on landings at the CHMC campus. For example, if it was necessary to transport medical staff to accompany the patient to the emergency room, the staff would be dispatched from the IMA Field. The IMA Filed is also the site of the University Hospital's medical flights.

9. SMC 23.84.005 establishes the criteria for a helistop accessory to a major institution.

> 1. A helistop may be permitted as a Council conditional use if the Council finds that:
>
> a. The helistop is needed to save lives:
>
> b. The helistop is located so as to minimize impacts upon surrounding residential property;
>
> c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.
>
> 2. The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas.

Medical Necessity for the Helistop

10. CHMC has indicated that the primary reasons for helicopter transport are to reduce the time before appropriate advanced treatment can begin and to decrease patient manipulation.

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11. CHMC is one of three pediatric tertiary[1] care centers in the state. The other two others are Mary Bridge Children's Hospital in Tacoma and Sacred Heart Medical Center in Spokane. CHMC is the largest, in terms of staffing numbers and size, and is the best equipped to offer full service tertiary care for children.[2] (EIS p. 11)

12. CHMC is a part of a regional tertiary care system for a four-state region including Washington, Alaska, Idaho and Montana. This informal "regional medical referral system" is a part of a health care referral system. The system allows for specialized health care to be delivered to patients throughout the region without duplication of services or competition for patients.

13. In addition to the regional medical referral system, Washington hospitals have organized as Washington Emergency Medical Service (EMS), which ensures an appropriate hospital referral during emergency situations. The EMS is composed of a helicopter service, trauma, burn and pediatric care center.

14. Historically, approximately 90% of the children who are transported to CHMC by helicopter enter one of the intensive care units at the hospital. Approximately one-fourth of the children are so critically ill that they die. (Exhibit 10) Volume III of the Final EIS contains a complete listing of the key characteristics of the critically ill patients brought to CHMC by helicopter from August 1985 through March 1989, and Exhibit 10 extends the listing through March 1992. The diagnosis of the patients include: respiratory failure, drowning, asphyxia, seizures, ingestion of toxic substances, cardiac arrest and viral encephalitis.

15. In some other emergency situations, helicopter transport is necessary because ground transport is infeasible such as where the distance to the emergency center is too long or where transportation such as the ferry is not practical.

16. Airlift Northwest helicopter services is the primary air transport service for patients destined for Children's Hospital. Airlift NW, started in 1982, is operated as a non-profit service by a hospital consortium composed of CHMC, Harborview Medical Center, and Providence Medical.

17. Helicopter or air transport comprise a very small per percentage of emergency room visits at CHMC. In 1991, only 76 patients (0.3%) arrived by helicopter

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[1]Tertiary Care is defined as those advanced services necessary to deal with illness characterized by complex path-physiologic processes. Tertiary care requires continous management from presentation of an illness to its resolution. Complex illness such as severe congential anomalies, multiple organ system trauma, prematurity in newborns, poisonings and neuropsychiatic disorders. (EIS p. 10)

[2] "Children" is used to refer to all patients served by CHMC from neonates, younger than one-month, to persons twenty-one years of age.

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compared to 23,080 emergency room visits in the year. Emergency landings at the campus is also a small percentage of the total number of air transport patients.

The helistop is located so as to minimize impacts upon surrounding residential property;

18. The two primary impacts on the surrounding residential community are anticipated to be safety and noise and vibration from the helicopters. A very detailed analysis of these impacts is discussed in the Final EIS, however, for a clarification of the issues raised by the scope of these impacts as well as to address the community's concerns, a summary of the EIS follows:

Safety

19. In addressing the issue of safety to the residents in the vicinity surrounding the CHMC campus helistop, the EIS looked generally at the history of medical flights, the accident history of Airlift NW, the primary helicopter service used by EMS and a review of the information available for the accident history of military helicopter flights. The EIS also addressed the probability of accidents on Airlift NW helicopter flights to the CHMC campus.

20. The final EIS analysis of the probability of an accident at the CHMC campus is based on what is considered the worst case scenario of 20 flights per month including all flight segments. (The average of 20 flights includes take-off from base, landing to pick up patient, take off with patient landing at CHMC and take-off from CHMC). Under this analysis, an accident would be statistically expected to occur less than once every 59.1 years. Under the preferred alternative, landings at the CHMC campus would be restricted to landing with the patient and take-off, with a corresponding reduction in the probability of an accident to once every 177 years.

21. Airlift NW has not had a helicopter accident in eight years. During this period Airlift NW has flown approximately 9,000 flights. There was a non-injury "incident " at Harborview in 1989. (An "incident" is an event causing minor damage for minor injury.)

22. National Transportation Safety Association (NTSA) conducted a study on the major causes of helicopter accidents. Listed as contributors to helicopter accidents are: human error (68%); adverse weather (30%); mechanical failure (25%). Airlift NW engages in preventative measures to ensure that Airlift NW maintains it safety record. Airlift NW has a safety committee to ensure that safe operations are integrated into the Emergency Service (EMS).

23. Airlift NW maintains high standards for its pilots by requiring them to meet higher safety standards than are required by the Federal Aviation Administration (FAA). The pilot training program includes "factory training" by the Augusta

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manufacturer, and annual training time. Airlift has sought to minimize weather-related accidents by keeping its pilots "instrument current" and "instrument rated" which allows them to fly without ground visibility. Another policy which allows for safer pilot decisions is to give pilots the discretion to decide whether they want to fly in adverse weather conditions.

24. The designated flight path raises issues of both safety and noise. To the greatest extent possible the flight path follows bodies of water and arterials. The current flight paths are designed to reduce flights over residential neighborhoods, by flying over SR-520, Montlake Blvd and I-5 when coming from the south. The flight path to the IMA was altered when Airlift NW pilots expressed concerns regarding large numbers of birds on the athletic field during certain times of the year. According to the EIS, the possibility of a bird strike has been reduced but not eliminated by the change in flight paths.

25. The EIS also noted several locations in the vicinity of CHMC that could be used for emergency landings. In additions to parking surfaces and streets, the University campus, and the Sand Point Naval Station could be used.

Noise and Vibration

26. A full analysis of noise and vibration appears in the Final EIS at pages 105 through 121. A variety of different terms are used to measure noise and the effect of noise on people. Sound levels are measured in decibels (dB). Environmental noise is measured in A-weighted decibel levels (dBA) To evaluate the effect of noise on people, a day/night average sound level (Ldn) with a penalty for noise occurring between 10:00 p.m. and 7:00 p.m. "Lmax" is used to measure the maximum sound level and the probability of sound interference from single noise events.

27. Sound measurements for noise impacts from the proposal were analyzed from five residential sites in the vicinity of the CHMC campus. The measurements in the EIS are based on the original proposal which would have increased the number of flights landing and taking of from the campus. The study showed the original proposal would increase the Ldn sound levels by between zero to three. A "worst one day Ldn" assuming two daytime and two nighttime flights (a total of eight trips including crew pickup) would show an increase of 0 to 5 dBA.

28. Exhibit 20 (Table 16, p.106 of the Final EIS) is a chart placing the sound levels of the Augusta helicopter in the context of other noise sources and conditions.

Sound level (dBA)	Source or Condition
140	Hearing damage risk for short exposure
130	Threshold of pain
120	Race car at 50 feet

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110	Orchestra fortissimo; rock and roll concert
100	Ambulance siren at 50 feet
90	Occupational noise limit for 8 hour/day exposure
85	Accelerating truck or bus 50 ft; lawn mower
84	**Augusta helicopter, measured at receptor location closest to CHMC**
80	Ambulance siren at 500 ft., average downtown traffic
75	Inside auto, accelerating
70	Inside auto, steady speed
65	Typical auto measured at residential setback;urban residential average noise
60	Normal conversation
55	Suburban residential average noise
50	General office
45	Typical residential
40	Quit indoor
20	Whisper
0	Threshold of hearing

29. SMC 25.08.530 of the Seattle Noise Control Ordinance, lists the sounds which are exempt from the Noise Control Ordinance. Relevant to this proposal, exempt sounds are:

> 1. Sounds originating from the aircraft in flight, and sounds which originate at airports and are directly related to flight operations;
>
> 4. Sounds created by emergency equipment and emergency work necessary in the interests of law enforcement or of the health, safety or welfare of the community;

30. There are no local, state or federal noise regulations which set a standard for acceptable noise levels for helistops. The review of the standards outlined in the Final EIS are summarized in the footnote below.[3]

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3. United States Environmental Protection Agency (USSEPA) Noise Guidelines,Ldn, affecting residential, hospital and educational activity under USSEPA Guidelines, indicates that significant impacts are considered to exist if exterior Ldn is 65 dBA or above. Increases above the 65 Ldn of 0 to 5 dBA is a slight impact, five to ten dBA is a significant impact , and over 10 dBA a very serious impact.

United States Housing and Urban Development (USHUD) Noise Standards, for USHUD- assisted projects (the proposal is not a USHUD-assisted project and those the information is for reference only) an Ldn of 65 dBA or less is "acceptable". Ldn exceeding 65dBA, but less than 75 dBA, is normally acceptable, Ldn exceeding 75dBA is "unacceptable".

FAA Land Use Compatibility Critreria, residential or hospital land use is not compatible where yearly Ldn is 65 dBA or above.

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31. The noise study reported noise levels in the area surrounding CHMC, without any helicopters was between 52 and 68 Ldn. Under the worst case of 40 flights the sound levels would increase to between 54 and 68 Ldn.

32. Some helicopters, primarily two-bladed helicopters, produce an "impulse" noise known as "blade slap". The noise caused by blade slap distinguishes helicopter noise from other types of loud noises. The Augusta 109 used by Airlift NW, has four-bladed rotors which reduces the blade slap noise. Some of the military helicopters such as the Huey have two-bladed rotors which make more noise and cause more vibration. Restricting the use of Huey and other two-bladed rotor helicopters from landing on the CHMC campus would greatly reduce the noise and vibration impacts on the residences in the immediate vicinity.

33. Residents in the immediate vicinity of the CHMC, would be impacted by noise from helicopters landing on the campus. The noise studies in the EIS shows that there would be sleep interference (people awakened by nighttime flights) and that young children and older people are more affected by the noise. The extent to which the residents will be bothered depends on location, whether the windows are open or closed and the physical characteristics of the sleeper. There are measures to mitigate, but not to eliminate the noise impacts. The mitigating measures are included as recommended conditions of approval of the project.

34. Noise-induced vibration in structures depends on a variety of factors including construction type and the window size and type. Detectable vibration of portions of the building can occur if exterior sound pressure levels are above 65 to 80 dB. In the Final EIS, it was concluded that the vibration of the structures in the vicinity near CHMC was not expected to cause structural damage. This conclusions was based on studies that showed that the Concorde supersonic jet transport, at 104 dBA produced insignificant structural damage. The helicopters used by Airlift NW would produce significantly lower sound levels than the Concorde.

Use restricted to occurrences involving life-threatening emergencies

35. CHMC began helicopter landings on the campus in 1984. DCLU issued a notice of violation in response to complaints about the operation of the helistop but allowed CHMC to continue flight operation pending a decision on this application.

36. The decision to use helicopter is made either by the physician at the referring hospital after consultation with the receiving hospital or by the paramedics, after consultation with a physician. Airlift Northwest determines which children are transported by helicopter directly to CHMC campus according to established standards. If any one of the following conditions occur at the initiation of the helicopter or occur during the course of the flight, landing at CHMC is authorized. The conditions involve:

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I. Unstable Airway
II. Inability to Ventilate/Oxygenate
III. Inability to Maintain Adequate Cardiac Output
IV. Inability to Maintain Adequate Cerebral Blood Pressure Flow
V. The Persistence of Unstable Vital Sign Despite Heroic Attempts to Control Them

37. In order to ensure compliance with the standards, the attending crew completes a medical justification form which is reviewed by CHMC and Airlift NW. During a review of flight landing at the CHMC campus and a sampling of a few flights to Harborview, only one landing at CHMC and/or Harborview was found to be questionable.

38. There is a one-mile distance and approximate 10 minutes to transport a patient from the IMA Field to the CHMC campus. In many cases, timing is of such a critical factor, that the extra 10 minutes could determine whether the patient will live.

39. In addition to the added time of transporting a patient from the IMA Field to the emergency room at CHMC, many patients are unable to sustain the manipulation, or movement that is associated with the transfer from the helicopter to the ambulance and to the emergency room. Some of the factors involved in the manipulation which could jeopardize the patients' life are, changes in temperature, loss of intravenous or other tubal connections, the dislocation of monitors, and/or unnecessary movement.

40. The projected number of CHMC campus helicopter landings for 1991 to 1995 is between four or five. The Public Health Department estimated six patients per month would be transported to the CHMC campus. The projected number of IMA helistop for the same period is between 12 and 13.

Alternative Sites

41. Several alternative locations for a helistop, on and off the CHMC campus, were reviewed and rejected for a variety of reasons. A more detailed explanation is outlined in the Final EIS pages 47 through 49. The on-campus locations which were considered were landing the helicopters on the roof of the parking garage, which was not acceptable due to the time and manipulation needed to then transfer the patient to the emergency room. Landing on the roof of the medical center building was rejected because it would necessitate major structural changes to support the weight of the helicopter and extend the elevator to the roof.

42. Three other campus locations, outside of the east entrance of the campus, outside of the south entrance and in the parking lot were also considered unacceptable because all would require ground transport by ambulance after the patient landed in one of the landing sites. There was also the added factor that landings at the east entrance would place the helicopter closer to the residences to the east.

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43. Several off-campus locations were suggested but only three were selected for a detailed analysis in the EIS. The three locations included the IMA Field location on the University campus, which became a part of the Preferred Alternative. Another location was the roof top of the University of Washington Medical Center, which is not under consideration by the University. The third alternative location, known as the "No Action Alternative" would provide for landings at Boeing Field or Harborview and then ground transport to CHMC. The third alternative is considered to be unacceptable because of the length of time involved in ground transport to CHMC.

44. The Preferred Alternative, requiring the most critically ill to land at CHMC and those who could be stabilized to land at the IMA Field and then ground transport to CHMC, emerged as the alternative best designed to meet the needs of reducing the time to access to specialized treatment, minimizing manipulation of the most critically ill. The preferred alternative also reduces the associated noise impacts of ground transport.

45. There are no current plans by other local area hospitals to apply for helistop permits. Consequently, there are no other alternative sites under review. In addition, concern about a proliferation of helistop request if the application under review in this matter is approved, is not supported by the record.

DCLU Analysis and Recommendation

46. DCLU recommended conditional approval for an emergency helistop at the Kitchen Garden site on the CHMC campus and a second full service helistop at the IMA Field at the University of Washington. Conditions were recommended to mitigate impacts to the public safety and welfare. DCLU concluded that the anticipated adverse noise impacts could not be mitigated, but the benefits from the preferred alternative outweighed the adverse impacts. The recommended noise mitigation are intended to alleviate to the greatest extent possible the noise and safety impacts. DCLU made minor revisions to the conditions as they appear in the analysis. The text with the line through the words or printed in "bold" type reflect the revisions from the original text. The original conditions and the revisions are included below:

47. The DCLU recommended conditions are:

1. Only the most critical and life-threatening medical emergencies shall be allowed to land at CHMC. All other patients shall land at the Intramural Activities field site. The initial decision whether to land at the Kitchen Garden site or the IMA field is to be made by the referring physician and/or attending medical team. For patients whose condition deteriorates in flight, the medical team on board the helicopter may decide to land at CHMC. The following conditions indicate a landing at CHMC is appropriate:

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a. unstable airway;
b. inability to ventilate/oxygenate;
c. inability to maintain adequate cardiac output;
d. inability to maintain adequate cerebral bloodflow; or
e. the persistence of unstable vital signs despite heroic attempts to control them.

2. Military Assistance to Safety and Traffic (MAST)~~, Coast Guard, and Navy~~ **HUEY** helicopters shall not be permitted to land at CHMC, but shall land at the IMA field or at Harborview, in order to reduce noise impacts and reduce the potential for helicopter accidents in the CHMC area. **Other helicopters, military or civilian, shall be permitted to land at CHMC only if they demonstrate a noise profile equal to or less than the Agusta 109 and meet FAA size guidelines for the CHMC helipad.**

3. A Medical Review Committee shall be established to review compliance with Condition 1 above, allowing only the most critically ill patients to land at CHMC. The Committee shall consist of the following five members:

1) The Director of the Seattle-King County Department of Public Health, or the Director's appointee, who will serve as Committee chair;

2) A representative of CHMC selected by the Chief Executive Officer;

3) A physician representative of the Washington State Medical Association (WSMA), selected by the President of the Association. The representative must be a qualified neonatology, pediatric intensivist, or pediatric emergency physician;

4) A physician representative of the Washington State Society of Pediatrics (WSSP), selected by the President of the Society. The representative must be a board certified pediatrician.

5) A citizen, residing in one of the neighborhoods in the area of CHMC, to be nominated by the Department of Neighborhoods and confirmed by the City Council.

Committee members will be appointed for terms not to exceed three years, with replacements to be made by the original appointing authority. The role of the Committee is advisory only. The Committee shall meet at least twice per year to review and evaluate helicopter transports to CHMC. The Committee shall submit a report after each

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review meeting to DCLU, the Chief Executive Officer of CHMC, the Airlift Northwest Executive Committee and Medical Director, and the Citizens' Advisory Committee for CHMC Master Plan. Committee members will receive no compensation or other remuneration for their service on the Committee. The Committee shall adopt rules and procedures as necessary to ensure compliance with laws and administrative rules governing confidentiality of patient medical records, while also providing for public input and review of the Committee's work.

CHMC shall provide administrative and staff support needed by the Committee. The necessity for, and performance of, the Committee shall be evaluated by DCLU after two years and a recommendation shall be made to the City Council regarding whether to continue, reorganize, or discontinue the Committee's work.

4. CHMC shall continue to report on a quarterly basis to the community regarding the number and nature of transports to the campus. The report shall also include the number of helicopter landings at the IMA/Graves Field site for the given quarter.

5. Helicopters shall not be allowed to land at CHMC to pick up medical staff prior to patient transport.

6. DCLU shall review the quarterly reports of CHMC and the reports of the Medical Review Committee. If it appears that inappropriate or non-medically necessary landings have occurred, DCLU shall work with CHMC, the Public Health Director, the Medical Review Committee and ALNW to revise guidelines or procedures to ensure compliance with the limited landings requirement stated in condition one (1). Failure to demonstrate clear improvement in implementation of the limited landings criteria may result in suspension of the permit for landings and shall be subject to enforcement action pursuant to Chapter 23.90 of the Land Use Code.

7. ~~Only helicopters with a four bladed rotor shall be permitted to land at the CHMC campus helistop~~. Should Airlift Northwest or other aeromedical vendor seek to establish regular flights to CHMC in helicopters other than the Agusta 109 studied in the EIS, a showing must be made to DCLU proving the noise impacts of the alternative equipment are no greater than for the Agusta 109. **Technological features (twin engines, navigation equipment,etc) must equal or exceed the Agusta 109.** DCLU must give approval of the new equipment prior to its regular use for flights to CHMC.

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8. The flight paths for approach and departure to the CHMC and IMA/Graves Field helistops shall be strictly maintained as described in the Final EIS and shall to the greatest extent possible avoid residential areas. Airlift Northwest and any other regular carrier shall establish a training program to introduce all pilots to the approved flight paths. ALNW or other regular carrier shall confirm in writing to DCLU its commitment to the training program and to ensuring the approved flight paths are followed.

9. Prior to beginning regular use of the Kitchen Garden helistop, all ALNW pilots shall make at least one test landing and take-off at the site. CHMC and ALNW shall schedule the training/test flights for a weekday between the hours of noon and 3:00 p.m. Advance notice of at least ten days shall be given to the surrounding communities of the test/training time, date, and expected number of flights. The number of flights shall be held to the minimum necessary to provide adequate training.

10. New pilots shall make at least one landing at CHMC under supervision of a pilot experienced in landing at CHMC prior to unsupervised patient transport landings. Non-patient transport training flights, if desired, may be scheduled no more than twice per year without approval from DCLU. Notice shall be provided to surrounding communities as stated in Condition ~~10~~ 9.

48. CHMC does not oppose any of the conditions recommended by DCLU. In response to concerns raised by neighborhood, CHMC recommended that Condition 3 and 4 be revised to exclude appointment of salaried physicians from Children's as members of the Medical Review team.

Public Comment

49. The proposal has generated a significant quantity of public comments, during the eight years the matter has been pending. DCLU estimated hundreds of letters, and telephone calls were received by DCLU during the review period. There were well organized campaigns by parties on both sides of the issue, resulting in substantial public awareness and commentary on the issues. In addition to comments by the public, Volume II of the Final EIS contains responses from City and State agencies who were given the opportunity to review the EIS. They are generally in agreement that the proposal would not have any significant adverse impacts. Concerns were raised by many community group representatives as to noise, safety, vibration, medical necessity and whether the proposal was consistent with the City's land use policies.

Favorable

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50. The number of comments in favor of the project vastly exceeded the number opposed to the project. Health care professionals all across the state wrote in support of the helistop and offered statements as to the vital need for the service in providing prompt specialized tertiary care to children. Several parents whose children were brought to CHMC campus by helicopter testified at the hearing in support for the helistop. The numbers of commentators who indicated that they resided in the Laurelhurst neighborhood were also overwhelmingly in favor of the campus helistop and expressed their belief that the benefits outweighed the inconvenience of the noise.

Opposition

51. A sizeable segment of the organized public opposition to the CHMC campus helistop location was represented by North East Families for Residential Neighborhoods (NEFRN). The members of NEFRN are primarily families living in close proximity to CHMC, and as such, are most susceptible to impacts from the helistop. NEFRN's spokesperson raised several concerns regarding the helistop at the CHMC campus. First, NEFRN feels it is important to address this matter as a Land Use and not an issue of medical care. NEFRN feels strongly that the services offered at CHMC can be offered at other locations, thus it is not an issue of medical care, but an institutional decision that CHMC made to offer the care at that particular location. NEFRN's primary concerns are noise, safety and diminished property values.

52. NEFRN has offered some counter proposals to the conditions recommended by DCLU. NEFRN's proposals are outlined below because its proposals were representative of the concerns and recommendations of many of the resident commentators who opposed the CHMC helistop location. Among the proposals offered by NEFRN, which differed substantially from the DCLU conditions are:

1. That the helistop at CHMC receive conditional approval for two years and then be reviewed again as a part of the CHMC Master Planning process.

2. Approval of the helistop should be limited to the proposed site only, except during construction. Location at any other site would require additional environmental review.

3. Landings at the CHMC campus should be limited to 9 landings per month and shall not exceed 18 landings in any given month

4. Only Augusta 109 helicopters with a four-bladed rotor shall be permitted to land at the CHMC campus. If Airlift NW seeks to use an alternative a new noise analysis shall be conducted and an opportunity for additional public comment.

5. The Medical Review Committee shall consist of five members, including two representatives of the Laurelhurst Community Club (LCC). Committee members shall be compensated at the rate of $100 for each landing review.

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6. CHMC shall report quarterly to the Committee and the community on the number and nature of the helicopter landings at the IMA Field.

7. The flight paths for approach and departure from CHMC and the IMA Field shall be strictly followed. All flights plans are designed to avoid flying over residential areas.

8. Prior to beginning regular use of the CHMC campus helistop site, all Airlift NW pilots shall make at least one test landing and take-off at the site. Ten days advance notice shall be given to the community.

53. NEFRN's recommended conditions 4, 6, 7, and 8 are adequately addressed in the DCLU's recommended conditions. No persuasive evidence was presented to support NEFRN's suggestion that the review process for the proposed helistops should begin anew when the CHMC Master Plan is reviewed.

54. NEFRN has not shown how its proposal to place a limit of 9 landings at the CHMC campus helistop would be a reasonable limitation if the proposal met the requirement for a Council conditional use permit, i.e., that the helistop is medically necessary and is only used for life-threatening situations.

55. Several members of the community suggested that the size of the CHMC campus helistop should be reduced from the proposed 40 ft. by 40 ft. size to 20 ft. by 20 ft. Reducing the size of the helistop would have aesthetic benefits, as there would be a smaller slab of concrete and it would also serve as a limitation on the size of helicopters that could land on the site, since the larger noisier Huey or other military helicopter could not land on the smaller helipad. The restriction against Huey helicopter landing on the site is recommended as a condition for approval of the site. The neighbors have not shown that the size of the helipad will have any adverse impacts. The size of the helipad, with the proposed limitation on Huey landings will not decrease the anticipated impacts from the proposal.

Conclusions

1. On a Council Land Use decision, the Hearing Examiner shall conduct a public hearing which shall constitute a hearing by the Council, and shall make recommendations to the City Council. (SMC 23.76.052)

2. The first and third criteria for Council conditional use approval for a helistop, i.e., that it is needed to save lives and use restricted to life-threatening occurrences, have been satisfied. Both the CHMC campus helistop and the IMA Field helistop are necessary components of medical emergency response system for critically ill children. A review of medical condition of children who have been transported indicates that the

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children were inflicted with serious life threatening illness and that the use of ground transport could have resulted in a loss of life. The statistical data that 25% of the children transported by helicopter die despite the extraordinary efforts to save them is evidence of the seriousness of the medical condition.

3. The standards established by Airlift NW for air transport and for landing at the CHMC campus are designed to ensure that only those children with life threatening illness are transported. It is also important to note that there is no evidence of abuse of this service under the self-monitoring system and that the likelihood of future abuse is diminished by the monitoring requirement of the Medical Review team.

4. The second criteria for approval requires locating the helistop so as to minimize impacts on the surrounding residential community. It is important to note at this point, that the concerns of noise and safety impacts raised by the residents in the community are significant and important considerations. However, when compared to the substantial evidence of the medical necessity of air transport for children in life-threatening emergencies, the benefits of the availability of the service outweigh the occasional impacts (the highest anticipated number of flights was six per month) to the surrounding community. This conclusion is reached in significant part because of the safeguard which will ensure minimal impacts. The impacts to the community cannot be eliminated, however, the recommended conditions are designed to minimize the impacts to the greatest extent possible.

5. The following additions or changes to the conditions proposed by DCLU were made in an effort to incorporate some of the concerns raised by the community residents. Many of the conditions proposed by neighbors would have needlessly extended the review process or added additional levels of bureaucracy that would unnecessarily hamper, or in some cases defeat, the purpose of the helistop service.

1. CHMC can temporarily relocate the helistop to another location on campus during the construction of the helistop at the Kitchen Gardens location. The temporary location, which is subject to approval by DCLU, should be selected to reduce construction related impacts on the surrounding residential community. Once the helistop has commenced permanent operation at the Kitchen Garden site it is not subject to further review. Should CHMC decide to relocate the helistop to any other location on its campus, including the alternative sites which were specifically rejected during the EIS review process, the proposal shall be subject to an environmental review and land use approvals.

2. The composition of the Medical Review Team should be revised to add an additional member from the surrounding community and to ensure that it is not heavily

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weighted with physicians who are affiliated with CHMC. The Medical Review Team as proposed by DCLU (Condition 3) is acceptable except that:

The physician representative selected by the President of the Washington State Society of Pediatrics (WSSP) shall not be a CHMC affiliated pediatric physician.

3. Two citizens, residing in the neighborhoods in the area of CHMC shall be selected. One representative shall be selected by the Laurelhurst Community Council and the other representative shall be selected by the Department of Neighborhoods.

Recommendation

The Hearing Examiner recommends that the City Council grant the proposal for an emergency helistop at the Kitchen Garden site on the CHMC campus and a second full service helistop at the University of Washington IMA/Graves Filed site, subject to the revised conditions proposed by DCLU and the revisions recommended by the Examiner in Conclusion 5 above.

Entered this 16th day of July, 1992

Ruperta Alexis
Deputy Hearing Examiner

NOTICE OF RIGHT TO PETITION
FOR FURTHER CONSIDERATION

Pursuant to Seattle Municipal Code Section 23.76.054, as amended, any person substantially affected by a recommendation of the Hearing Examiner may submit a petition in writing to the City Council requesting further consideration. The petition must be submitted within fifteen (15) calendar days after the date of mailing of the recommendation of the Hearing Examiner, and be addressed to;

Seattle City Council, Land Use Committee
c/o Seattle City Clerk
First Floor, Municipal Building

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600 Fourth Avenue
Seattle, Washington 98104

The request for further consideration shall clearly identify specific objections to the Hearing Examiner's recommendation, facts missing from the record, and the relief sought.

Pursuant to Seattle Municipal Code Section 23.76.054(D), if there is no request for further consideration, Council action shall be based on the record established by the Hearing Examiner.

The City Council Land Use Committee should be consulted for further information on the Council review process.

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CITY OF SEATTLE
ANALYSIS AND RECOMMENDATION
OF THE DIRECTOR OF THE
DEPARTMENT OF CONSTRUCTION AND LAND USE

Application Number: 8405870, 9106441
C.F. No. 297288 and 298740

Project Address: 4800 Sand Point Way N.E.
2501 N.E. 45th Street

Applicant Name: Children's Hospital and Medical Center

SUMMARY OF PROPOSED ACTION

Council Land Use Action to allow helistops accessory to Children's Hospital and Medical Center on the campus of Children's Hospital and Medical Center and on the campus of the University of Washington.

The following permit approvals are required:

Council Conditional Use Permit - To allow a helistop accessory to a major institution, Sections 23.48.005 and 23.69.012 C, Seattle Municipal Code (SMC);

SEPA - Adequacy of EIS and recommendation to grant with conditions, Chapter 25.05 SM.

SEPA DETERMINATION: [ ] Exempt [ ] DNS [ ] MDNS [X] EIS

[ ] DNS with conditions

[ ] DNS involving non-exempt grading or demolition or involving another agency with jurisdiction

See Table of Contents on following page

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BACKGROUND INFORMATION

Proposal Description and Application History

The proposal would legally establish an emergency helistop on the CHMC campus at the Kitchen Garden site near the entrance to the hospital's emergency room. In addition, under the Preferred Alternative presented in the Final EIS, a second helistop for CHMC would be established at the Intramural Activities Field (IMA) on the University of Washington campus. The helistop at the IMA Field would receive most of the helicopter landings. The most critically ill or injured patients would land at CHMC.

The Kitchen Garden helistop would be a 40 ft. by 40 ft. square concrete pad centered in an approximately 96 ft. diameter circular grass area. The helipad would be floodlit with ground lights around the perimeter and would be enclosed with a low fence. The IMA field helipad would have a 65 ft. diameter circular concrete pad centered in a 150 ft. diameter asphalt apron. Area and perimeter lighting similar to the Kitchen Garden site helipad will be provided.

The first application (#8405870) was submitted by Children's Hospital and Medical Center (previously called Children's Orthopedic Hospital) on November 13, 1984. Following an initial comment period, the Department of Construction and Land Use (DCLU) issued a Determination of Significance on January 13, 1986. A Draft Environmental Impact Statement (DEIS) was published September 2, 1986, and a public hearing on the Draft EIS was held September 23, 1986. The Final EIS (FEIS) was published April 25, 1991. For purposes of this report, Children's Hospital and Medical Center will be designated "Children's" or "CHMC" and AirLift Northwest will be "ALNW."

The initial project application was for a helistop accessory to CHMC located on the CHMC campus. That facility and location, north of the hospital emergency room at the site of the Kitchen Garden, was described in the DEIS as the proposal and became known as the Kitchen Garden Site. Other alternative locations on the campus were described and given other names. Another alternative presented in the DEIS involved landings at the University of Washington Intramural Athletic (IMA) Field. This alternative became known as the Intramural Field Alternative (also known as Graves Field). In response to comments received on the DEIS, a new alternative was developed and presented in the FEIS. It involved the majority of the Children's destined landings occurring at the Intramural Field and the most critical patients landing at the Kitchen Garden site. This alternative was dubbed the preferred alternative. On December 5, 1991, Children's submitted an application (#9106441) for the addition of Children's destined landings at and the physical upgrade of the IMA field helistop on the University of Washington campus.

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Site Description

The Kitchen Garden site is located on the 25-acre campus of Children's Hospital and Medical Center, along the western edge of the Laurelhurst neighborhood. The Children's campus is developed with a series of interconnected hospital and medical related buildings which generally follow the site topography as it slopes up to the east. These buildings, which range from one to five stories in height above grade, are located on the southern half of the site. A four-story, detached parking garage occupies portions of the north half of the site. Several large surface parking lots and large landscaped open spaces cover the rest of the site.

Construction over the last few years on the site has included closing off the rear vehicular access to the site from 45th Avenue N.E., completion of a four-story medical office building to the northeast of the main hospital buildings, and approval of a series of additions on and around the main structures.

The proposed helistop on the Children's campus would be where the Kitchen Garden is now located. This area is in the center of the Children's campus; approximately 142 feet from the emergency room entrance and 104 feet to the parapet of the medical office building. The main campus access road, Penny Lane, and the parking garage are to the north. Minor access roads are adjacent to the Kitchen Garden to the east and west.

The Intramural Activities Field site is located south of the golf driving range, near the northwest corner of IMA sports field number two and the northeast corner of the large parking area north of Hec Edmundson Pavilion and Husky Stadium.

Vicinity Description

The neighborhood surrounding the Children's campus is primarily zoned and developed for single family use with density limitations ranging from one lot per 9600 square feet to one lot per 5000 square feet. One block east of the Children's campus is the Laurelhurst Elementary School and Laurelhurst Playfield. A half block southeast of the Children's campus is the Battelle Memorial Institute. Four blocks east of the campus is the Villa Academy; with St. Bridget's Church located north of N.E. 50th Street at 49th Avenue N.E., to the south of the school.

Along Sand Point Way N.E., to the north and west of the hospital, are multi-family and commercial uses. Laurelon Terrace, with predominantly elderly occupants, is adjacent to the campus to the west. To the northwest, across Sand Point Way, is a large Planned Unit Development with single and multi-family development. A variety of other low-rise multi-family structures

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and commercial uses line Sand Point Way, including an Albertson's, a medical/dental clinic, and small restaurants and retail shops.

Public Comment

Hundreds of letters, telephone calls, and oral comments at public meetings have been received by DCLU over the eight year review period for this proposal. Beginning in 1984, DCLU received complaints about the noise of helicopter landings and take-offs from nearby residents. Many of these comment also expressed concern over safety hazards related to landings and take-offs over a densely populated urban area. Public comments also stated concern about possible proliferation of helistops at other hospitals or in residential areas generally. Whether the proposal is consistent with the City's land use policies for major institutions and for residential areas was also questioned.

Volume II of the Final EIS contains 64 written comments on the Draft EIS from State agencies, City departments, community and professional organizations, and individuals. Recent letters received in 1991 and 1992 on the proposal have been included in the file for review by the Hearing Examiner and the City Council.

OTHER INFORMATION

Flight History

In 1991, ALNW flew a total of 253 Children's destined flights. 177* of these flights landed at the IMA field; 76 landed on the CHMC campus. In 1990, of the total 199 ALNW flights, 140* landed at the IMA field and 59 at CHMC. In 1989, of 220 ALNW flights, 171* landed at the IMA field and 49 at CHMC. In 1988, of 163 ALNW flights, 127* landed at the IMA fields and 36 at CHMC. (*A few landings occurred at Harborview or at Boeing Field.) In addition to ALNW flights, there were flights by other vendors including MAST and Med-Flight (see Aeromedical Vendors section, below). These landings accounted for a small percentage of additional flights (generally 10% or fewer).

Since the time helicopter landings commenced at Children's in 1984, there have been no accidents or injuries at CHMC related to the flights. (See, Safety section, below.)

Regulatory Framework

There is no single jurisdiction regulating the siting of a helistop and the operation of emergency patient transport services. Instead, as many as 8 different agencies regulate or support emergency air transport. These are briefly summarized in this section.

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The Federal Aviation Administration (FAA) provides programs certifying pilots and ensuring that aircraft are operated consistent with regulations. There are no FAA regulations regarding private helistops. Instead, an advisory circular titled "Helistop Design" is distributed to interested persons. Helistop operators are required to file with the FAA in order for the FAA to review and approve flight paths for a proposed helistop.

FAA regulations establish general rules for aviation, qualifications for pilots and airmen, and specifications for equipment. Examples of such regulations are the limitation of emergency medical service (EMS) pilots to eight hours of flight time during a 24-hour period). EMS services must meet FAA regulatory standards for "Air Taxi" services.

The Washington State Health Department has several programs which interact with the provision of EMS service. Until January 1991, new helistops were required to obtain Certificate of Need approval, similar to most other new medical facilities. New State administrative rules, however, now exempt helistops from such requirements. The State also administers an Emergency Medical Services Program. Through this program, the State provides statewide EMS program planning, establishes minimum standards for EMS equipment and personnel, establishes EMS system standards, and evaluates EMS program changes.

The Puget Sound Health Systems Agency (PSHSA) was a non-profit, quasi-public corporation established to assist in implementing federal health regulations. Although an active entity at the time of the DEIS issuance, the organization is no longer active.

The City of Seattle regulates helistops through the provisions of the Seattle Land Use Code. According to the zoning, helistops are allowed or disallowed according to standards which vary with zone and type of helistop. Major Institutions are allowed accessory helistops according to the provisions for Council Conditional Uses and the criteria of SMC 23.48.005 or 23.69.012 C.

The Seattle-King County Public Health Department, a joint Seattle/King County agency, provides health services throughout the City and County. In addition to various direct health service programs, the Department's Emergency Medical Services Division plans, develops and administers paramedic services outside Seattle. The Public Health Department has no direct regulatory authority over an EMS helistop.

The Washington State Department of Transportation provides statewide transportation planning services to enhance safety

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programs and fund transportation improvements. The Department does not have specific authority with respect to EMS helistop siting or operation.

The Association of Air Medical Services (AAMS) and the National Emergency Medical Services Pilots Association (NEMSPA) are voluntary organizations established within the EMS industry to provide organization and guidance to EMS service providers. These organizations do not have legal authority to impose regulations except to the extent that hospitals or helicopter operators must meet their guidelines in order to be accepted as members. AAMS and NEMSPA each have developed uniform guidelines for EMS helicopter service. These standards address aircraft, flight crew capabilities, staffing, training, program review, standards for receiving hospitals, communications, and other key issues related to EMS service. The standards for both organizations are provided in Appendix B of the FEIS.

The Washington State Medical Association is a trade organization representing doctors in the state. The organization's subcommittee on Air Ambulance Services has submitted to the State Department of Health protocols to be used by the air ambulances that operate in the state. These protocols, which are included in Appendix A of the Final EIS, set forth criteria for use of pre-hospital air ambulance services, criteria for non-use of air ambulances, and present examples of patient medical conditions that would warrant the use of an air ambulance. The State Health Department has drafted amendments to the Washington Administrative Code in concert with these protocols. These amendments have been in draft form for several years, while parties try to reach a consensus on the changes.

The Washington State Hospital Association and Seattle Area Hospital Council are trade organizations representing hospitals in the state and Seattle area, respectively. Neither organization is directly involved in emergency airborne transport issues.

<u>Aeromedical Vendors</u>

The use of helicopters for transporting wounded solders was first established during the Korean War. This application, which was further refined during the Vietnam War, translated to the development of the nation's first medivac operation in 1969. Aeromedical transport has expanded and improved in the years since 1969.

For the past 10 years, the primary aeromedical service provider in the Seattle area has been Airlift Northwest (ALNW). It provides air ambulance service throughout the Pacific Northwest and Alaska. Airlift Northwest is governed by a consortium of Children's, the University of Washington Medical Center,

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Harborview Medical Center, and Providence Medical Center. St. Joseph's Hospital in Tacoma, Virginia Mason Medical Center and Swedish Hospital Medical Center in Seattle are Associate members of the consortium. Multicare, which operates the Mary Bridge Children's Hospital in Tacoma, is negotiating a contract to become an associate member of the consortium. As the administrative arm of the consortium, Harborview Hospital provides the equipment, staff and medical director for the program. The ALNW medical director is the Medical Director of the Harborview Trauma Center.

Harborview contracts with the Seattle Jet Center to provide fixed wing aircraft, pilots, mechanics, and fuel for Airlift Northwest. That includes a Citation 500 "Eagle" which is used for transport of patients located more than 120 miles from the King County Airport base. Other aircraft are also available for these long distance transports from Alaska, eastern Washington, Idaho and Montana. Some patients do come from outside this four-state region.

In 1985, ALNW added helicopter service. Harborview contracts with Hospital Air Transport to provide the rotary-wing aircraft, pilots, and mechanics to ALNW. The contract includes two Agusta 109 Mark II helicopters. The specifications of this helicopter and others frequently used for aeromedical purposes are provided in Table 4 of the FEIS (p. FEIS 27). The Agusta is slightly larger and faster than other privately based helicopters, but is significantly smaller and lighter than the various government based helicopters used for EMS purposes. The two Agusta helicopters, one of which is used half-time, are equipped with "state-of-art" avionics and airframe systems. In addition, standard medical equipment on each helicopter includes standard and advanced stabilization and life support equipment and supplies. They can also carry specific support necessary for particular transports, such as an isolette unit for transport of neonates (infants less than one month old).

ALNW transport teams come from a pool of about 20 flight physicians and nurses who are trained and experienced in a variety of medical disciplines such as pediatrics, infectious disease, burns and neonatology. Although most flight teams are based at Harborview, the helicopter base, some specialized teams may be necessary in order to meet the unique needs of a particular patient. In those cases, the flight team either reports to Harborview or is picked up at the Intramural Activities Field.

Airlift Northwest provided about 88 percent of the patient transports to Children's in 1990. Other providers were MAST and Med-Flight. These two providers along with other aeromedical operators are discussed in the FEIS (p. 32-35).

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MAST, which stands for Military Assistance to Safety and Traffic, provides emergency transport of all military personnel and their dependents within 100 nautical miles of Fort Lewis. Military personnel are required to use MAST services under most circumstances. It is available for civilian flights in areas where there are inadequate civilian programs and when civilian programs are already on a mission.

MAST operates seven "Huey" helicopters out of western and eastern Washington bases. These helicopters are staffed with various medical personnel generally from Madigan Hospital at Fort Lewis and carry basic medical and life-support systems. Over the past 5 years, MAST is estimated to have transported 17 to 20 Children's destined patients per year. Because the "Hueys" are noisy and cause substantial vibration, Children's has discouraged their use at the campus landing sites.

Med-Flight is an aeromedical transport program sponsored by St. Luke's Hospital in Bellingham. It flies a MBB-105 helicopter, which is slightly smaller and slower than the Agusta, primarily to missions in the four northwest Washington counties. The number of flights to Children's by Med-Flight ranges from one to eight per year since 1985.

The U.S. Navy operates aeromedical services in conjunction with their Whidbey Island Naval Air Station. Most Navy rescue missions involve military personnel, their dependents or other situations where the Navy is the only service available. The number of Navy flights to Children's has dropped from 10 in 1985 to zero in 1990. The U.S. Coast Guard station in Port Angeles is similarly available. Its operations are generally limited to 50 miles off the coast. Inland operations and interhospital transports are rare. There have been no Coast Guard transports to Children's.

Other helicopter operators are available to transport patients in limited circumstances. As an example, one patient transport by a local television station occurred in the past. Transports by these other operators are rare.

ANALYSIS-SEPA

Alternatives

The original proposal was to establish the CHMC Kitchen Garden helistop and allow all flights to land on campus. In the Final EIS, the Preferred Alternative is presented, under which both the Kitchen Garden helistop and the IMA Field helistop would be established. Under the Preferred Alternative, only the most critically ill or injured patients would land at Children's.

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Most flights would land at the IMA Field and the patients would be transported by ground ambulance to the hospital.

Alternative helistop locations were considered in the Draft and Final EIS. On-campus alternative locations were the roof of the medical center, the roof of the parking garage, the east entrance to the medical center, the south entrance to the medical center (described as the core building), the administrative wing (northwest corner) entrance, and the surface parking lots. Off-campus alternatives were to make all landings at the IMA Field, at a rooftop helistop at the University of Washington Medical Center, or at Harborview and Boeing Field, with ground ambulance transport of all patients to CHMC.

The rooftop helistop on the UW campus is no longer under consideration by the University and will not be discussed in this report. On-campus locations other than the Kitchen Garden site will not be discussed in this report. The Department has concluded that if helicopter landings are allowed to continue on the CHMC campus, they should be made at the most open, flat, and nearest location to the emergency room. The on-campus sites noted above are all located at distances far enough away from the emergency room to require transport by ambulance or circuitous routes through other sections of the medical center. In addition, the alternative on-campus locations are located either closer to neighboring residential and educational properties or on steeper or depressed terrain that would be somewhat less safe for landings and take-off.

Noise

For the full analysis of noise and vibration, see the Draft EIS and pages 105 through 121 of the Final EIS. The noise analysis presented in the EIS considers a worst case scenario, including four flight segments for each patient transport: 1) from helicopter base to CHMC or IMA Field to pick up medical crews; 2) from CHMC or IMA Field to patient; 3) transport of patient to CHMC helistop; and 4) return from CHMC helistop to base. (Only on rare occasions are medical crews from Children's necessary on the helicopter. The vast majority of flights use a medical crew based with ALNW at Boeing Field or at Harborview.)

For noise analysis purposes, sound levels are measured in decibels (dB), with a weighted adjustment (A-weighting) based on the sensitivity of human hearing to various sound frequencies. The dBA measurement scale is logarithmic, not linear, and a doubling of loudness occurs for roughly each 10 dBA increase. For example, 80 dBA is judged to be twice as loud as 70 dBA and four times as loud as 60 dBA. Sound level increases of one to two dBA are barely perceptible. Increases of three to five dBA are generally noticeable.

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In evaluating the effect of noise on people, a day/night average sound level (L_{dn}) with a penalty for noise occurring between 10:00 p.m. and 7:00 a.m., is used. The highest sound level occurring in a given time period is called the maximum sound level (L_{max}). L_{max} is sometimes used to estimate the probability of sleep interference from single noise events. Intermittent indoor sound levels above 70 dBA have a significant probability of causing sleep interference. Intermittent sound levels between 40 and 70 dBA have varying potential for causing sleep interference. The elderly and children in some age groups are more susceptible to awakening.

Noise impacts were analyzed for five locations in the primarily residential neighborhoods surrounding the campus. In the Draft EIS, the noise study found the original proposal would increase the day/night average (L_{dn}) sound levels by between one and five dBA. This result derived from an assumption of 20 landings and take-offs to pick up medical crews and 20 landings and take-offs for patient transports (40 round trips) per month.

The final EIS used a revised flight path in its noise analysis that reduces L_{max} sound levels, particularly at the Laurelon Terrace location. The Final EIS (p. 117) found an increase in day/night average sound levels of zero to three dBA. A "worst one-day L_{dn}," assuming two daytime and two nighttime flights (eight round trips counting crew pickup), was also calculated. This worst case analysis showed an increase of zero to five dBA.

For the Preferred Alternative, total landings were projected at four to five per month at CHMC, with an average of one night landing per month. This estimate is low compared to actual 1991 levels. Under the Preferred Alternative, with no landings on campus to pick up medical crew and with only the most critical patients landed on campus, monthly and worst day day/night averages would be three or more dBA lower than under the original proposal. Maximum sound level impacts would be the same. The increase in noise would not rise to the level generally considered significant. (U.S. Environmental Protection Agency guidelines cite activities with a 65 dBA day/night average as significant.) Noise level increases of zero to five dBA are considered slight; five to ten, significant; and over ten, very serious. FAA and federal Housing and Urban Development standards consider L_{dn} below 65 dBA generally acceptable for residential areas.

Under the alternative with all landings t the IMA (Graves) Field site, noise levels at CHMC would be lower than with the original proposal or the preferred alternative. A minor increase in monthly day/night average sound levels could occur related to ground ambulance sirens. Occasional helicopter noise would be noticeable in the student dormitories and classrooms above the IMA fields.

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The noise analysis reported in the EIS relies on calculated estimates of actual noise impacts. No test landings and take-offs were conducted. The noise study addresses the potentially greater sleep interference impacts from low frequency (blade slap) noise generally, without specific frequency segregation and analysis.

Some helicopters generate a loud "impulse" noise known as blade slap, which distinguishes helicopter noise from other noise sources. Blade slap noise is primarily related to helicopters with two-bladed rotors. The Agusta 109 helicopters used by ALNW have four-bladed rotors, which reduce blade slap noise. The Huey (used by MAST) and most other military helicopters have two-bladed rotors and are noisier and cause more vibration than the ALNW helicopters.

Detectable vibration can occur when sound levels are above 65 to 80 dB in the low frequencies. Vibration in a structure depends on construction type and window size and type. Detectable buzzing or rattling of windows, dishes, and other lightweight objects increases levels of annoyance, but is not damaging to structures unless sound pressure levels are greater than 134 dB. Truck drive-bys and general aircraft fly-overs are usually in the 65 to 80 dB range. The EIS finds that vibration impacts would not be significant with the original proposal, the Preferred Alternative, or the other alternatives. Therefore, the Department concludes that mitigation of vibration impacts would not be required.

A number of mitigating measures have been or could be implemented to minimize noise impacts. As noted in the EIS, these include: using primarily multi-blade helicopters to reduce blade slap impacts, enforcing flight path rules to keep the helicopters primarily over Sand Point Way N.E. and at high altitudes, and prohibiting landings at Children's to pick up medical crews.

Approximately 20 percent of the landings and take-offs at Children's occur during the night or early morning (generally one to two per month). According to the noise study, it appears the likelihood of being awakened by a nighttime flight will vary depending on location, whether bedroom windows are open or closed, and the age or general physical condition of the sleeper. Some nearby residents will probably be awakened by nighttime flights to CHMC.

<u>Safety</u>

The Final EIS addresses safety issues related to helicopter transport on pages FEIS 75 - 104. The EIS sets forth general information from national studies of air ambulance helicopter safety over five to ten year periods. Specific flight history

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for the ALNW service is examined, and safety concerns associated with the alternative helipad locations are considered.

Pages FEIS 98 - 100 summarize the general findings regarding the probability of accidents for ALNW helicopter flights to the CHMC campus. The worst case assumption was for 20 landings per month at the hospital by ALNW. The calculated probability for accidents during a flight ultimately destined for CHMC was found to be one in 14,184 flights, or roughly, one accident every 59.1 years. When the number of landings at CHMC is reduced under the preferred alternative by a factor of three or four, the probability of accidents is similarly reduced. Under the preferred alternative, an accident during a CHMC flight would be expected less than once every 177 years.

Further reducing the probability of an accident in the CHMC campus area is the fact that the accident probabilities include all flight segments, i.e., take-off from base, landing to pick up patient, take off with patient, landing at CHMC, take off from CHMC. There would be a decrease in accident probability if only landings and take-offs from Children's were considered.

Airlift Northwest has had no accidents in the eight year history reported in the Final EIS. One "incident" occurred July 24, 1989, when a tail rotor struck the helistop perimeter fence at Harborview. (An "incident" is an event causing minor damage or minor injury, but not rising to the level of a defined "accident." See page FEIS 76 for a definition of accident.)

Data regarding military helicopter safety are not reported under the same categories as for civilian helicopter flights. The FEIS presents only an abbreviated analysis of military helicopter safety, but concludes that for the year sampled (1986), the military experienced a lower fatality rate per hours of flight than did the civilian aeromedical industry (p. FEIS 92).

The main causes of helicopter accidents are discussed in the FEIS. One study by the National Transportation Safety Board found that 68% of EMS helicopter accidents involved human error. Thirty percent (30%) of accidents were attributable to adverse weather including windshear, ice, snow, rain, fog, or reduced visibility. Mechanical failure was responsible for 25% of accidents. Obstacle strikes, which involve the main or tail rotors coming in contact with trees, wires, buildings or other obstacles occurred in 21% of all accidents. For the period between 1972 and 1990, these three factors, weather, engine failure, and obstacle strikes, were the leading cause of accidents.

Most EMS helicopter accidents occur during daylight hours (64% to 93% depending on study). In addition to weather and mechanical failure, pilot fatigue, lack of pilot familiarity with the

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landing area, and poor visibility or obstruction of the landing area were significant factors in accident occurrences.

The FEIS considered safety factors related to the design and location of the several alternative helipad locations described in the document. The Kitchen Garden site and proposed design for the helipad would meet or exceed the FAA guidelines for the ALNW helicopters. The design would not meet the guidelines for MAST aircraft. Several trees and light poles would need to be removed or relocated to provide for unobstructed primary and secondary approach and departure routes. A natural gas meter house is located approximately 38 feet northwest of the northern edge of the proposed Kitchen Garden site. The meter is protected by a concrete structure and a fence, and is not viewed as a hazard to take offs and landings at the site.

Other campus locations considered in the EIS included the rooftops of the medical center or the parking garage, the east, south and northwest entrances to the medical center, and the surface parking lots. These locations were all considered somewhat less safe due to their proximities to obstructions, location in a topographically depressed area, or proximities to nearby residences or schools.

Safety issues at the IMA Field site are minor. The helipad design is consistent with FAA guidelines. The approach and departure paths are free of obstructions. The flight paths have been revised to avoid areas known as bird roosting sites.

Cumulative Effects

During the scoping process, the potential for the approval of the Children's helistop to establish a precedent for the siting of helistops at other Seattle-area hospitals was determined to be a potentially significant impact. There was concern that other medical institutions would seek approval to construct helistops on their campuses. This could result in more dispersed EMS helicopter operations throughout the City, with new aeromedical vendors to compete with existing services. Extensive and uncoordinated competition could result in compromised safety standards.

Although all hospitals treat critically ill and injured patients, only a few hospitals in Seattle are considered tertiary care centers for these emergencies. Children's is a regional referral center for neonatal and pediatric medical and surgical emergencies; Harborview for trauma and burn emergencies; Providence for adult cardiac emergencies; and the University of Washington for neonatal, obstetrical, and adult medical emergencies. Helistop facilities currently exist for Harborview and the University of Washington. Aside from Children's no other applications have been received nor are other hospitals

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considered candidates for helistops. A survey of Seattle's major medical facilities indicated that no other helistops were being considered (FEIS-133).

Mitigation of the possible impacts associated with the proliferation of helicopter facilities and services would come from several factors associated with the structure and organization of EM service in the Puget Sound region. The consortium operating Air Lift Northwest significantly reduces the likelihood of other aeromedical vendors being established. Every tertiary care provider in Seattle is part of the consortium, as are other Seattle area hospitals not providing tertiary emergency services, and other hospitals outside the Seattle area, providing emergency service to other regions. A new vendor would have to complete directly with the established Air Lift network and the extensive services available to the consortium member hospitals. New vendors would also have the extensive capital cost for acquisition of aircraft and equipment.

With the completion of airmedical transport services to Children's, each of the full consortium members will have established helicopter facilities on their respective campuses. The current specializations of the other institutions do not indicate demand for helicopter service. Any applications by the other member hospitals, or other institutions, would be subject to an evaluation for Council Conditional Use approval, including a likely EIS requirement. FAA regulations, along with possible state and regional EMS guidelines, also help limit the expectation of additional helicopter facilities and services.

The preferred alternative would result in two helistops within close approximation of one another. However, the balance between increased number of facilities and the appropriate sorting of patients to reduce noise and safety impacts, indicates the additional facility is appropriate. Although there remains a potential for additional hospital helicopter facilities and services, the Department concludes that such an outcome is unlikely.

ANALYSIS - COUNCIL CONDITIONAL USE

Seattle Municipal Code Section 23.48.005 (superseded by 23.69.012 C) establishes the standards for consideration of a helistop accessory to a major institution. The proposals for the helistop on the CHMC campus and for the related helistop at Graves Field on the University of Washington campus are both subject to the same criteria. The analysis for the two permits is combined below.

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1. A helistop may be permitted as a Council conditional use if the Council finds that:

   a. The helistop is needed to save lives;

   b. The helistop is located so as to minimize impacts upon surrounding residential property;

   c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

2. The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas.

19
This section of the report summarizes the health care background information provided in the EIS along with an assessment of the medical need information regarding this proposal.

The mission of Children's is the treatment of patients from birth to 21 years of age including the practice of neonatology (practice of medicine on children less than 1 month old) and pediatrics (medical care of children). In addition to the different categories of patient by age, hospitals are grouped by the level of patient care they provide: primary, which is offered by all hospitals; secondary, which provides more advanced care capabilities; and tertiary, which generally includes medical specialists. Because of the relative infrequency of need of medical specialists' expertise, specialists are generally affiliated with regional medical centers in urban areas, with patients coming from the surrounding rural and urban areas. This aspect of health care is informally referred to as the regional medical referral system.

Only a few hospitals in the three-state Pacific Northwest provide pediatric tertiary care: Children's, Harborview Hospital, Mary Bridge Children's Hospital in Tacoma, Sacred Heart and Deaconess Medical Centers in Spokane, St. Luke Regional Medical Center in Boise, and Emmanuel Medical Center in Portland. CHMC is the largest of these medical facilities specializing in children. Key sections of the Children's tertiary care service are the Infant Intensive Care Unit (IICU) and Pediatric Intensive Care Unit (PICU). The FEIS (p. 11) lists the types of patient conditions typically admitted to the IICU.

The University of Washington NICU is operated in conjunction with the University's high-risk obstetrical program so that low birth-weight babies born at the University of Washington Medical Center do not have to be transported to Children's. Some low birth-

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weight babies born in outlying community hospitals require transport to a tertiary care facility. A program administered by the University of Washington determines which medical facility, Children's or the University, is appropriate for referral of a low birth-weight baby.

Pediatric emergencies in the Puget Sound are generally referred to the PICU at Children's or Mary Bridge. The two Spokane hospitals also have PICUs.

A formal agreement establishes Children's as the pediatric teaching hospital for the University of Washington School of Medicine. The University of Washington also administer the County's Harborview Medical Center. Most traumatized or severely burned children in the Puget Sound first go to Harborview, as it is the region's recognized trauma center. Children's does not meet all the criteria to be considered a trauma hospital, although it does treat some trauma patients.

There are two types of medical referrals to a regional hospital; interhospital transports between clinics and community hospitals where a diagnosis has occurred, and pre-hospital transports, which bring a patient from a field location such as home, work or accident scene. Children's has been transporting patients by helicopter to the campus since August 1984. The types of patients brought to Children's include near-drownings, premature births, severe injuries, overwhelming infections, and ingestion of toxic substances. Appendix D of the FEIS provides summary profiles of the patients referred directly to Children's from August 1985 to March 1989. Quarterly reports providing summary profiles of patients flown to the CHMC campus are provided to the community and City.

According to Children's, the two objectives of helicopter transport are to reduce the time before appropriate advanced treatment can begin and to decrease patient manipulation. Because of the severe nature of the medical conditions referred to Children's, delays in the initiation of advanced treatment may affect patient outcomes.

The Department has concluded the proposed helistops meet the first criterion of being needed to save lives. As discussed in the FEIS (Medical Rationale for Helicopter Transport section, pages 18-22, FEIS) and detailed in the report from the Seattle-King County Department of Public Health (Volume III, Appendix A, FEIS), shortening the time of transport for some patients is essential and even a minimal shortening of time may be lifesaving. The Public Health Department report concludes that "there are hospital transfers to Children's where 10 minutes are critical to a severely ill infant or youngster, but the actual number of such cases is small." In its conclusion that

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the helistop was needed to save lives, Public Health also noted that the use of the helistop could be restricted to life-threatening emergencies.

In response to this issue and the third criterion noted above, DCLU presented a new alternative, the "Preferred Alternative," in the Final EIS. Under this alternative, most helicopter landings occur at the University of Washington IMA field site, with only the most critically ill or injured patients being flown directly to CHMC. This alternative has been adopted by the hospital for the interim period before a final decision is made by the City Council.

The FEIS predicted four to five landings at the hospital per month under the preferred alternative approach. Public Health, in its comment to DCLU, estimated six patients per month requiring transport directly to the hospital. In 1991, an average of slightly over six patients per month were landed at CHMC.

The remaining flights carried patients to the IMA field. These flights carried less critically injured children. According to the criteria used to determine whether to use air transport or not, many of these flights can be considered necessary to save lives due to the shorter transport times, even though direct flight to the hospital campus was not required.

The remaining conditional use criterion requires that helistops be located to minimize impacts on surrounding residential property. The EIS analysis concludes that the kitchen garden location proposed on the hospital campus provides the best noise buffering and flight safety of any alternative that allows flights to land on campus. In reliance on the EIS analysis, the Department concludes the third criterion is met for the Kitchen Garden site.

With respect to the IMA/Graves Field location, it is far from residential uses and does not create the noise or safety concerns arising from the hospital campus location. The Graves Field helistop works to minimize flights to the Children's campus, further minimizing impacts to the hospital neighborhood. Impacts to the University of Washington campus are shown to be minor in the Final EIS. The Department concludes that IMA/Graves Field helistop, as an integral piece of the CHMC preferred alternative, meets the required conditional use criteria.

As discussed in the EIS analysis, concerns about overuse of the CHMC campus helistop and consequent increases in noise and safety impacts could be addressed by the formation of a review panel to consider whether flights landing at CHMC were appropriately directed. The review panel should meet at least twice yearly and should file reports with DCLU on the same schedule.

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Other conditions discussed in the EIS analysis include prohibition of staff pickup at CHMC by helicopters, continuation of the quarterly public newsletter reporting on helicopter landings, establishing a regular training schedule to familiarize pilots with the specific characteristics of the helistops, and limiting landings at CHMC to helicopters no noisier than the Agusta 109.

These conditions, as set forth below, should be imposed based on Council authority under the conditional use provisions of the Land Use Code and on the City SEPA noise and transportation policies.

DECISION - SEPA

The Department concludes the Environmental Impact Statement for the CHMC helistop proposal adequately discloses and analyzes expected impacts from the proposal and from reasonable alternatives. The Department finds the proposal can be expected to result in significant adverse noise impacts which cannot be mitigated. However, the Department also finds that the benefits of the proposal, as defined in the Preferred Alternative, outweigh the adverse impacts. The Department recommends mitigation to the extent possible of noise and safety impacts as set forth in the Conditions section based on substantive authority found in sections 25.05.675 L and R, Noise and Transportation.

RECOMMENDATION - COUNCIL CONDITIONAL USE

The Department recommends the proposal for an emergency helistop at the Kitcher Garden site at CHMC and a second, full service helistop at the University of Washington IMA/Graves Field site be approved, with conditions to mitigate impacts to the public safety and welfare. The recommended conditions, based on Council authority to mitigate averse impacts including that set forth in the Land Use Code and the Noise and Transportation policies of Seattle's SEPA Ordinance, are set forth below.

RECOMMENDED CONDITIONS

1. Only the most critical and life-threatening medical emergencies shall be allowed to land at CHMC. All other patients shall land at the Intramural Activities field site. The initial decision whether to land at the Kitchen Garden site or the IMA field is to be made by the referring physician and/or attending medical team. For patients whose condition deteriorates in flight, the medical team on board

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the helicopter may decide to land at CHMC. The following conditions indicate a landing at CHMC is appropriate:

a. unstable airway;
b. inability to ventilate/oxygenate;
c. inability to maintain adequate cardiac output;
d. inability to maintain adequate cerebral bloodflow; or
e. the persistence of unstable vital signs despite heroic attempts to control them.

2. Military Assistance to Safety and Traffic (MAST), Coast Guard, and Navy helicopters shall not be permitted to land at CHMC, but shall land at the IMA field or at Harborview, in order to reduce noise impacts and reduce the potential for helicopter accidents in the CHMC area.

3. A Medical Review Committee shall be established to review compliance with Condition 1 above, allowing only the most critically ill patients to land at CHMC. The Committee shall consist of the following five members:

1) The Director of the Seattle-King County Department of Public Health, or the Director's appointee, who will serve as Committee chair;

2) A representative of CHMC selected by the Chief Executive Officer;

3) A physician representative of the Washington State Medical Association (WSMA), selected by the President of the Association. The representative must be a qualified neonatologist, pediatric intensivist, or pediatric emergency physician;

4) A physician representative of the Washington State Society of Pediatrics (WSSP), selected by the President of the Society. The representative must be a board certified pediatrician.

5) A citizen, residing in one of the neighborhoods in the area of CHMC, to be nominated by the Department of Neighborhoods and confirmed by the City Council.

Committee members will be appointed for terms not to exceed three years, with replacements to be made by the original appointing authority. The role of the Committee is advisory only. The Committee shall meet at least twice per year to review and evaluate helicopter transports to CHMC. The Committee shall submit a report after each review meeting to DCLU, the Chief Executive Officer of CHMC, the Airlift Northwest Executive Committee and Medical Director, and the Citizens' Advisory Committee for CHMC Master Plan.

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Committee members will receive no compensation or other remuneration for their service on the Committee. The Committee shall adopt rules and procedures as necessary to ensure compliance with laws and administrative rules governing confidentiality of patient medical records, while also providing for public input and review of the Committee's work.

CHMC shall provide administrative and staff support needed by the Committee. The necessity for, and performance of, the Committee shall be evaluated by DCLU after two years and a recommendation shall be made to the City Council regarding whether to continue, reorganize, or discontinue the Committee's work.

4. CHMC shall continue to report on a quarterly basis to the community regarding the number and nature of transports to the campus. The report shall also include the number of helicopter landings at the IMA/Graves Field site for the given quarter.

5. Helicopters shall not be allowed to land at CHMC to pick up medical staff prior to patient transport.

6. DCLU shall review the quarterly reports of CHMC and the reports of the Medical Review Committee. If it appears that inappropriate or non-medically necessary landings have occurred, DCLU shall work with CHMC, the Public Health Director, the Medical Review Committee and ALNW to revise guidelines or procedures to ensure compliance with the limited landings requirement stated in condition one (1). Failure to demonstrate clear improvement in implementation of the limited landings criteria may result in suspension of the permit for landings and shall be subject to enforcement action pursuant to Chapter 23.90 of the Land Use Code.

7. Only helicopters with a four-bladed rotor shall be permitted to land at the CHMC campus helistop. Should Airlift Northwest or other aeromedical vendor seek to establish regular flights to CHMC in helicopters other than the Agusta 109 studied in the EIS, a showing must be made to DCLU proving the noise impacts of the alternative equipment are no greater than for the Agusta 109. DCLU must give approval of the new equipment prior to its regular use for flights to CHMC.

8. The flight paths for approach and departure to the CHMC and IMA/Graves Field helistops shall be strictly maintained as described in the Final EIS and shall to the greatest extent possible avoid residential areas. Airlift Northwest and any other regular carrier shall establish a training program to introduce all pilots to the approved flight paths. ALNW or

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other regular carrier shall confirm in writing to DCLU its commitment to the training program and to ensuring the approved flight paths are followed.

9. Prior to beginning regular use of the Kitchen Garden helistop, all ALNW pilots shall make at least one test landing and take-off at the site. CHMC and ALNW shall schedule the training/test flights for a weekday between the hours of noon and 3:00 p.m. Advance notice of at least ten days shall be given to the surrounding communities of the test/training time, date, and expected number of flights. The number of flights shall be held to the minimum necessary to provide adequate training.

10. New pilots shall make at least one landing at CHMC under supervision of a pilot experienced in landing at CHMC prior to unsupervised patient transport landings. Non-patient transport training flights, if desired, may be scheduled no more than twice per year without approval from DCLU. Notice shall be provided to surrounding communities as stated in Condition 10.

Signature Faith L. Lumsden
Faith L. Lumsden, Senior Land Use Specialist
Land Use Division

Date 5/14/92

FLL:sh♦

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Seattle Department of Construction and Land Use

Dennis J. McLerran, Director
Norman B. Rice, Mayor

January 16, 1992

MASTER USE PERMIT

****
NOTICE OF APPLICATION
****

Seattle's Department of Construction and Land Use is currently reviewing the Master Use Permit applications described below. Your WRITTEN COMMENTS ARE ENCOURAGED AND MAY BE SUBMITTED TO:

Department of Construction and Land Use
710 Second Avenue, Suite 200
Seattle, Washington 98104-1703

For projects other than those requiring shoreline approvals, the comment period may be extended an additional fifteen (15) days. A written request to extend the comment period must be received by this Department within the initial 15-day comment period as published in this bulletin. For additional information, contact the Master Use Information and Notification Center, 710 Second Avenue, First Floor of the Dexter Horton Building (684-8467).

Please note that "SEPA" refers to the State Environmental Policy Act.

2501 NE 45th St Zone MIO37/65L1/3 **Project #9108441**

Master Use Permit to allow Children's Hospital and Medical Center to use an existing helistop located on the U of W campus. (Helistop to be used for medical emergencies.) The project includes the construction of approx. 65 ft. diameter landing pad and apron improvements. Environmental review completed under MUP# 8405870.
The following approvals are required:

Council Conditional Use to allow addition of Children's Hospital and Medical Center flights to the UW's heliport at Graves Field.

Written Comments may be submitted until **January 30, 1992**

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Posted
1/16/92

BEFORE THE HEARING EXAMINER
CITY OF SEATTLE

In the Matter of the Petition of

CHILDREN'S HOSPITAL AND MEDICAL CENTER

C.F. File: **297288 and 298740**
DCLU Application: **8405870 and 9106441**

Council Conditional Use

ORDER

In order to provide a fair opportunity for all interested parties and witnesses to testify in this matter, the order for presentation of evidence and testimony shall be as follows:

1. DCLU presents summary and submittal of file.

2. The applicant, Children's Hospital and Medical Center (Children's) shall have up to one and a half hours to present an overview of its proposal and witnesses.

3. For the remainder of the day, we will alternate on hourly intervals between witnesses in favor of the petition and witnesses opposed to the petition.

On Wednesday, June 24, 1992:

1. Children's will complete the presentation of its case.

2. All other witnesses in favor of the proposal will testify.

3. Testimony from opposing witnesses will begin immediately after the witnesses in favor.

4. Witnesses with legitimate time restraints will have a block of time from 1 p.m. to 2 p.m. on Wednesday, June 24, 1992 to present their testimony.

Entered this 16th day of June, 1992.

Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104
Telephone: (206) 684-0521

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COMPTROLLER FILE No. 27786

Council Conditional Use Application of Children's Orthopedic Hospital and Medical Center to build a helistop at the hospital at 4800 Sand Point Way N.E.

NO SPONSOR REQUIRED

Filed July 21 1969
Norman Sheldon, City Comptroller

By Thomas Dunbar
Deputy

ACTION OF THE COUNCIL

Referred AUG 7 1969	To Urban Redevelopment
Referred	To
Referred	To
Reported SEP 11 1969	Disposition Pass as amended
Re-referred	To
Reported	Disposition

Honorable President:

Your Land Use C. F.

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Full Council

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REPORT OF COMMITTEE

Honorable President:

Your Land Use Committee

to which was referred the within C.F. 297288

would respectfully report that we have considered the same and respectfully recommend that

Do grant, by a vote of 2-0, on 9/23/92.

Full Council vote 7-1 (Ziegler absent)

Chairman

CITY OF SEATTLE

ANALYSIS AND DECISION OF THE DIRECTOR OF

THE DEPARTMENT OF CONSTRUCTION AND LAND USE

DETERMINATION OF SIGNIFICANCE AND SCOPING NOTICE

Application Number 8405870 Comptroller's File # CC84-022

Applicant Name Children's Orthopedic Hospital and Medical Center, by Dorothy Teeter, Dir. of Planning, COHMC

Address of Proposal 4800 Sand Point Way N.E.

SUMMARY OF PROPOSED ACTION

Applicant proposes to construct an emergency helistop facility accessory to an existing hospital/medical center.

The following approvals are required:

Council Conditional Use for a helistop. Seattle Municipal Code (SMC) 23.48.05

S.E.P.A. - Environmental Determination. State Environmental Policy Act and Rules Chapter 25.05 SMC

BACKGROUND DATA

The proposed helistop site is located at Children's Orthopedic Hospital and Medical Center (COHMC), 4800 Sand Point Way N.E., within the Laurelhurst neighborhood. Within the hospital grounds, the proposed helistop site is 85 feet due north of the existing COHMC emergency room.

Land on the 9552 square foot site is generally rolling, with the steepest slope at 10%. The hillslope at the proposed site appears stable with an existing retaining wall located to the west.

COHMC is designated a Major Institution under the Seattle Land Use Code. As such it is subject to provisions in Chapters 23.48; 23.80; and 23.82 of the code. The proposed helistop site is within COHMC's major institution boundary.

The surrounding area is developed with single and multi-family residences and with community businesses.

The use of the helistop is proposed to be limited to the transportation of critically ill or seriously injured infants, children and adolescents. The number of patients per month estimated by COHMC to be transported by helicopter would average 15 to 20; each transport would generate four trips to or from COHMC, for a monthly average of between 60 and 80 helicopter trips.

Under the current system helicopters land at the University of Washington soccer field, and the patient is transferred to an ambulance for final transport to COHMC.

FILED
CITY OF SEATTLE
1989 JUL 21 AM 11:58
COMPTROLLER AND CITY CLERK

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SEPA DETERMINATION:

☐ Exempt ☐ DNS ☒ EIS

☐ DNS involving non exempt grading or demolition or involving another agency with jurisdiction.

ANALYSIS - SEPA

The department has reviewed the proposed development and has concluded that the proposal may have a probable significant adverse environmental impact. Preliminary analysis indicates that as a part of the scoping process, areas of impact and alternatives to be discussed in the EIS should include the following:

Areas of Impact

Noise
Vibrations
Safety

Alternatives
- -alternative sites
- -alternative uses, i.e.,shared use of helicopter sites
- -no action alternative

SCOPING

Agencies, affected parties and members of the public are invited to comment on the scope of the Environmental Impact Statement prior to its preparation. You may comment on alternatives, mitigation measures, probable significant adverse impacts, and licenses or other approvals that may be required.

Comments should be in writing and received at the following address by February 3, 1986:

Beatrice Farrar Ryan, Director
Department of Construction and Land Use
Room 400 - Municipal Bldg., Seattle, WA 98104

DECISION

This decision was made after review by the responsible official on behalf of the lead agency of a completed environmental checklist and other information on file with the responsible department. This constitutes the Threshold Determination and form. The intent of this declaration is to satisfy the requirements of the State Environmental Policy Act (RCW 43.21C), including the requirement to inform the public of agency decisions pursuant to SEPA.

☐ Determination of Non-Significance. This proposal has been determined to not have a significant adverse impact upon the environment. An EIS is not required under RCW 43.21C.030(2)(c).

☒ Determination of Significance. This proposal has or may have a significant adverse impact upon the environment. An EIS is required under RCW 43.21C.030(2)(c).

There is no agency appeal.

CONDITIONS

Signature Julia Gibb
Land Use Specialist For
Katy Chaney, Director, Land Use Division
Department of Construction and Land Use

Date January 13, 1986

LU4/VA22

Revised 84.12.14

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THE CITY OF SEATTLE
MUNICIPAL CODE CHAPTER 23.90
LAND USE CODE - ORDINANCE 110381

DEPARTMENT OF CONSTRUCTION AND LAND USE

ORDER OF THE DIRECTOR

FOLLOWING RECONSIDERATION OF NOTICE OF VIOLATION

February 20, 1986
File No. 2855646

Treuman Katz, Chief Executive Officer
Childrens Orthopedic Hospital
4800 Sand Point Way Northeast
Seattle, Washington 98105

Michael Copass, Medical Director
Airlift Northwest
325 - 9th Avenue
Seattle, Washington 98104

Subject: Premises known as 4800 Sandpoint Way Northeast
which location is described as follows:

That portion of the West half of the Southeast quarter of the Southwest Quarter of Section 10, Township 25 North, Range 4 East, W. M., in King County, Washington, described as follows:

Beginning on the Easterly line of said subdivision at a point 658.20 feet Northerly of the Southeast corner thereof; thence West 271.44 feet, more or less, to the Northerly production of the Westerly line of Block 1, of Gwinn's Laurelhurst Manor Addition according to Plat recorded in Volume 41 of Plats Page 27, in King County, Washington; thence North 0'26'19" East along the Northerly production of said Westerly line to the Southeasterly line of Sand Point Way; thence Northeasterly along said Southeasterly line of East 50th Street; thence Easterly along said Southerly line to the Easterly line of said subdivision thence Southerly along said Easterly line 630 feet, more or less, to the point of beginning.

PARCEL B

The West 5.00 feet of the Northeast quarter of the Southeast quarter of the Southwest Quarter of Section 10, Township 25 North, Ranger 4 East, W. M., in King County, Washington, except the North 30.00 feet thereof, and the South 25 thereof;

PARCEL C

Blocks 1, 2, 3, 4, 5, and 6 of Gwinn's Laurelhurst Manor addition to Plat recorded in Volume 41 of Plats, Page 27, in King County, Washington except Lot 12 in said Block 6;

PARCEL D

Those portions of 42nd Avenue Northeast, 43rd Avenue Northeast, 44th Avenue Northeast and East 47th Street, vacated under Ordinance No. 76010 of the City of Seattle.

Subject to:

Right of the public to make neccesary slopes for cuts or fills upon said premises in the reasonable original grading of streets, avenues, alleys and roads, as dedicated in the Plat.

Also subject to:

Right to make necessary slopes for cuts of fills over the Northerly 558 feet of said Parcel as granted to the City of Seattle by Deed recorded under Auditor's File No.

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2553722.

Also subject to:

Right of the public to use that portion of Lot 9 and 10, Block 4, of Gwinn's Laurelhurst Manor addition, lying within boundaries of East 47th Street.

Upon request for reconsideration of a Notice of Violation dated December 10, 1985, a hearing was held before the Director of the Department of Construction and Land Use in accordance with Section 23.90.16 of the Land Use Code on February 10, 1986. BASED UPON THE EVIDENCE PRESENTED, THE DIRECTOR HAS DETERMINED AND HEREBY ORDERS THAT SAID NOTICE OF VIOLATION IS MODIFIED AS FOLLOWS:

THE COMPLIANCE DATE IS EXTENDED TO AUGUST 31, 1986

A copy of this Order will be filed by the Director of the Department of Construction and Land Use with the Department of Records and Elections of King County.

The Land Use Code provides that any party affected by this final order may file a written notice of appeal with the Hearing Examiner, stating in what respects the notice is erroneous and the specific grounds upon which the party relies for the reversal or modification of the Order. The notice of appeal shall be accompanied by a filing fee of $25.00. The appeal shall be filed with the Office of the Hearing Examiner, 400 Yesler Building, Seattle, Washington 98104, by five o'clock p.m. of the fourteenth calendar day following service of the final order of notice of violation. When the last day of the appeal period so computed is a Saturday, Sunday, Federal or City holiday, the appeal period shall run until five o'clock on the next business day.

Please review the contents of the Notice of Violation, including the procedures for compliance on the first page. Any communications should be addressed to the Inspector whose signature appears on that Notice, c/o Housing and Zoning Enforcement Division, Department of Construction and Land Use, Room 408 Municipal Building, 600 4th Avenue, Seattle, Washington 98104. Telephone 625-2271. Please feel free to call upon us if we may be of service.

Sincerely,

BEATRICE FARRAR RYAN
Interim Director

Mary Denzel

By
MARY DENZEL
Hearing Officer

MD: ms

cc: Appellant(s) and person(s) served with the Notice of Violation.
Mary Denzel
HEARIA IP

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CITY OF SEATTLE
DEPARTMENT OF CONSTRUCTION AND LAND USE

FINDINGS AND DECISION
OF THE
HEARING OFFICER

ATTACHMENT TO FINAL ORDER

Re: Premises known as 4800 Sand Point Way Northeast
Childrens Orthopedic Hospital, Airlift Northwest
File No. 2853959

INTRODUCTION

Childrens Orthopedic Hospital and Airlift Northwest contest the Notice of Violation filed on August 30, 1985 against 4800 Sandpoint Way.

The hospital and Airlift Northwest sought a reconsideration hearing pursuant to Seattle Municipal Code 23.90.

The matter was heard before the Hearing Officer on October 31, 1985.

Parties to the proceeding were: Childrens Orthopedic Hospital by attorney Rand Koler; Airlift Northwest by attorney Steve Milam, and Department of Construction and Land Use by Hermia Ip.

FINDINGS OF FACT

1. Helicopters bearing critically ill infants landed at Children's Orthopedic Hospital (COH) on August 3, 20 and 27, 1985. In each case the helicopter was operated by Airlift Northwest.

2. Airlift Northwest (A'W) is operated by a consortium of five hospitals, one of which is Childrens Orthopedic. Airlift was created several years ago in order to provide emergency services, and recently added helicopter service. Under its agreement with ANW, COH agrees to accept patients from ANW.

3. As one of five member hospitals, Childrens Orthopedic cannot by itself control Airlift Northwest. Airlift Northwest is essentially run from Harborview Medical Center.

4. No specific agreement between Airlift Northwest and COH allows the landing of helicopters at COH.

5. Under the terms of COH's participation in ANW, the financial contribution of COH is reduced relative to other hospitals on the basis that it does not have a helipad.

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6. In the case of each of the helicopter landings at COH, the decision to land at COH was made by the director of ANW, located at Harborview, and the on-board physician. In the case of the first landing, COH was given only several minutes notice that the helicopter would be landing.

7. Each landing occurred on a small lawn in the center of the hospital's circular entryway to the emergency ward.

8. Under the Major Institution zoning applicable to COH, a helistop requires a conditional use permit (Seattle Municipal Code 23.48.05).

9. COH has applied for, but does not yet have a conditional use permit for a helistop. Helistop is defined in Seattle Municipal Code Section 23.84.16 as "A transportation facility in which an area on a roof or on the ground is used for the take-off and landing of helicopters of steep gradient aircraft, but not include fueling services, hangers, maintenance, overhaul or tie-down space for more than one aircraft."

10. COH did not protest any of the three landings to ANW.

11. Section 248-18-285 of the Washington Administrative Code defines a hospital's duty with respect to emergency care services. It states:

> (1) The hospital shall provide the following basis out-patient emergency care services.
>
> (a) Assessment of a person's condition to determine the nature, acuity, and severity of the person's immediate medical need.
>
> The condition of each person, who comes or is brought to the hospital for emergency medical care, shall, upon arrival, be assessed by a registered nurse, physician, or physician's assistant for the purpose of determining the nature and urgency of the person's medical need and the timing and place of the person's care and treatment.
>
> (b) Immediate diagnosis and treatment of any life-threatening cardiac arrythmia, respiratory insufficiency or shock.

12. The Notice of Violation, dated August 30, 1985, alleges violations of Land Use Code Sections 23.40.02C, 23.48.05A, and 23.90.02B. The Notice of Violation states "The specific violation and corrections are as follows: Using or permitting the use of the premises as a landing pad for helicopter, immediately discontinue the use of a helicopter pad or obtain a permit for such use".

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13. Section 23.40.02 is not divided into subsections. Thus, there is no 23.40.02C.

14. The parties agreed that the section of 23.90.02 applicable to this proceeding was subsection "A", not "B".

15. The Land Use Code includes no definition of "landing pad for helicopters" or "helicopter pad".

16. Section 23.40.02 of the Land Use Code reads as follows:

> No structure or premises shall hereafter be used or occupied and no structure or part of a structure shall be erected, moved, reconstructed, extended, enlarged or altered, except in conformity with the regulations specified in Title 24 or this Title for the zone and overlay district, if any, in which it is, or will be located. Changes to existing structures may be permitted which make the structures nonconforming if the changes are required by law for reasons of health and safety.

Section 23.48.05, referred to in paragraph 8, reads as follows:

A. Helistops

1. A helistop may be permitted as a Council conditional use if the Council finds that:

   a. The helistop is needed to save lives;

   b. The helistop is located so as to minimize impacts upon surrounding residential property;

   c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

2. The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas.

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Section 23.84.40 defines "use" as follows:

> The purpose for which land or a structure is designed, built, arranged, intended, occupied, maintained, let or leased.

Section 23.90.02A reads as follows:

> A. It is a violation of this Land Use Code to use or cause to be used any structure or land, or to construct, locate, or cause to be constructed or located any structure within the City of Seattle without first obtaining the permits or authorizations required by the Land Use Code for the respective use, location, or construction.

CONCLUSIONS

1. There is no dispute that the three landings occurred and that they occurred on COH premises. There is also no dispute that the helicopter in each case was operated by Airlift Northwest.

2. It is not clear that the three landings should be seen as constituting "use" of the lawn as a helipad. In each instance COH was informed that a helicopter bearing a sick child was on its way, and in each instance COH had no part in the decision that the helicopter should be diverted to COH. Once that decision was made, it does not appear that COH had the option of diverting the helicopter. In fact, diversion might have placed COH in violation of State provisions governing hospitals. On the other hand, there is no question that for purposes of the landings, the lawn was used as a defacto helipad.

3. Occasional use of a lawn for emergency landings can violate the Land Use Code if part of an ongoing pattern. It should be noted that even permitted institutional helistops are restricted to occurrences involving life threatening emergencies. Thus, the fact that a situation is life-threatening does not exempt a hospital from securing a conditional use permit before having a helistop.

4. In this case, it need not be decided if the helicopter landings justifies a finding that the lawn was used as a helipad, because it is plain that the Notice of Violation was defective. Of the three listed Code provisions, two were mis-cited, and the Notice must therefore be withdrawn. However, based on its pending permit application for a helipad conditional use permit and the discussion at the violation hearing, COH must now be seen as aware of the Land Use Code issues involved in its use of the lawn for helicopter landing purposes. Similarly, Airlift Northwest must also be seen as aware of the possible legal complications with its land helicopters at COH.

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DECISION

The Notice of Violation is withdrawn.

Guy E. Fletcher
Hearing Officer

FD2/coh

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JTD

Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Norman B. Rice, Mayor

RECEIVED
MAY 0 2 1991
DEPT OF CONSTRUCTION & LAND USE

CONTACT: John Doan 684-8875
Susan Dehlendorf 233-3880

FOR IMMEDIATE RELEASE

DCLU Publishes Children's Hospital Helistop EIS

A Final Environmental Impact Statement (EIS) for a helistop proposed by Children's Hospital and Medical Center was released April 25 by the Seattle Department of Construction and Land Use.

The proposal, which requires City Council Conditional Use Approval, would allow construction of a helistop for the transport of critically ill and injured children to the Children's Hospital Laurelhurst campus.

The EIS discusses a new alternative to the hospital's original proposal, which called for all helicopter landings with patients destined for Children's Hospital to take place on the Children's campus. This could have resulted in as many as 40 landings per month.

The new alternative calls for the majority of the landings with patients for Children's Hospital to occur at the University of Washington Intramural Field. Landings with patients for both Children's and the University of Washington Hospital have occurred there in the past. A minority of the patient transports, in the most critical condition, would be allowed to land on the Children's Hospital campus. This could result in approximately 7 landings per month at the Children's campus. The EIS proposes an oversight panel to review the appropriateness of the landings at both facilities.

An application by Children's Hospital to allow additional landings at the University of Washington Helistop at the Intramural Field is anticipated to be filed soon with the Department of Construction and Land Use. The Director of the Department of Construction and Land Use will subsequently issue a recommendation on whether to approve, conditionally approve, or deny that proposal. At that time, a public hearing before the City's Hearing Examiner will be announced. Interested citizens will have an opportunity to comment on the proposal and the recommendation at that hearing. The Hearing Examiner will make a recommendation to the City Council; who will make the final decision on this permit.

# # #

An equal opportunity, non-discriminatory, affirmative action employer
Seattle Department of Construction and Land Use, 400 Municipal Building, Seattle, Washington 98104

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CITY OF SEATTLE

ANALYSIS AND DECISION OF THE DIRECTOR OF

THE DEPARTMENT OF CONSTRUCTION AND LAND USE

DETERMINATION OF SIGNIFICANCE AND SCOPING NOTICE

Application Number 8405870 Comptroller's File # CC84-022

Applicant Name Children's Orthopedic Hospital and Medical Center, by Dorothy Teeter, Dir. of Planning, COHMC

Address of Proposal 4800 Sand Point Way N.E.

SUMMARY OF PROPOSED ACTION

Applicant proposes to construct an emergency helistop facility accessory to an existing hospital/medical center.

The following approvals are required:

Council Conditional Use for a helistop. Seattle Municipal Code (SMC) 23.48.05

S.E.P.A. - Environmental Determination. State Environmental Policy Act and Rules Chapter 25.05 SMC

BACKGROUND DATA

The proposed helistop site is located at Children's Orthopedic Hospital and Medical Center (COHMC), 4800 Sand Point Way N.E., within the Laurelhurst neighborhood. Within the hospital grounds, the proposed helistop site is 85 feet due north of the existing COHMC emergency room.

Land on the 9552 square foot site is generally rolling, with the steepest slope at 10%. The hillslope at the proposed site appears stable with an existing retaining wall located to the west.

COHMC is designated a Major Institution under the Seattle Land Use Code. As such it is subject to provisions in Chapters 23.48; 23.80; and 23.82 of the code. The proposed helistop site is within COHMC's major institution boundary.

The surrounding area is developed with single and multi-family residences and with community businesses.

The use of the helistop is proposed to be limited to the transportation of critically ill or seriously injured infants, children and adolescents. The number of patients per month estimated by COHMC to be transported by helicopter would average 15 to 20; each transport would generate four trips to or from COHMC, for a monthly average of between 60 and 80 helicopter trips.

Under the current system helicopters land at the University of Washington soccer field, and the patient is transferred to an ambulance for final transport to COHMC.

SEPA DETERMINATION:

☐ Exempt ☐ DNS ☒ EIS

☐ DNS involving non exempt grading or demolition or involving another agency with jurisdiction.

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ANALYSIS - SEPA

The department has reviewed the proposed development and has concluded that the proposal may have a probable significant adverse environmental impact. Preliminary analysis indicates that as a part of the scoping process, areas of impact and alternatives to be discussed in the EIS should include the following:

Areas of Impact

Noise
Vibrations
Safety

Alternatives
- -alternative sites
- -alternative uses, i.e.,shared use of helicopter sites
- -no action alternative

SCOPING

Agencies, affected parties and members of the public are invited to comment on the scope of the Environmental Impact Statement prior to its preparation. You may comment on alternatives, mitigation measures, probable significant adverse impacts, and licenses or other approvals that may be required.

Comments should be in writing and received at the following address by February 3, 1986:

Beatrice Farrar Ryan, Director
Department of Construction and Land Use
Room 400 - Municipal Bldg., Seattle, WA 98104

DECISION

This decision was made after review by the responsible official on behalf of the lead agency of a completed environmental checklist and other information on file with the responsible department. This constitutes the Threshold Determination and form. The intent of this declaration is to satisfy the requirements of the State Environmental Policy Act (RCW 43.21C), including the requirement to inform the public of agency decisions pursuant to SEPA.

☐ **Determination of Non-Significance. This proposal has been determined to not have a significant adverse impact upon the environment. An EIS is not required under RCW 43.21C.030(2)(c).**

☒ **Determination of Significance. This proposal has or may have a significant adverse impact upon the environment. An EIS is required under RCW 43.21C.030(2)(c).**

There is no agency appeal.

CONDITIONS

Signature Julia Gilbert
Land Use Specialist For
Katy Chaney, Director, Land Use Division
Department of Construction and Land Use

Date January 13, 1986

LU4/VA22

Revised 84.12.14

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MINUTES
Children's Hospital and
Medical Center
8405870, C.F. 297288
4800 Sand Point Way
9106441, C.F. 298740
2501 N.E. 45th Street
Tuesday, June 23, 1992
Time: 9 a.m.
Hearing Examiner:
Ruperta Alexis
Legal Assistant:
Marta R. Idowu

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TAPE 1

COUNT

000 Introduction of hearing by Hearing Examiner

268 Overview by Faith Lumsden

500 Parties present:

John Keegan, attorney at law representing Children's Hospital and Medical Center
2600 Century Square
1501 4th Avenue
Seattle, Washington 98101

Faith Lumsden, land use specialist representing the DCLU Director
M/S 13-07-01

700 Lumsden offers Director's Exhibit 1, Two Large Boxes Containing Children's Hospital and Medical Center Documents/Materials, Director's Exhibit 2, Draft EIS, Director's Exhibit 3, Final EIS, Director's Exhibit 4, Plans

1994 Exhibits 1-4 admitted

2010 Opening statement by John Keegan and he presents case for Children's and calls Treuman Katz, oath administered, he testifies

2914 Off record

2915 Back on record

2940 Keegan calls Michael Copass, oath administered, he testifies

3395 Keegan offers Applicant's Exhibit 5, Diagram Showing Regional Pediatric Tertiary Care Facilities and Origin of Patients Transported by AirLift Northwest Helicopter

3874 End of Tape 1, beginning Tape 2

TAPE 2

COUNT

000 Continued direct-examination by Keegan of Copass

059 Keegan offers Applicant's Exhibit 9, Standing Orders for Children's Landings for AirLift Northwest

293 No cross-examination by Lunsden of Copass

306 Keegan calls Dr. James Logerfo, oath administered, he testifies

452 No cross-examination by Lumsden of Logerfo

462 Keegan calls Pamela Held, 22928 111th Avenue SE, Vashon Island, Washington, oath administered, she testifies

875 No cross-examination by Lumsden of Held

882 Keegan calls Dr. John Neff, oath administered, he testifies and Keegan offers Applicant's Exhibit 6, Geographic Origin of all Children's Inpatients, Applicant's Exhibit 7, Patient Transports to Children's ER by Transport Made, Applicant's Exhibit 8, Monthly AirLift Northwest Transports (Jan-1987-May 1982), Applicant's Exhibit 10, AirLift Northwest Listing of Children AirLifted

1712 Cross-examination by Lumsden of Neff

1819 Keegan calls Eugene Bill Marsh II, oath administered, he testifies and Keegan offers Applicant's Exhibit 15, Map, Applicant's Exhibit 16, The Seattle Paramedic Training Program (Document)

2652 No cross-examination by Lumsden of Marsh

2709 Off record

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2710 Back on record, Keegan offers Applicant's Exhibit 11, Letter by John Neff, M.D. dated September 9, 1985, Applicant's Exhibit 12, Letter to Joanne Brekke from John M. Neff, M.D., dated September 13, 1985, Applicant's Exhibit 13, Letter to Dr. Bud Nichols from John M. Neff, M.D. dated October 29, 1985, Applicant's Exhibit 14, Letter to Fred Bruner from John M. Neff, M.D. dated September 28, 1987

2769 Exhibits 5-16 admitted

2803 Hearing Examiner allows testimony in favor of the proposal to testify

2820 Richard Mehrer, oath administered, he testifies

2993 Raymond Meuse, oath administered, he testifies

3270 Elizabeth Szombathy, oath administered, she testifies

3527 Nancy Allen, oath administered, she testifies

3626 Sariah Stillwell, oath administered, she testifies

3760 Roy Stillwell, oath administered, he testifies

3872 End of Tape 2, beginning Tape 3

TAPE 3

COUNT

000 Continued testimony by Roy Stillwell

181 Lindy Kurtz, oath administered, she testifies

289 Those in opposition to the proposal

298 Helen Belvin, oath administered, she testifies

417 Cheryl Kitchin, oath administered, she testifies

550 Al Young, oath administered, he testifies

690 Clark Sorensen, oath administered, he testifies

1550 Helen Newma, oath administered, she testifies

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1640 Harold Kurtz, oath administered, 5043 Sand Point Place N.E., he testifies

1740 Marvin O. Christman, oath administered, 4350 53rd Avenue N.E., he testifies

1900 Keegan continues on with his case

1925 Off record

1926 Back on record

1935 Keegan calls Robert Childs, oath administered, he testifies

2571 Video tape is viewed

3271 Video is offered as Applicant's Exhibit 17, Video of AirLift Northwest

3275 Exhibit 17 admitted

3281 Cross-examination by Lumsden of Childs

3893 End of Tape 3, beginning Tape 4

TAPE 4

COUNT

000 Continued cross-examination by Lumsden of Childs

016 Keegan offers Applicant's Exhibit 18, Children's Hospital Helistop Glossary

027 Exhibit 18 admitted

032 Keegan calls Debbie Sampson, oath administered, she testifies

700 No cross-examination by Lumsden of Sampson

720 Gannett calls Jaku Hauge, oath administered, he testifies

1069 Gannett offers Applicant's Exhibit 19, Residential Noise Criteria

1160 Exhibit 19 admitted

1250 Cross-examination by Gannett of Hauge

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1617 Gannett offers Applicant's Exhibit 20, Sound Levels of Various Noise Sources

1680 Exhibit 20 admitted

1830 Cross-examination by Lumsden of Hauge

2142 Hearing adjourned at 4:40 p.m. Hearing will reconvene on Wednesday, June 24, 1992 at 9 a.m.

CONTINUED HEARING

2143 Off record

2144 Back on record

2154 Keegan calls Dr. Paula Rozono, 3854 43rd St., Seattle, Washington 98105. Oath administered, she testifies

3184 No cross-examination by Lumsden of Rozono

3205 Keegan calls Jody Carona, oath administered, she testifies

3870 Keegan offers Applicant's Exhibit 21, Rotary Wing Landings - Pediatric

3871 End of Tape 4, beginning Tape 5

TAPE 5

COUNT

000 Continued direct-examination by Keegan of Carona

157 No cross-examination by Lumsden of Carona

167 Hearing Examiner questions Carona

264 Exhibit 21 admitted

268 Gannett calls Dan Davidson, oath administered, he testifies

642 Gannett offers Applicant's Exhibit 22, Large Topographic Map

934 Cross-examination Lumsden of Davidson

1035 Exhibit 22 admitted

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1048 Gannett calls Errol VanEaton, oath administered, he testifies

1412 Cross-examination by Lumsden of VanEaton

1560 Redirect-examination by Gannett of VanEaton

1604 Off record

1605 Back on record

1613 Gannett calls Mike Miller, oath administered, he testifies and offers Applicant's Exhibit 23, Helistop Diagram, Applicant's Exhibit 24, Campus Plan

2300 Exhibits 23 and 24 admitted

2304 Cross-examination by Lumsden of Miller

2330 Gannett calls Steve Scheibe, oath administered, he testifies

2625 No cross-examination by Lumsden of Scheibe

2667 Public testimony is allowed at this time

2668 Vicki Young, oath administered, she testifies

3065 Hearing Examiner and parties discuss closing argument

3100 Response by Keegan

3400 Response by Lumsden

3426 Response by Keegan regarding site visit and if Exhibit 10 is a complete exhibit

3525 Hearing Examiner will make a site visit

3540 Keegan discusses proposed findings for the Hearing Examiner

3735 End of Tape 5, beginning Tape 6

TAPE 6

COUNT

000 Parties continue to discuss how to proceed with hearing

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084 Hearing Examiner discusses procedures regarding submittals. She will make a site visit and allow proposed findings and any other additional written comments

169 Public comment against the proposal

170 Kate Hemer oath administered, she testifies

430 Peter Eglick, attorney at law testifies for the neighbors against the proposal

2009 Mark Lamb. Oath administered, he testifies in favor of proposal

2134 Continued presentation by Eglick

2870 Eglick states that he would like to make a submittal

2941 Off record

2942 Back on record

2960 Rebuttal by Keegan

3901 End of Tape 6, beginning Tape 7

TAPE 7

COUNT

000 Continued rebuttal by Keegan

139 Rebuttal by Lumsden

503 Response by Keegan

574 Closing argument by Lumsden

690 Closing argument by Keegan

1258 Hearing adjourned at 3:35 p.m. July 1, 1992 is the day when the proposed findings are due from Keegan and Lumsden will have two days to response if she feels the necessity to do so.

EXHIBITS

1:1994	Director's	1	Two Large Boxes Containing

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			CHMC Materials/Documents
1:1994	Director's	2	Draft EIS
1:1994	Director's	3	Final EIS
1:1994	Director's	4	Plans
2:2769	Applicant's	5	Regional Pediatric Tertiary Care Facilities and Origin of Patients Transported by ALNW Helicopter
2:2769	Applicant's	6	Geographic Origin of all Children's Inpatients (FY 1990)
2:2769	Applicant's	7	Patient Transports to Children's ER by Transport Mode (1991)
2:2769	Applicant's	8	Monthly AirLift Northwest Transports (Jan, 1987 - May, 1992)
2:2769	Applicant's	9	Standing Orders for Children's Landings
2:2769	Applicant's	10	AirLift Northwest Listing of Children Airlifted
2:2769	Applicant's	11	Letter by John Neff,M.D. September 9, 1985
2:2769	Applicant's	12	Letter to Joanne Brekke from John M. Neff M.D. dated September 13, 1985
2:2769	Applicant's	13	Letter to Dr. Bud Nicola from John Neff M.D. dated October 29, 1985
2:2769	Applicant's	14	Letter to Fred Bruner from John Neff M.D. dated September 28, 1987
2:2769	Applicant's	15	Map
2:2769	Applicant's	16	The Seattle paramedic Training Program (Document)
3:3275	Applicant's	17	Video Tape on AirLift Northwest
4:027	Applicant's	18	Children;s Hospital Helistop Glossary
4:1160	Applicant's	19	Residential Noise Criteria
4:1680	Applicant's	20	Sound Levels of Various Noise Sources
5:264	Applicant's	21	Rotary Wing Landings - Pediatric
5:1035	Applicant's	22	Large Topographic Map
5:2300	Applicant's	23	Helistop Diagram
5:2300	Applicant's	24	Campus Plan

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Office of Hearing Examiner
Applications: 8405870, 9106441
C.F. Nos. 297288, 298740
Hearing Date: June 23, 24, 1992
Forwarded to the City Clerk: July 16, 1992

POCKET 1	-	Office of Hearing Examiner Recommendation
	-	Department of Construction and Land Use Recommendation
	-	Office of Hearing Examiner Affidavit of Mailing
	-	Minutes of Hearing
POCKET 2	-	Letters received subsequent to hearing
POCKET 3	-	Letters received by the Office of Hearing Examiner
POCKET 4	-	Exhibits 1-24 with exception to large exhibit diagrams and plans that were too large for enclosure in brown folder

FILED
CITY OF SEATTLE
1992 JUL 16 AM 11: 12
CITY COUNCILOR AND CITY CLERK

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TAPE_____ TIME START _____
TIME FINISH_____

LAND USE COMMITTEE
Wednesday, September 23, 1992
9:30 a.m.

Member: Sue Donaldson, Chair
Margaret Pageler, Vice Chair
George Benson, Member
Martha Choe, Alternate

Staff: Paula Hoff, Council Asst.
Kymberley Allen, Council Asst.
Telephone: 684-8806
Nighttime Hotline: 684-8999

The Council's Chambers and offices are physically accessible; print and communications access provided on request. Call 684-8888 (TDD: 233-0025) for further information.

				RECOMMENDED ACTION
1.	C.F.	297288	Council Conditional Use Application of Children's Orthopedic Hospital and Medical Center to build a helistop at the hospital at 4800 Sand Point Way NE (#8405870).	DISCUSSION AND POSSIBLE VOTE
	C.F.	298740	Council Conditional Use Permit Application of Children's Hospital for future use of an existing surface helistop on U.W. Campus by Children's Hospital and Medical Center at 2501 NE 45 Street (#9106441).	DISCUSSION AND POSSIBLE VOTE Do grant by a vote of 2-0.
2.	C.F.	298275	PETITION of Burt Wickland to Rezone property from L3 to L4 and establish use for construction of two four story apartment buildings over a common underground parking garage located at 9527 Interlake Avenue North.	DISCUSSION AND VOTE
3.	C.F.	298303	PETITION of Bradley A. Hill to Rezone a parcel of land approximately 29,841 sq. ft. from Single Family 7200 (SF 7200) to Lowrise 3 (L-3).	DISCUSSION AND VOTE
4.	C.B.	109323	Rezoning portions of Endolyne neighborhood of Southwest Seattle	DISCUSSION AND VOTE
5.	C.F.	298312	PETITION of Don Whatmore to Rezone approximately 39,204 sq. ft. from NC1/30' to NC2/30' at 11410 Renton Avenue South. (#9006606).	DISCUSSION AND VOTE

SD:tj

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TAPE_____ TIME START _____
TIME FINISH_____

LAND USE COMMITTEE
Friday, September 18, 1992
9:30 a.m.

Member: Sue Donaldson, Chair
Margaret Pageler, Vice Chair
George Benson, Member
Martha Choe, Alternate

Staff: Paula Hoff, Council Asst.
Kymberley Allen, Council Asst.
Telephone: 684-8806
Nighttime Hotline: 684-8999

The Council's Chambers and offices are physically accessible; print and communications access provided on request. Call 684-8888 (TDD: 233-0025) for further information.

			RECOMMENDED ACTION
1.	C.F. 297288	Council Conditional Use Application of Children's Orthopedic Hospital and Medical Center to build a helistop at the hospital at 4800 Sand Point Way NE (#8405870).	BRIEFING AND SUFFICIENCY OF RECORD
	C.F. 298740	Council Conditional Use Permit Application of Children's Hospital for future use of an existing surface helistop on U.W. Campus by Children's Hospital and Medical Center at 2501 NE 45 Street (#9106441).	BRIEFING AND SUFFICIENCY OF RECORD Record is sufficient, by a vote of 2-0.
2.	C.F. 298275	PETITION of Burt Wickland to Rezone property from L3 to L4 and establish use for construction of two four story apartment buildings over a common underground parking garage located at 9527 Interlake Avenue North.	ORAL ARGUMENT
3.	C.F. 298952	SEPA Appeal of David E. Jarrell from a decision of the Hearing Examiner to affirm the decision of the Director of the Department of Construction and Land Use on a master use permit application for property located at 4100 Southwest Alaska Street (9004054/MUP-92-004).	DISCUSSION AND VOTE
4.		Confirmation of Lisa Kirkendal, Ballard Avenue Landmark District Board	
5.	C.F. 299021	SEPA Appeal of Jordan Brower from a decision of the Hearing Examiner to affirm the decision of the Director of the Department of Construction and Land Use on a master use permit application for property located at 2801 N.E. 130th Street (9103312/MUP-92-010(W)).	DISCUSSION AND VOTE

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			RECOMMENDED ACTION
6.	C.F. 298303	PETITION of Bradley A. Hill to Rezone a parcel of land approximately 29,841 sq. ft. from Single Family 7200 (SF 7200) to Lowrise 3 (L-3).	BRIEFING

SD:tj .

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COH PROPOSED HELIPAD

Medical and related Agencies for
Public Hearing Notification

Representative Joanne Brekke
State House Committee on Social and Health Services
House Office Building, 2nd Floor
Olympia, WA 98504

Larry Thompson, Executive Director
Puget Sound Health Systems Agency
601 Valley Street
Seattle, WA 98109

Frank Chestnut, Director
Certificate of Need Program HB-31
State Department of Social and Health Services
Olympia, WA 98504

King County Medical Society
200 Broadway
Seattle, WA 98122

Washington State Medical Association
2033 6th Avenue
Seattle, WA 98101

Seattle-King County Hospital Society
2161 E. Hamlin
Seattle, WA 98102

Seattle Area Hospital Council
419 Occidental South, 5th Floor
Seattle, WA 98104

Dr. Michael Copass, Medical Director
Airlift Northwest
325 9th Avenue
Seattle, WA 98104

Helen M. Shawcroft
Director of Planning
University Hospital RC-34
1959 N.E. Pacific Street
Seattle, WA 98195

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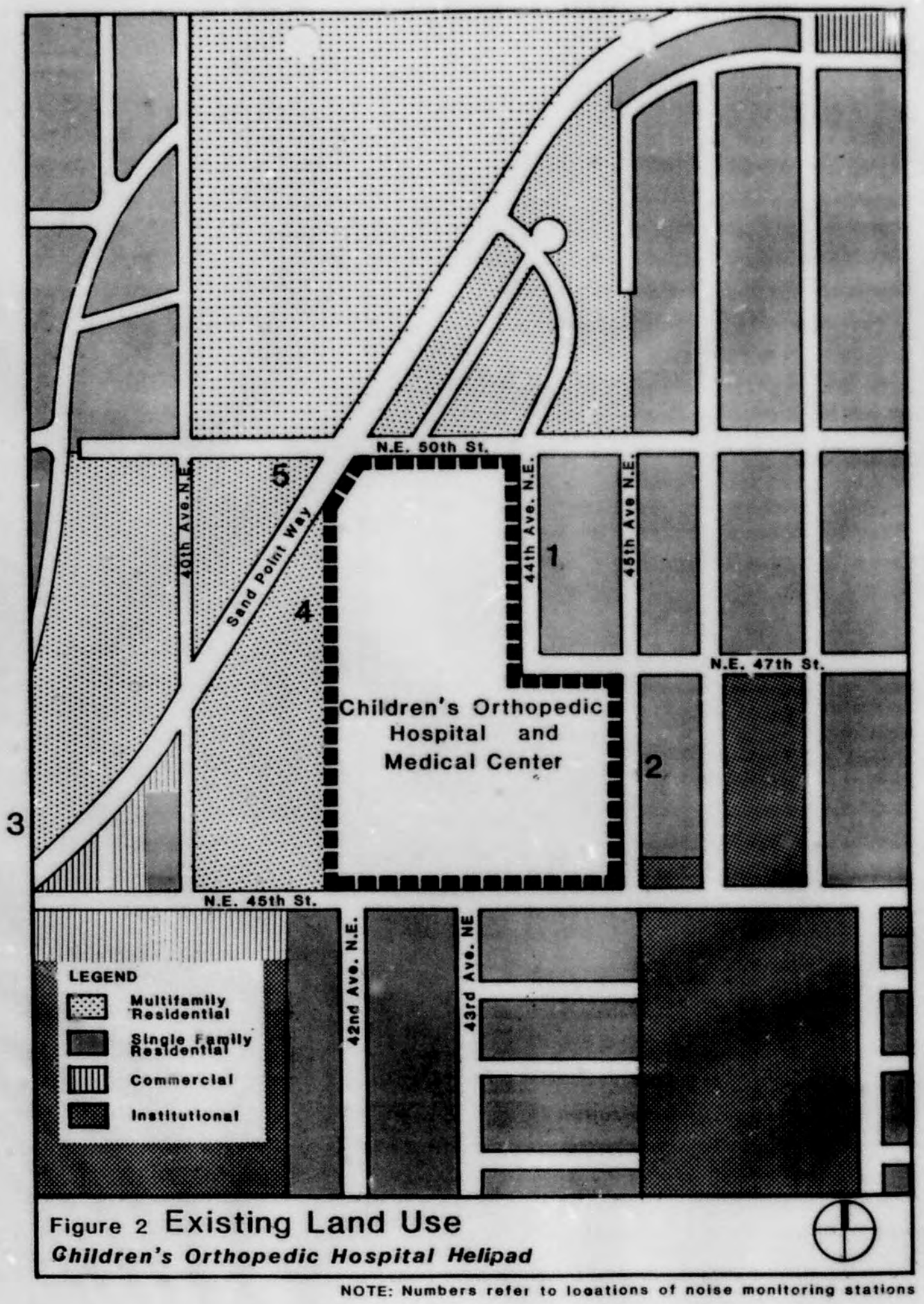

Figure 2 Existing Land Use

Children's Orthopedic Hospital Helipad

NOTE: Numbers refer to locations of noise monitoring stations

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Seattle City Council
Memorandum

Date: September 14, 1992

To: Land Use Committee

From: Ingrid Holmlund

Subject: Application of Children's Hospital and Medical Center for Council Conditional Use permits (helistops)
C.F. #297288 & #298740 / Appl. #8405870 & #9106441

Proposal: The applicant seeks Council Conditional Use permits to allow helistops accessory to Children's Hospital and Medical Center ("CHMC") at the CHMC campus and at the Intramural Activities ("IMA") Field on the University of Washington campus. The most critically ill or injured patients would land at the helistop at CHMC. The less critical patients would land at the helistop at the IMA Field and be transported by ground to CHMC. The IMA field helistop would receive more of the helicopter landings than the CHMC campus helistop. This proposal was presented as the "preferred alternative" in the FEIS.

The proposed location for the helistop on the CHMC campus would be north of the emergency room on a site known as the Kitchen Garden. This helistop would be a 40 ft. by 40 ft. concrete pad surrounded by a 48-foot radius of unobstructed grass area. A 30-inch tall fence with a locked gate would surround the circular area. Ground light would surround the site. The IMA Field helistop would be at the existing site for the University of Washington Medical Center's helistop. It would have a circular pad centered in a 150 ft. asphalt apron, with lighting similar to that for the CHMC campus helipad.

Zoning, site and surrounding properties: The CHMC campus is a 25-acre site located in Laurelhurst. The neighborhood surrounding the CHMC campus is primarily zoned single-family and developed with single-family homes. To the east of the campus is the Laurelhurst Elementary School, Laurelhurst Playfield, Battelle Memorial Institute and Villa Academy. The area to the north and west of the campus is developed with multi-family residences. Across Sand Point Way is a large Planned Unit Development. There are commercial uses along Sand Point Way.

The IMA field site is located south of the golf course driving range near the northwest corner of an IMA sports field. The site is northeast of the north parking lot for Hec Edmundson Pavilion and Husky Stadium.

Action to Date

DCLU: Issued a Determination of Significance on January 13, 1986.

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A Final EIS was issued on April 25, 1991. On May 14, 1992, DCLU issued a report recommending that the proposal be approved, with conditions.

Hearing Examiner: On July 16, 1992, issued a recommendation that the Council grant the proposal, with revised conditions proposed by DCLU and revised conditions recommended by the Hearing Examiner.

Note: No request for further consideration of the Hearing Examiner's recommendation was submitted to the Council.

Criteria for Council conditional use decision on this proposal:

SMC 23.48.005[1] establishes the following criteria for a helistop accessory to a major institution:

1. A helistop may be permitted as a Council conditional use if the Council finds that:

   a. The helistop is needed to save lives;

   b. The helistop is located so as to minimize impacts upon surrounding residential property;

   c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

2. The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas.

Summary of Hearing Examiner's Decision:

Satisfaction of the above criteria for Council conditional use:

Regarding these criteria, the Hearing Examiner's findings and conclusions include the following (note: the findings and conclusions stated below are selected; please refer to Hearing Examiner's decision for additional relevant findings and conclusions):

a. Helistop needed to save lives: The Examiner concluded that

---

[1] SMC 23.48.005 was superseded by SMC 23.69.012.C in 1990, but SMC 23.48.005 has been treated as applicable in this case, apparently given that CHMC submitted its original application in 1984. The language of SMC 23.69.012.C, in any event, is substantially similar to that of SMC 23.48.005.

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this criterion was satisfied. Conclusion 2. She found that CHMC has indicated that the primary reasons for helicopter transport are to reduce the time before appropriate advanced treatment can begin and to decrease patient manipulation. Finding 10. She concluded that both the CHMC campus helistop and the IMA Field helistop are necessary components of [a] medical emergency response system for critically ill children. A review of [the] medical condition of children who have been transported indicates that the children were inflicted with serious life threatening illness and that the use of ground transport could have resulted in a loss of life. Conclusion 2. See also Findings 11 - 17.

b. Helistop located so as to minimise impacts upon surrounding residential property: The Examiner found that the two primary impacts on the surrounding residential community are anticipated to be safety and noise and vibration from the helicopters. Finding 18.

Safety:

The Examiner made numerous findings regarding the analysis of safety in the EIS. She found that the final EIS analysis of the probability of an accident at the CHMC campus is based on what is considered the worst case scenario of 20 flights per month including all flight segments. (The average of 20 flights includes take-off from base, landing to pick up patient, take off with patient landing at CHMC and take-off from CHMC). Under this analysis, an accident would be statistically expected to occur less than once every 59.1 years. Under the preferred alternative, landings at the CHMC campus would be restricted to landing with the patient and take-off, with a corresponding reduction in the probability of an accident to once every 177 years. Finding 20. See also Findings 19, 21 - 23.

The Hearing Examiner also found that the designated flight path raises issues of both safety and noise. To the greatest extent possible the flight path follows bodies of water and arterials. The current flight paths are designed to reduce flights over residential neighborhoods, by flying over SR-520, Montlake Blvd and I-5 when coming from the south. The flight path to the IMA was altered when Airlift NW pilots expressed concerns regarding large numbers of birds on the athletic field during certain times of the year. According to the EIS, the possibility of a bird strike has been reduced but not eliminated by the change in flight paths. Finding 24. See also Finding 25.

Noise and vibration:

The Examiner made a number of findings about the FEIS's measurement and analysis of noise and vibration impacts. See Findings 26 - 31. The Examiner also made the following findings on noise and vibration:

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Some helicopters, primarily two-bladed helicopters, produce an "impulse" noise known as "blade slap." The noise caused by blade slap distinguishes helicopter noise from other types of loud noises. The Augusta 109 used by Airlift NW, has four-bladed rotors which reduces the blade slap noise. Some of the military helicopters such as the Huey have two-bladed rotors which make more noise and cause more vibration. Restricting the use of Huey and other two-bladed rotor helicopters from landing on the CHMC campus would greatly reduce the noise and vibration impacts on the residences in the immediate vicinity. Finding 32.

Residents in the immediate vicinity of the CHMC would be impacted by noise from helicopters landing on the campus. The noise studies in the EIS show that there would be sleep interference (people awakened by nighttime flights) and that young children and older people are more affected by the noise. The extent to which the residents will be bothered depends on location, whether the windows are open or closed and the physical characteristics of the sleeper. There are measures to mitigate, but not to eliminate the noise impacts. The mitigating measures are included as recommended conditions of approval of the project. Finding 33.

Noise-induced vibration in structures depends on a variety of factors including construction type and the window size and type. . . . In the Final EIS, it was concluded that the vibration of the structures in the vicinity near CHMC was not expected to cause structural damage. . . Finding 34.

The Examiner made the following overall conclusion about the criterion of locating the helistop to minimize impacts on the surrounding residential community:

. . . the concerns of noise and safety impacts raised by the residents in the community are significant and important considerations. However, when compared to the substantial evidence of the medical necessity of air transport for children in life-threatening emergencies, the benefits of the availability of the service outweigh the occasional impacts (the highest anticipated number of flights was six per month) to the surrounding community. This conclusion is reached in significant part because of the safeguard which will ensure minimal impacts. The impacts to the community cannot be eliminated, however, the recommended conditions are designed to minimize the impacts to the greatest extent possible. Conclusion 4.

c. Use restricted to occurrences involving life-threatening emergencies: The Hearing Examiner concluded that this criterion was satisfied. Conclusion 2. The Examiner found that the decision to use [a] helicopter is made either by the physician at the referring hospital after consultation with the receiving hospital or by the paramedics, after consultation with a physician. Airlift Northwest determines which children are transported by helicopter

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directly to CHMC campus according to established standards. . . Finding 36. (See Finding 36 for a list of these standards.) See also Findings 35, 37 - 39.

The Hearing Examiner also found that the projected number of CHMC campus helicopter landings for 1991 to 1995 is between four or five [per month]. The Public Health Department estimated six patients per month would be transported to the CHMC campus. The projected number of IMA helistop [landings] for the same period is between 12 and 13. Finding 40.

The Examiner further concluded that the standards established by Airlift NW for air transport and for landing at the CHMC campus are designed to ensure that only those children with life threatening illness are transported. It is also important to note that there is no evidence of abuse of this service under the self-monitoring system and that the likelihood of future abuse is diminished by the monitoring requirement of the Medical Review team. Conclusion 3.

Alternative sites:

The Hearing Examiner found that several alternative locations for a helistop, on and off the CHMC campus, were reviewed and rejected for a variety of reasons. See Finding 41. See also Findings 42 - 45.

Public comment:

The Hearing Examiner found that the proposal has generated a significant quantity of public comments. See Finding 49. She also found that the number of comments in favor of the project vastly exceeded the number opposed to the project. See Finding 50. She further found that a sizeable segment of the organized public opposition to the CHMC campus helistop location was represented by North East Families for Residential Neighborhoods (NEFRN). Finding 51. See Findings 51 - 54 and Conclusion 5 for Hearing Examiner's discussion of NEFRN's concerns and suggestions.

Conditions recommended by the Hearing Examiner:

The Hearing Examiner's recommendation includes revised conditions proposed by DCLU as well as the Examiner's own additions and changes to those revised conditions. See the Hearing Examiner's decision, pp. 10 - 13 and pp. 16 - 17, for language of these recommended conditions.

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Seattle City Council

MEMORANDUM

DATE: August 26, 1992

TO: Persons on mailing list compiled at Hearing Examiner hearing

FROM: Ingrid Holmlund, Council Central Staff

RE: Application of Children's Hospital and Medical Center for Council Conditional Use permits (helistops)
C.F. #297288 and #298740 / Appl. #8405870 and #9106441

The City Council received no requests for further consideration of the Hearing Examiner's recommendation on the above matter.

This matter is scheduled for a sufficiency of the record meeting before the City Council Land Use Committee at its meeting on September 18, 1992. The Committee meeting begins at 9:30 a.m. and is held in the City Council Chambers on the 11th floor of the Municipal Building, 600 4th Avenue, in downtown Seattle. At this meeting, the Committee will decide whether the record established by the Hearing Examiner is sufficient for the Committee to determine its recommendation to the full Council, in accordance with the "Rules for Quasi-Judicial Proceedings Before the City Council."

If you have any questions, please call me at 684-8148.

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DAVIS WRIGHT TREMAINE

LAW OFFICES

2600 CENTURY SQUARE · 1501 FOURTH AVENUE · SEATTLE, WASHINGTON 98101-1688
(206) 622-3150

JOHN E. KEEGAN
(206) 628-7688

August 17, 1992

Ms. Ingrid Holman
Seattle City Council
Municipal Building, 11th Floor
600 Fourth Avenue
Seattle, Washington 98104

Re: Children's Hospital and Medical Center Application Nos. 8405870 and 9106441

Dear Ms. Holman:

Pursuant to our phone conversation of August 14, I am hereby withdrawing Children's letter to the Council dated July 30, 1992 which requested the clarification of a condition.

Thank you for your consideration and please notify me of the date and time when this matter will be considered by the Council's Land Use Committee.

Very truly yours,

DAVIS WRIGHT TREMAINE

John E. Keegan

JEK:dac
pc: Ruperta Alexis
Treuman Katz
Faith Lumsden
Carol Eychaner

P:\DOCS\17722\160\00046.D20
Seattle

FAX: (206) 628-7040 · TELEX: 328919 DWJ SEA
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DAVIS WRIGHT TREMAINE
Law Offices
2600 Century Square · 1501 Fourth Avenue · Seattle, Washington 98101-1688
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1992 JUL 31 AM 10:06
COMPTROLLER AND CITY CLERK

John E. Keegan
(206) 628-7688

July 30, 1992

Land Use Committee
Seattle City Council
c/o Seattle City Clerk
Municipal Building, First Floor
600 Fourth Avenue
Seattle, WA 98104

Re: Children's Hospital and Medical Center
Application Nos. 8405870 and 9106441

Dear Members of the Council:

The Hearing Examiner, Ms. Ruperta Alexis, has recommended City Council approval for the proposed Children's helistops on the CHMC campus and at the University of Washington Intramural Field site. Children's fully supports the Examiner's recommended decision and recommended conditions of approval and requests a minor clarification.

In Conclusion 5(2), the Examiner recommended the following provision:

> The physician representative selected by the President of the Washington State Society of Pediatrics (WSSP) shall not be a CHMC ***affiliated*** pediatric physician.

Examiner's Report, p. 17 (emphasis supplied).

CHMC agrees with the intent of the above condition to exclude from the Medical Review Team a pediatric physician with significant ties to CHMC. Unfortunately, the term "affiliated" is vague and subject to potential misinterpretation.

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Seattle

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We believe that the term "affiliated", for purposes of membership on the Medical Review Team, should be defined and suggest the following (new language in bold italics):

> The physician representative selected by the President of the Washington State Society of Pediatrics (WSSP) shall not be a CHMC affiliated ***(i.e., a salaried, contracted or active physician who is a voting member of Children's medical staff)*** pediatric physician.

This definition would exclude from membership on the Review Team the 575-675 physicians, whether employed by Children's or not, who regularly admit patients to Children's and practice at Children's. This proposed definition also addresses the concern raised by NEFRN at the hearing. NEFRN stated:

> For instance, it is not at all uncommon for a physician to be a University of Washington-salaried employee, but yet work at CHMC (which is the pediatric teaching facility of the University of Washington). Additionally, grant-supported personnel have offices at CHMC, but would not be considered CHMC-salaried employees.

NEFRN Post-hearing Statement, p. 9. A definition which covers the contracted physicians and active physicians will exclude from the Review Team the UW-salaried physicians and the grant-supported physicians referred to by NEFRN. It will also exclude the 400-500 private physicians who practice actively at Children's but who are not employed by Children's, UW or grant-supported.

This proposed definition would not cover "courtesy staff" who are non-voting members of Children's medical staff and admit patients infrequently or what are known as "affiliated physicians" who receive mailings and attend education sessions at Children's but who are not members of the medical staff and don't admit patients or have staff privileges at Children's. Unless the definition is limited as we have suggested, we are concerned that nearly every pediatric physician in the state could be excluded from appointment to the Medical Review Team by the Washington State Society of Pediatrics. This would defeat the purpose of having pediatric expertise from the WSSP on the Review Team.

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Thank you for your consideration.

Sincerely yours,

DAVIS WRIGHT TREMAINE

John E. Keegan

JEK:ajp
pc: Ruperta Alexis
Treuman Katz
Faith Lumsden
Carol Eychaner

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Seattle

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AFFIDAVIT OF SERVICE BY MAILING

State of Washington)
)
County of King)

Marta R. Idowu, being first duly sworn, upon oath deposes and states:

That on the 17th day of June, 1992, affiant deposited in the mails of the United States and the Mail/Messenger Service (used for City personnel only) a sealed envelope containing AN ORDER, with postage prepaid, addressed to the parties listed in this affidavit or attached mailing list in the below-entitled Council Conditional Use Case.

Marta R. Idowu

Subscribed and sworn this 18th day of June, 1992.

Notary Public in and for the State of Washington, residing in Seattle.

CHILDREN'S HOSPITAL AND MEDICAL CENTER C.F. 297288 and ~~298740~~
DCLU Application 8405870 and 9106441

MAILING LIST ON BACK

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Mailing list for
8405870 and 9106441
297288 and 298740

FAITH LUMSDEN
DCLU
MS 02-04-01

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1501 4TH AVENUE
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PETER J. EGLICK
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SEATTLE WA 98164

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AFFIDAVIT OF SERVICE
BY MAILING

STATE OF WASHINGTON)
COUNTY OF KING)

MARTA R. IDOWU, BEING FIRST SWORN UPON, OATH DEPOSES AND STATES:

THAT ON THE 16th DAY OF July, 19 92, AFFIANT DEPOSITED IN THE MAILS OF THE UNITED STATES AND THE MAIL MESSENGER SERVICE (used fo City Personnel only) A SEALED ENVELOPE CONTAINING A DECISION OR RECOMMENDATION WITH POSTAGE PREPAID, ADDRESSED TO THE PERSONS LISTED BELOW OR ON THE REVERSED FOR THE APPEAL/APPLICATION/PETITION OF CHILDREN'S HOSPITAL AND MEDICAL CENTER FILE NO. 8405870, 9106441 & 297288, 298740

Marta R. Idowu

SUBSCRIBED AND SWORN THIS 16th DAY OF July 1992

Joyce L. Fritts
NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON, RESIDING IN SEATTLE
My commission expires 4-5-96

Mailing list on back

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Mailing list for
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JAMES A. DIEGEL
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PAUL WILLIAMS MD
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MT. VERNON WA 98273

KATHY MOREFIELD
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3405870 and 9106441
297288 and 298740

PAT SCHNEIDER
LAW DEPT
MS 01-10-01

GOVERNMENTAL RESEARCH LIB.
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Ingrid Holmlund
Legislative
MS 01-11-01

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DCLU
MS 13-07-01

MARK CLEMMENS
ENGINEERING PLANNING
MS 13-04-01

CITY CLERK
MS 01-01-01

JADA BARTEAUX
CITY COUNCIL
MS 01-11-01

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MS 13-07-01

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Seattle Department of Construction and Land Use

Laura Gilbert, Acting Director
Norman B. Rice, Mayor

May 14, 1992

MASTER USE PERMIT

NOTICE OF DIRECTOR'S RECOMMENDATION ON COUNCIL CONDITIONAL USE, ENVIRONMENTAL DETERMINATION AND PUBLIC HEARING

Children's Hospital and Medical Center has applied for a permit to allow an emergency helistop on the CHMC campus and a second, primary helistop on the University of Washington campus near the intramural fields.

Project numbers: 8405870 and 9106441
Addresses: 4800 Sand Point Way N.E. and 2501 N.E. 45th Street
CF numbers: 297288 and 298740

The Director's recommendation is that the Council Conditional Use be conditionally approved. Recommended conditions relate to limiting noise, improving safety and monitoring of landings (types of equipment used and flight paths).

ENVIRONMENTAL DETERMINATION

DCLU has determined that the Final Environmental Impact Statement (FEIS) adequately describes and assesses the adverse impacts of the proposal. The proposal has been conditioned to mitigate impacts. Although significant noise impacts occur, the benefits of the proposal have been found to outweigh the adverse impacts.

INFORMATION AVAILABLE

Copies of the Director's Report and Recommendation and the application materials are available at the DCLU Master Use Permit Information and Notification Center, 710 Second Avenue, Suite 200, Dexter Horton Building. Questions may be directed to Faith Lumsden, Senior Land Use Specialist, 684-8875, at DCLU.

PUBLIC HEARING

A public hearing to take public comment on the Director's recommendation and to establish the record for this application will be held on **June 23, 1992**, beginning at 9:00 a.m. in Room 1310 Alaska Building, 618 Second Avenue. The first two hours of the hearing have been scheduled for presentations by DCLU and CHMC. (This location is accessible.) Citizens may call the Office of Hearing Examiner in June to confirm timing for public testimony or to request accommodations for disability.

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WRITTEN COMMENTS

Written comments may be submitted through **June 23, 1992**. Comments may be sent to:

Office of Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

Those persons who want to receive a notice of the Hearing Examiner's recommendation should specify that request in their comment letter.

HOW TO APPEAL THE ENVIRONMENTAL DETERMINATION

Appeals of the decision finding the EIS to be adequate may be submitted to the Hearing Examiner through **May 29, 1992**. Appeals should be addressed to the Hearing Examiner at the address above.

Any appeal of the SEPA determination will be heard at the conclusion of the public hearing. A second day, June 24, 1992, is available for the appeal, if necessary.

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Faith L L/Use

Seattle
Department of Construction and Land Use

RECEIVED
MAY 15 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dennis J. McLerran, Director
Norman B. Rice, Mayor

CONTACT: Faith Lumsden, 684-8875

FOR IMMEDIATE RELEASE

DCLU Recommends Children's Hospital Helistop Solution

The City of Seattle Department of Construction and Land Use has published a recommendation to allow helicopter landings at Children's Hospital in Northeast Seattle for patients who are "most critically ill."

DCLU's recommendation on the hospital's request for conditional use approval to establish a helistop will next be the subject of a public hearing before the City's Hearing Examiner on June 23. City Council consideration of the helistop will follow in late summer. Approval requires City Council action.

DCLU's recommendation calls for limited landings at Children's Hospital, with the majority of helicopter landings to take place at an improved helistop located by the intramural playfields on the University of Washington campus. The recommendation also would establish limits on type of helicopter, noise restrictions and various safety standards.

DCLU's files on the helistop issue, including a detailed Environmental Impact Statement are available for public review at the Master Use Counter, Suite 200, Dexter Horton Building, 710 2nd Avenue. Project numbers for the helistop, which has been under review since 1984, are 8405870 and 9106441.

* * *

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Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Norman B. Rice, Mayor

RECEIVED
MAY 1 1992

April 24, 1992

Re: 4800 Sand Point Way Northeast
FLL MUPs #8405870 and #9106441 FLL

Suzanne Peterson, Director
Governmental Relations
Children's Hospital and Medical Center
4800 Sand Point Way Northeast
P. O. Box C-5371
Seattle, Washington 98105

Dear Ms. Peterson:

The Department of Construction and Land Use (DCLU) is preparing to publish its recommendation on the proposed helistop at Children's Hospital and Medical Center (CHMC). Prior to publication of the recommendation, CHMC must pay the fee for the time spent reviewing the project. On February 22, 1989, DCLU notified CHMC that $71.00 per hour would be charged for environmental review costs incurred after January 1, 1989. CHMC must also pay, at an hourly rate of $71.00, for all time spent on the original Council Conditional Use component.

To date, over 600 hours of land use review time have been spent on this project. Since January, 1989, approximately 84 of these hours have been charged to billable environmental review. Since January, 1985, approximately 170 hours have been charged to the Council Conditional Use component. The remaining hours were assigned to environmental review and, according to our letter of February 22, 1989, are not billable.

The majority of the billable hours for this project have been, and will continue to be, charged to the original project, #8405870. CHMC also has a second project, at the Intramural Activities Field site, #9106441. This project is an integral piece of the preferred alternative to the originally proposed CHMC helistop. Because of its more recent application date, it is subject to the current fee ordinance with an hourly charge of $110. The hourly fee for project #9106441 will be $1,798.50 for 16.35 hours. You have paid a deposit of $1,100 toward this fee, so only an additional $698.50 is owing.

In addition to the hourly fees incurred to date, we estimate a substantial number of additional billable hours will be

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spent in the upcoming public hearings. To cover these hours, as well as the time to finalize the recommendation, we are adding 50 hours to the current bill. Following a Council decision on the project, DCLU will total the billable hours. In the unlikely event that fewer than an additional 50 hours are accounted for, the overpayment will be credited to any other fees owing or will be refunded. If more than 50 hours are shown, a new bill will be generated.

The amount owing at this time accounts for hours spent through approximately April 20, 1992, plus an estimate of time needed to complete the project.

MUP #8405870

Council Conditional Use	170 hours	
Environmental Review	84 hours	
Additional Billable (estimate)	50 hours	
TOTAL	304 X $71.00 =	$21,584.00

MUP #9106441

Council Conditional Use (average hours)	16.35 X $110.00 =	1,798.50
	less deposit	<1,100.00>
TOTAL		$ 698.50
TOTAL AMOUNT DUE		$22,282.50

5/4/92

If you have questions c ease call me at 233-3856. We hope t ation in early May, but must receive pa tion. We look forward to comple ting th

Sincerely,

Laura L. Gilbert
Acting Director

Faith L. Lumsd
b

By
Faith L. Lumsden
Senior Land Use Speciali

FLL:mrr
wp1\petersn

0•*
ccu — 170•+
ccu — 50•=
220•*
220•X
71•=
15620•*
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<R— 84•X
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15620•=
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BEFORE THE HEARING EXAMINER
OF THE CITY OF SEATTLE

In the Matter of the Petition of CHILDREN'S HOSPITAL AND MEDICAL CENTER Council Conditional Use	C.F. File: 297288 and 298740 DCLU Application: 8405870 and 9106441 NEFRN STATEMENT IN SUPPORT OF REVISED HELISTOP CONDITIONS

I. INTRODUCTION.

These comments on the Children's Hospital and Medical Center's ("CHMC") proposal to locate helistops at its Laurelhurst campus and at the University of Washington's nearby Graves Field are submitted on behalf of North East Families for Residential Neighborhoods ("NEFRN"). NEFRN is a non-profit corporation that was formed, in part, to assist the residential community adjacent to CHMC in reviewing and addressing the impacts of the proposed helicopter use. Its diverse membership includes residents (both property owners and tenants) of single-family, multifamily and senior housing from a range of economic backgrounds.

CHMC was established in the Laurelhurst residential neighborhood as a private children's orthopedic hospital in 1953. Although the character and uses surrounding the CHMC campus are predominantly residential (and CHMC's underlying zoning continues to be single-family), the one-time community hospital has in recent years aggressively pursued a growth policy, resulting in substantial expansion of both its facility and programs. CHMC's incremental growth (including, for instance, the construction of medical office space and a multi-level parking garage) has for the most part been permitted by the City without any serious regard for the effect on the residential neighborhood of converting a small community hospital into a mushrooming medical center. However, the land use incompatibility and cumulative environmental impacts of CHMC have become increasingly apparent with every new expansion.

Despite (or perhaps because of) the campus expansion during the last decade, CHMC continues to pursue major development and new uses for the campus. New proposed expansions (which include additions to the hospital, height increases, buffer reductions and another parking facility) are being considered as part of CHMC's first major institution master planning process. The process is in its early stages (the Master Plan Advisory Committee is still discussing scoping for the environmental

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impact statement -- "EIS") and adoption of a final Master Plan is anticipated by the end of 1993 (per telephone conversation with Cheryl Cronander of the Department of Neighborhoods assigned to CHMC Master Plan Advisory Committee).

However, one significant CHMC proposal is conspicuously absent from the Master Plan proposed development: the CHMC campus helistop. Initially proposed by CHMC in 1984 to be served by Airlift Northwest, a hospital-sponsored emergency medical air service,[1] the helistop was the subject of a 1986 Draft EIS that substantially underestimated the number of helicopter landings projected for the campus.[2] Rather than complete the permitting and EIS process at the time, CHMC instead apparently chose to forego City approvals, while continuing to receive an increasing number of non-permitted helicopter landings. Now, after a nearly five year lapse in the permit process, CHMC has resurrected the helistop proposal, seeking its review in isolation from the substantial additional development proposed for the CHMC campus and outside of the now-established master planning process.

II. ADDITIONAL CONDITIONS ARE REQUIRED TO MITIGATE IMPACTS ON THE SURROUNDING RESIDENTIAL COMMUNITY IF THE HELISTOPS AT CHMC AND GRAVES FIELD ARE APPROVED.

The helistops proposed for the CHMC campus and the University's Graves Field can only be permitted as a Council

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[1] Airlift Northwest was founded in 1982 by a consortium of Seattle-area regional medical centers, including the University of Washington Medical Center, Harborview Medical Center, Providence Medical Center and CHMC. See April 1991 Final EIS, Volume I, page 23. Contrary to statements made in DCLU's Analysis and Recommendation for the helistop, CHMC is not the only consortium member without a helistop on its campus; Providence Hospital, which, like CHMC, is also located in a residential neighborhood, does not have a helistop.

[2] According to the helistop's Final EIS, Airlift Northwest's actual helicopter transports to CHMC between 1986 and 1990 (which occurred even though CHMC had not obtained the required City approvals) exceeded the earlier Draft EIS projections for each of the five years as follows: actual CHMC transports exceeded projections for 1986 by 7%; 1987 by 47%; 1988 by 31%; 1989 by 68% and 1990 by 49%. The discrepancy between Airlift Northwest's actual total helicopter transports (to CHMC and other hospitals) and estimated total transports is even greater: actual total transports exceeded projections for 1986 by 4%; 1987 by 41%; 1988 by 77%; 1989 by 82% and 1990 by 96%. See April 1991 Final CHMC Helistop EIS, Volume I, page 28.

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Conditional Use. SMC 23.69.012.C establishes the following criteria for review and approval of helistops proposed for sites located in a Major Institution overlay zone:

1. A helistop may be permitted as a Council conditional use if the Council finds that:

   a. The helistop is needed to save lives;

   b. The helistop is located so as to minimize impacts upon surrounding residential property;

   c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

2. The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas.

The Land Use Code, through the Council conditional use criteria described in Section II above, seeks to establish a balance between CHMC's goals and the City's obligation to protect surrounding residents and properties from the incompatible helistop use and its associated impacts. Permitting all emergency medical service helicopter landings only at the Graves Field site would strike such a balance.

Nonetheless, CHMC continues to support (and DCLU has recommended) a proposal for joint use of the CHMC campus site and the Graves Field site, identified in the FEIS as CHMC's "preferred Alternative". Should the Hearing Examiner determine that the two-site proposal is generally consistent with the conditional use criteria, additional conditions and modification of DCLU-proposed conditions are necessary to ensure that the helistop, once constructed and in operation, remains consistent with the criteria for approval and with the impacts and mitigation measures identified in the EIS and the DCLU Analysis and Recommendation. A separate statement of the text of NEFRN's proposed conditions for the helistop approvals is attached for the Examiner's review; the basis for each of the proposed conditions is discussed in detail below.

Condition No. 1:

Approval of the helistop at the Children's Hospital Medical Center (CHMC) Kitchen Garden site is temporarily granted for a period not to exceed two (2)

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years. During this time, the helistop proposal for the Kitchen Garden site shall be reviewed as part of the CHMC Master Planning process.

If, through the Master Planning process, City Council approves a more permanent helistop at the Kitchen Garden site, conditions contained in this temporary approval of the helistop at the Kitchen Garden site shall be incorporated into the adopted CHMC Master Plan, together with any additional conditions that may be identified and required by City Council. The Kitchen Garden helistop shall cease operation at the end of this temporary approval period if the helistop is not approved in the CHMC Master Plan.

Discussion:

NEFRN proposes a temporary conditional use approval for the helistop. Temporary approval allows CHMC to legally operate its helistop facility, and provides the City and neighborhood some limited control over its impacts, until the full implications of the helistop can be evaluated in the context of CHMC's expansion and Master Plan. Such coordinated environmental and land use review of the helistop and proposed campus expansion is essential in order to determine whether the expanded facilities and activities proposed in the CHMC Master Plan (such as the increase in beds) will precipitate increased use of the helistop--perhaps beyond unacceptable levels. See Attachment A, description of Master Plan Proposal distributed April 20, 1992 to Master Plan Advisory Committee. Further, the CHMC Master Plan proposal to significantly increase the allowable building height from 50 feet to 105 feet above and around the Kitchen Garden site must be reviewed for its potential effect on the proposed helistop. See Attachment B, Proposed Height Standards, distributed April 20, 1992 to Master Plan Advisory Committee.

Despite the obvious advantages (and legal mandate) to coordinate environmental and land use review of concurrent development on the CHMC campus, there is no reference in the helistop EIS to CHMC's proposed expansion and pending Master Plan. Similarly, the CHMC Master Plan seems to indicate that the helistop is either non-existent, or is an approved, existing facility, rather than a proposed project like the rest of the Master Plan development. See Attachment C, proposed Master Plan illustrations distributed April 20, 1992 to Master Plan Advisory Committee. The relationship between CHMC's proposed expanded activities and facilities and the helistop should be evaluated in the CHMC Master Plan. A condition making the helistop approval temporary pending completion of the Master Plan process would ensure that the Master Plan process would not be frustrated by piecemeal approval of the helistop.

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Condition No. 2:

> Approval and operation of the Kitchen Garden helistop on the CHMC campus is dependent upon concurrent approval and operation of the Intramural Activities/Graves Field site. If, for any reason, the Graves Field helistop is not approved, or ceases operation after approval, the use of the Kitchen Garden site shall not be expanded in any way beyond this conditional approval.

Discussion:

NEFRN's proposed clarifying condition addresses the relationship between the Kitchen Garden and Graves Field helistops, and particularly the use of the Kitchen Garden site in the absence of the Graves Filed helistop.

Both CHMC and DCLU support the joint approval of helistops at the Kitchen Garden and Graves Field sites and link them inextricably. Yet, DCLU does not carry over this link to its approval conditions, even though its Analysis and Recommendation concludes that the Graves Field site actually serves as impact mitigation, by reducing the number of helicopter landings that might otherwise be directed to the CHMC campus:

> Under the Preferred Alternative, only the most critically ill or injured patients would land at Children's. Most flights would land at the IMA [Graves] Field and the patients would be transported by ground ambulance to the hospital...
>
> * * *
>
> The Graves Field helistop works to minimize flights to the Children's campus, further minimizing impacts to the hospital neighborhood . . . The Department concludes the IMA/Graves Field helistop, as an integral piece of the CHMC preferred alternative, meets the required conditional use criteria.

See May 14, 1992 DCLU Analysis and Recommendation, pages 10 and 18.

Thus, while DCLU relies on the ability of Graves Field to accept the majority of CHMC-bound helicopters, the DCLU-recommended conditions do not include language necessary to

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ensure that this intent is carried out so that the Graves Field site, which is not owned and controlled by CHMC but by the University of Washington, would continue to be available to CHMC for as long as the Kitchen Garden helistop is in operation. NEFRN's proposed condition clarifies that the Kitchen Garden site cannot be used to accommodate additional, less-essential landings in the event the Graves Field site should be discontinued. Alternatively, the Hearing Examiner could require that the Kitchen Garden helistop shall only be operated if the Graves Field site is available to reduce helicopter demand and help minimize unauthorized landings.

Condition No. 3:

> Approval for the helistop on the CHMC campus is limited solely to the proposed Kitchen Garden site as shown on Figure 5 of the April 1991 Final Environmental Impact Statement. Location of the helistop on any other portion of the CHMC campus will require additional environmental review and new land use approvals, including as part of the CHMC Master Plan review process.

Discussion:

NEFRN'S proposed condition prohibits the operation of the helistop on any CHMC campus site other than the Kitchen Garden site currently before the Examiner for approval without going through a new, complete environmental review and permitting process. Both DCLU and CHMC have identified and evaluated the Kitchen Garden site as the location of the CHMC campus helistop; the approval conditions should therefore specify that the conditional use permit, if granted, is not a general license for any CHMC campus location (which might entail different impacts, flight paths, and safety considerations), but is specific to the Kitchen Garden site. It is not uncommon for an applicant, particularly a major institution, to request site "substitutions" after approval for a particular use or facility is granted, and public and Hearing Examiner scrutiny has abated. In this case, the possibility of a site substitution is heightened by CHMC's apparent failure to specifically commit to the Kitchen Garden helistop location pad in its proposed Master Plan, and by its concurrent, unexplained request for substantial building height increases for the Kitchen Garden site. See Attachments B and C. Site substitution in this case would be well beyond the scope of the helistop conditional use analysis; indeed, DCLU has already determined in its analysis that no alternative sites on the CHMC campus are appropriate for a helistop:

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On-campus locations other than the Kitchen Garden site will not be discussed in this report. The Department has concluded that if helicopter landings are allowed to continue of the CHMC campus, they should be made at the most open, flat, and nearest location to the emergency room...the alternative on-campus locations [considered in the EIS] are located either closer to neighboring residential and educational properties or on steeper or depressed terrain that would be somewhat less safe for landings and take-off.

Condition No. 4:

Only the most critical and life-threatening medical emergencies shall be allowed to land at CHMC. All other patients shall land at the Intramural Activities field site. The initial decision whether to land at the Kitchen Garden site or the Intramural Activities field is to made by the referring physician and/or attending medical team. For patients whose condition deteriorates in flight, the medical team on board the helicopter may decide to land at CHMC. The following conditions indicate a landing at CHMC is appropriate:

a. unstable airway;
b. inability to ventilate/oxygenate;
c. inability to maintain adequate cardiac output;
d. inability to maintain adequate cerebral bloodflow; or
e. the persistence of unstable vital signs despite heroic attempts to control them.

Discussion:

NEFRN supports DCLU Condition No. 1 as recommended.

Condition No. 5:

Landings at the CHMC Kitchen Garden site shall not exceed an average of 6 landings per month (calculated for each three-month quarter) and shall not exceed 15 landings in any given month. Additional landings that are clearly due to catastrophic events shall not be subject to the above limitations.

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Discussion:

NEFRN proposes a condition that will limit the use of the Kitchen Garden helistop to approximately the level of use established in the Final EIS. Although the Final EIS and DCLU Analysis and Recommendation clearly represented that "only the most critically ill and injured patients [would] land at a helistop that would be constructed at the Kitchen Garden site," DCLU's decision is void of any substantive condition limiting the number of landings to those that formed the basis of the environmental review and DCLU's analysis. Without such a threshold, residents surrounding CHMC and directly in the flight paths will have little hope of limiting impacts to the levels represented in the Final EIS.

The need for definitive limits on the number of landings at the Kitchen Garden helistop, consistent with the very same EIS analysis on which DCLU bases its recommended approval, is apparent in the Final EIS. Draft EIS projections of the number of landings at CHMC for a future five-year period substantially underestimated the growth in the use of emergency helicopter service on the CHMC campus. The Final EIS identifies some of the factors which can contribute to an increase in emergency helicopter service:

> advances in medical technologies; growth in population of children; inability to predict disasters -such as toxic spills, nuclear facility accidents, earthquakes; increase poverty that results in the increase in premature births; changes in hospital referral patterns or the capabilities of Children's or of other community hospitals..."

Thus, without established limits within which CHMC is permitted to operate the helistop, the intensity of the helistop use at the Kitchen Garden site could easily and quickly exceed the level of use that formed the basis of the conditional use approval.

The Final EIS estimates that there will be approximately 3 to 5 landings per month at the Kitchen Garden site if only the most critically ill patients are flown directly to the CHMC campus. See April 1991 Final EIS, Volume I, page 72. Elsewhere in the Final EIS and the DCLU Analysis and Recommendation, the Director of the Seattle-King County Department of Public Health estimated the number of landings at the Kitchen Garden site to be 6. See April 1991 Final EIS, Volume III, Appendix A, page A-7 and May 14, 1992 DCLU Analysis and Recommendation, page 18. Finally, according to CHMC's listing of critically ill and

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injured patients transported directly to CHMC from 1985 to 1989, only once during the approximately four and one-half year period did the number of landings reach 7 per month; the average number of monthly landings were 2.5 (1985), 3.1 (1986), 3.5 (1987), 3 (1988), and 4.7 (1989).

Therefore, based on the above EIS projections and historical records, it is reasonable to establish landing thresholds at an average of 6 landings per month (averaged over a three month interval, or quarterly, to be concurrent with the medical review committee meetings), with a maximum of 9 landings for any given month. Maintaining these thresholds will help ensure that the proposed helistop remains consistent with representations made in the Final EIS, which form the record basis for DCLU's recommended approval.

Condition No. 6:

> Only Augusta 109 helicopters, with a four-bladed rotor, shall be permitted to land at the CHMC campus helistop, in order to reduce noise impacts and reduce the potential for helicopter accidents in the CHMC area. Should Airlift Northwest or another aeromedical vendor seek to establish regular flights to CHMC in helicopters other than the Augusta 109 studied in the EIS, a supplemental EIS must first be prepared to evaluate the noise impacts of the new equipment, and new land use approvals must first be obtained. Two-bladed rotor helicopters, such as but not limited to the Huey helicopters typically used by the Military Assistance to Safety and Traffic (MAST), Coast Guard, and Navy, are prohibited from landing at the CHMC campus.

Discussion:

NEFRN proposes several revisions to DCLU recommended Conditions No. 2 and No. 7[3] in order to more effectively preclude use of the CHMC campus helistop by larger, more noisy, unauthorized helicopters. NEFRN's revisions focus on the helicopter and not the service organization flying them.

DCLU correctly determined in its Analysis and Recommendation that helicopter landings at the CHMC campus should be limited to "helicopters no noisier than the Augusta 109." See May 14, 1992

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[3] At the start of the hearing, DCLU itself indicated it would propose revisions to conditions concerning Huey helicopters and the use of helicopters by MAST, the Coast Guard and the Navy.

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DCLU Analysis and Recommendation, page 19. According to the Final EIS, the Augusta 109, with its four-bladed rotor, "represents near-current low-noise helicopter design." See April 1991 Final EIS, Volume I, page 112. Noise generated by other two-bladed rotor helicopters, such as those used by MAST, the Coast Guard and the military (commonly referred to as the Huey), "would be more noticeable than [the noise] of the Augusta because of more blade slap" that is inherent with two-bladed rotor helicopters. See April 1991 Final EIS, Volume I, page 118.

In its attempts to minimize noise impacts to both the nearby residents and schools, DCLU-proposed Conditions No. 2 and No. 7, which preclude MAST, Coast Guard and Navy helicopters from using the campus helistop and restrict use of the campus helistop to helicopters with four-bladed rotors, respectively. In addition, DCLU permitted helicopter substitution in Condition No. 7 if noise impacts were "shown" to be no greater than those of the Augusta 109. While these conditions seek additional impact mitigation for the residential neighborhood, they fall short of providing the intended elimination of noise-generating helicopters.

For instance, DCLU's proposed Condition No. 2 inappropriately focuses on the service organization and not on the type of noise-generating helicopter typically used by the organization. Moreover, DCLU's provision in Condition No.7 for a helicopter substitution based simply on a "showing" of reduced noise, does not address the need for expert noise analysis of any newly proposed helicopter, nor the public's right to participate in the review process.

NEFRN's proposed revisions address these concerns. In addition, NEFRN has included a limitation on the size of the landing pad (20 feet X 20 feet) to more accurately reflect FAA Guidelines for the Augusta 109 and help discourage use by other, unauthorized larger helicopters, such as the prohibited Huey. As currently proposed by CHMC, the 40 foot X 40 foot landing pad unnecessarily, and by the Final EIS' own admission, "exceeds the requirement for size and weight limitations" of the Augusta, and, in fact, would meet the FAA landing pad specifications for the Huey. See Attachment D, April 1991 Final EIS, Volume III, Appendix B, Table B-1. See also April 1991 Final EIS, Volume I, page 100.

Condition No. 7:

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A Medical Review Committee shall be established to review compliance with Conditions 4, 5 and 6, allowing only the most critically ill patients and only certain helicopters to land at CHMC. The Committee shall consist of the following 5 members:

a. One representative of CHMC selected by the Chief Executive Officer, who will co-chair the Committee with the representative from the Laurelhurst Community Club (LCC) described below;

b. One representative of the Laurelhurst residential neighborhood selected by the LCC, who will co-chair the Committee with the CHMC representative;

c. Two general non-CHMC-affiliated pediatric practitioners (primary care physicians), to be nominated and agreed upon by both the CHMC and LCC members in a) and b) above;

d. One representative with experience in emergency airlift services, to be nominated and agreed upon by both the CHMC and LCC members in a) and b) above.

Committee members will be appointed for up to a three year term, with replacements to be made by the original appointing authority. Committee members in b), c) and d) shall have no affiliation with CHMC, the University of Washington Hospital, Airlift Northwest or other organization that may present a potential conflict of interest, or the appearance of a conflict of interest. Nominees for positions c) and d) above shall submit to the CHMC and LCC Committee members a statement disclosing any potential conflict of interest, including but not limited to any past or present affiliation with CHMC, the University of Washington Hospital and Airlift Northwest, which can be evaluated by CHMC and LCC.

The Committee shall meet quarterly to review and evaluate helicopter transports to CHMC. To facilitate this review, CHMC will make available to the Committee all helicopter and medical data relating to each landing, including the number and type of helicopter landings, progress notes from the transport team and transfer notes from the referring institution and physician. It will be CHMC's responsibility to ensure patient-identifying information is removed prior to release of medical data to the Committee. The Committee shall evaluate the data to determine whether the use of air transport directly to the CHMC campus

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was justified in each case and whether the operation of the helistop complies with Conditions 4, 5 and 6. The Committee evaluations shall be included in a report submitted after each quarterly review meeting to the Department of Construction and Land Use (DCLU), the Chief Executive Officer of CHMC, LCC, the Airlift Northwest Executive Committee and Medical Director, and the Citizens' Advisory Committee for CHMC Master Plan. The report shall be made available to the public upon request and for a reasonable duplicating fee.

The Committee shall adopt rules and procedures as necessary to ensure compliance with laws and administrative rules governing confidentiality of patient medical records, while also providing for public input and review of the Committee's work. Each Committee member for positions b), c) and d) above will be compensated for his/her service on the Committee at the rate of $100.00 per landing, and all Committee members may be reimbursed for reasonable out-of-pocket expenses identified by the rules promulgated by the Committee. Compensation and expense reimbursement shall be paid by CHMC. CHMC shall provide administrative and staff support needed by the Committee, including assistance in preparing the quarterly report for Committee review and approval.

The Committee shall monitor CHMC helicopter landings for as long as there remains a helistop on the CHMC campus. Changes in Committee structure and operation shall be made only upon concurrence by CHMC, LCC and DCLU.

Discussion:

CHMC and DCLU have proposed in DCLU recommended Condition No. 3 that a medical review committee be established to monitor compliance with permit conditions restricting landings on the CHMC campus. While monitoring is no substitute for effective, tangible mitigation, this proposed mitigation measure will be rendered particularly ineffective in the absence of substantial revisions proposed by NEFRN regarding the composition and compensation of the committee. NEFRN's revisions are required in order to ensure a neutral, objective and complete monitoring of helistop landings.

One of the most serious flaws in the DCLU proposed committee is its composition. For the committee to have any credibility and for it to be able to freely review helistop landings and information, it is essential that no committee member have a real or perceived conflict of interest with CHMC. To the contrary,

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the committee membership proposed by DCLU is actually weighted very heavily in favor of CHMC.

For instance, the "qualified neonatologist, pediatric intensivist or pediatric emergency physician" representatives are all specialized, tertiary care physicians (as opposed to more generalized, primary care physicians who would likely be on the referring end of any helicopter transport); if from the local area, it is very likely that each would have present or former ties with the University of Washington (which uses CHMC as its pediatric teaching facility), or, even more likely, with CHMC itself. While the current President of the Washington State Medical Association, responsible under DCLU's proposed conditions for appointing one of the above tertiary specialists, does not at this time appear to be directly employed by the University or CHMC, it would not be at all unusual for this to occur.

Indeed, such is the case with the President of the Washington State Society of Pediatrics, Edgar Marcuse. Although he is the Director of CHMC's Ambulatory Care unit, Marcuse would nonetheless be empowered to select one of the five committee members. Thus, when Marcuse's committee appointment is combined with CHMC's own direct representative and the CHMC-trained or -employed tertiary specialist, CHMC would be able to highly influence the composition and decisionmaking of the committee under DCLU's proposal. In addition, under DCLU's proposed condition, there are no safeguards to ensure that the anticipated "citizen representative" does not work or perform other services for CHMC or a CHMC affiliate.

NEFRN's proposed condition establishes a more balanced committee with decision-making shared by CHMC and community representatives (co-chairs). Actual and potential conflicts of interests would be identified and screened by the committee co-chairs. Unlike the DCLU proposal which unreasonably anticipates a volunteer monitoring committee, CHMC would budget for and pay committee members modestly for their review of the circumstance of each helistop landing. Such compensation is essential due to the amount of review time required (thoughtful review of medical notes and deliberation on approximately 18 cases or landings each quarter). This same compensation will also help maintain committee continuity, reduce absenteeism, and most importantly, will enable the selection of committee members that are beyond the local area and, therefore, CHMC's sphere of influence.

Another critical aspect of NEFRN's proposed condition calls for committee monitoring throughout the operation of the helistop. The committee is the conduit through which DCLU and the public can obtain and review helicopter landing information that is not first processed by CHMC. Without the committee, access to such information, and the ability to enforce compliance

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with permit conditions, will be extremely limited. And while monitoring and enforcement are important under static conditions, these functions take on increasing importance as CHMC pursues the expansion proposed in its Master Plan. Unforeseen or planned changes to the CHMC campus and program, or to the Graves Field site, could easily affect helistop landings at the Kitchen Garden site and potentially increase the pressure for CHMC to expand its emergency air service beyond that approved by the conditional use. The monitoring committee should thus be provided for the life of the helistop project to ensure ongoing compliance with permit conditions.

Condition No. 8:

> CHMC shall report on a quarterly basis to the Committee and to the community the number and nature of helicopter landings at the Intramural Activities/Graves Field site.

Discussion:

NEFRN supports the DCLU recommended Condition No. 3 with the revision that the CHMC-produced quarterly lists of landings be provided to the monitoring committee, in addition to the normal neighborhood distribution. Although the list is distinct from the more-detailed and unaltered information provided to the committee in accordance with Condition No. 7, it can be used by the committee, in part, to cross-reference and confirm the consistency of the public lists with separately provided committee information.

Condition No. 9:

> Use of the CHMC campus helistop is limited solely to the transport of patients (and accompanying medical transport teams). Helicopters shall not be allowed to land at CHMC campus to transport medical staff prior to (or after) patient transport, or to transport organs, tissue, medical treatments, medical equipment or any other material not specifically required for and accompanying a patient.

Discussion:

DCLU recommends that the Kitchen Garden helistop be used only for the "most critical and life-threatening medical emergencies" as proposed in CHMC's Preferred Alternative in the Final EIS. See May 14, 1992 DCLU Analysis and Recommendation, Condition No. 1. Part of this limitation is the DCLU recommended

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prohibition (Condition No. 5) against transporting medical staff when not accompanied by a patient requiring treatment. NEFRN supports this condition and proposes additional detailed limitations on the transport of other non-patient related items. Such specificity is required in order to eliminate ambiguity regarding future landings and potential CHMC requests to expand the use of its helicopter service.

Condition No. 10:

DCLU shall review the quarterly reports of the Medical Review Committee. More than one landing in violation of Condition No. 4, 5 or 6, above, in any given month shall be grounds for DCLU suspension of the helistop permit for the Kitchen Garden site. CHMC may request reinstatement of the suspended conditional use permit by appealing to the Hearing Examiner, who shall then hold a public hearing during which CHMC and the general public may offer testimony regarding the violations, suspension and requested reinstatement. The Hearing Examiner shall reinstate the helistop conditional use permit based only on effective, specific corrective measures that will be implemented to prevent repeated violations.

Discussion:

NEFRN proposes specific enforcement thresholds that reflect CHMC and DCLU representations in the environmental review documents regarding the intensity of use and level of impacts. In situations where a significantly incompatible use such as the helistop is imposed on a residential community, it is the City's obligation to clearly define the limits of tolerance and ensure that permit violations, particularly those involving substantial impacts, are swiftly acted upon. The NEFRN condition clearly provides a specific enforcement threshold that is reasonable and consistent with CHMC's stated intensity of use (plus some leeway); it also provides a public process through which concerns can be raised and resolved.

Condition No. 11:

The flight paths for approach and departure to the CHMC and Intramural Activities/Graves Field helistops shall be strictly maintained as described in the Final EIS and shall to the greatest extent possible avoid residential areas. All helicopters shall follow the primary flight path along Northeast 45th Street and Sand Point Way, entering the CHMC campus from the north

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and northwest. The secondary flight path, which enters the CHMC campus from the northeast over the residential neighborhood, shall be followed only when winds out of the northwest quadrant are in excess of approximately 17 knots. Airlift Northwest and any other regular carrier shall establish a training program to introduce all pilots to the approved flight paths.

More than one deviation from or unjustified use of the approved flight paths per month shall be grounds for DCLU suspension of the helistop permit at the Kitchen Garden site. CHMC may request reinstatement of the suspended conditional use permit by appealing to the Hearing Examiner, who shall then hold a public hearing during which CHMC and the general public may offer testimony regarding the violations, suspension and requested reinstatement. The Hearing Examiner shall reinstate the helistop conditional use permit based only on effective, specific corrective measures that will be implemented to prevent repeated violations.

Discussion:

Similar to Condition No. 10 above, NEFRN proposes a specific enforcement threshold that reflects CHMC and DCLU representations in the environmental review documents regarding the helicopter flight patterns. The condition also specifies the flight patterns described in the Final EIS and the conditions under which they shall be followed. See April 1991 Final EIS, Volume I, pages 55 through 58.

Condition No. 12:

Prior to beginning regular use of the Kitchen Garden helistop, all Airlift Northwest (ALNW) pilots shall make at least one test landing and take-off at the site. CHMC and ALNW shall schedule the training/test flights for a weekday between the hours of noon and 3:00 p.m. Advance notice of at least ten (10) days shall be given to the surrounding communities of the test/training time, date and expected number of flights. The number of flights shall be held to the minimum necessary to provide adequate training.

Discussion:

NEFRN supports DCLU condition No. 9 as recommended.

Condition No. 13:

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New pilots shall make at least one landing at CHMC under supervision of a pilot experienced in landing at CHMC prior to unsupervised patient transport landings. Non-patient transport training flights, if desired, may be scheduled no more than twice per year without approval from DCLU. Notice of training flights shall be provided to surrounding communities as stated in Condition 13.

Discussion:

NEFRN supports DCLU condition No. 10 as recommended.

DATED this 24 day of June, 1992.

Respectfully submitted,

PETER J. EGLICK & ASSOCIATES

By: _____
Peter J. Eglick, Bar No. 8809
Attorney for North East
Families for Residential
Neighborhoods

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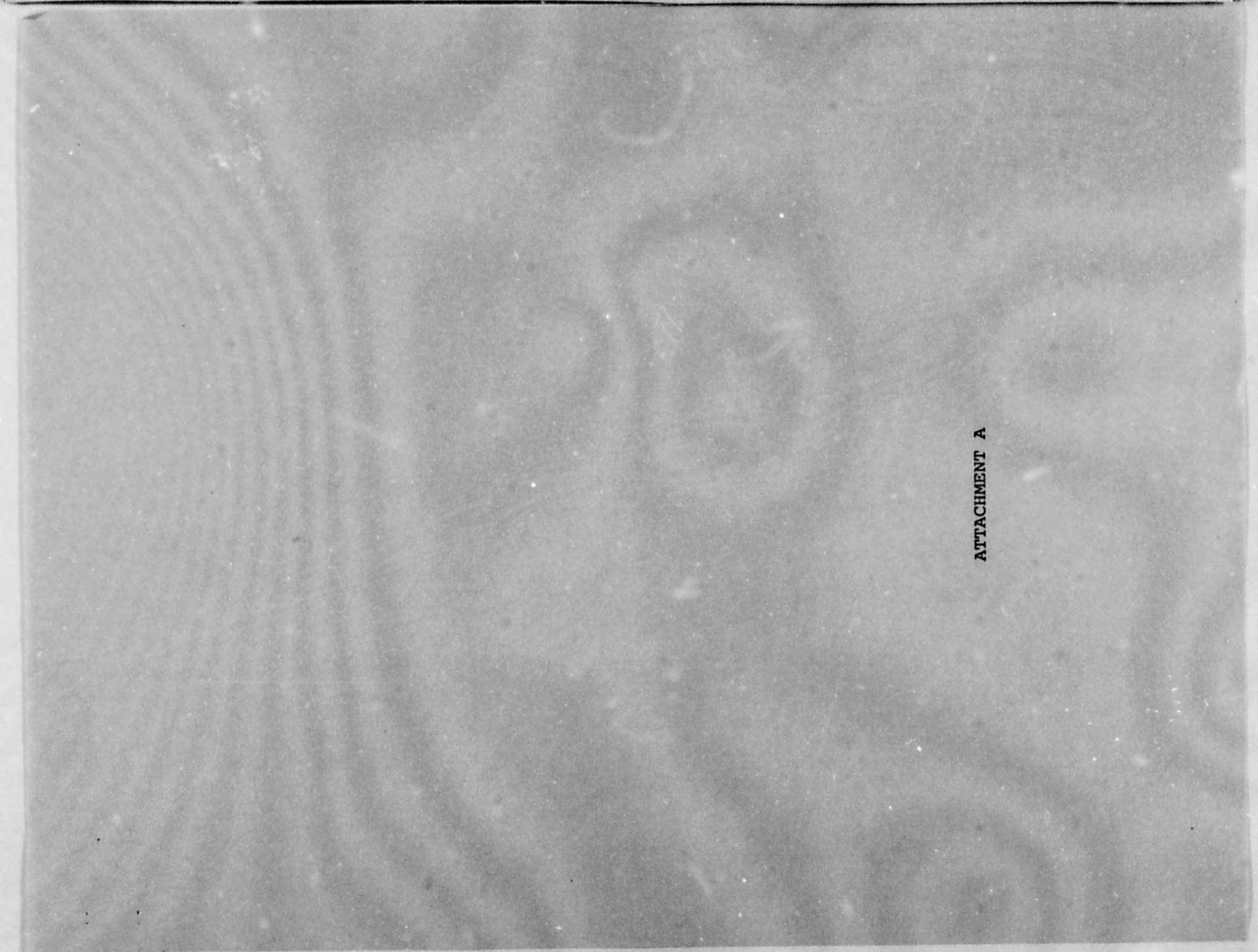

ATTACHMENT A

II. THE MASTER PLAN PROPOSAL

Project		Use	Floors	BGSF*/ Floor	Total BGSF*	Development Type
1	I-Wing Replacement	Clinic	4	12,500	50,000	Replacement
2	I-Wing Demolition	Clinic	4	(7,200)	(28,800)	Demolition
3	I-Wing Atrium	Public/Cafe	1	5,000	5,000	New
4	H-Wing Atrium	Entry	1	4,000	4,000	New
5	Research Building	Research	4	17,000	68,000	New
6	8th Floor Corridor	Circulation	1	1,100	1,100	New
7	3rd, 4th, 5th Floor Corridor	Circulation	3	960	2,880	New
8	D & T South (C Wing)	D & T/Admin	4	11,600	46,400	Expansion/Infill
9	Bed Wing	Lobby/Conference	1 [Level 1]	17,000	17,000	New
		Beds	3 [Levels 2-4]	14,000	42,000	
10	D & T North (C Wing)	D & T	1 [Level 1]	2,500	2,500	Expansion/Infill
			2 [Levels 3-4]	6,300	12,600	
11	D-Wing Infill	Clinic	2	3,750	7,500	Expansion/Infill
12	F-Wing Demolition	Research	3	(5,000)	(15,000)	Demolition
13	G-Wing Expansion	Clinic/Offices	5 [Levels 4-8]	7,000	35,000	Expansion/Infill
13A	G-Wing Expansion	Clinic/Offices	2 [Levels 4-5]	2,500	5,000	Expansion/Infill
Total Construction					298,990	
Net Construction (adjusted for demolition)						255,180
14	Structured Parking	Parking	3	48,000	144,000	New
15	Move Hospital Entry	(411 cars)				
16	Move Clinic Entry					
	1B Renovation for Beds	Beds	1	15,000	15,000	
	General Renovation			10,000	10,000	
	Total Renovation				25,000	

* BGSF: Building Gross Square Feet

Increase of 60 beds proposed, for a total of 268 beds.

Total existing development = 877,980 square feet including 316,955 square foot garage

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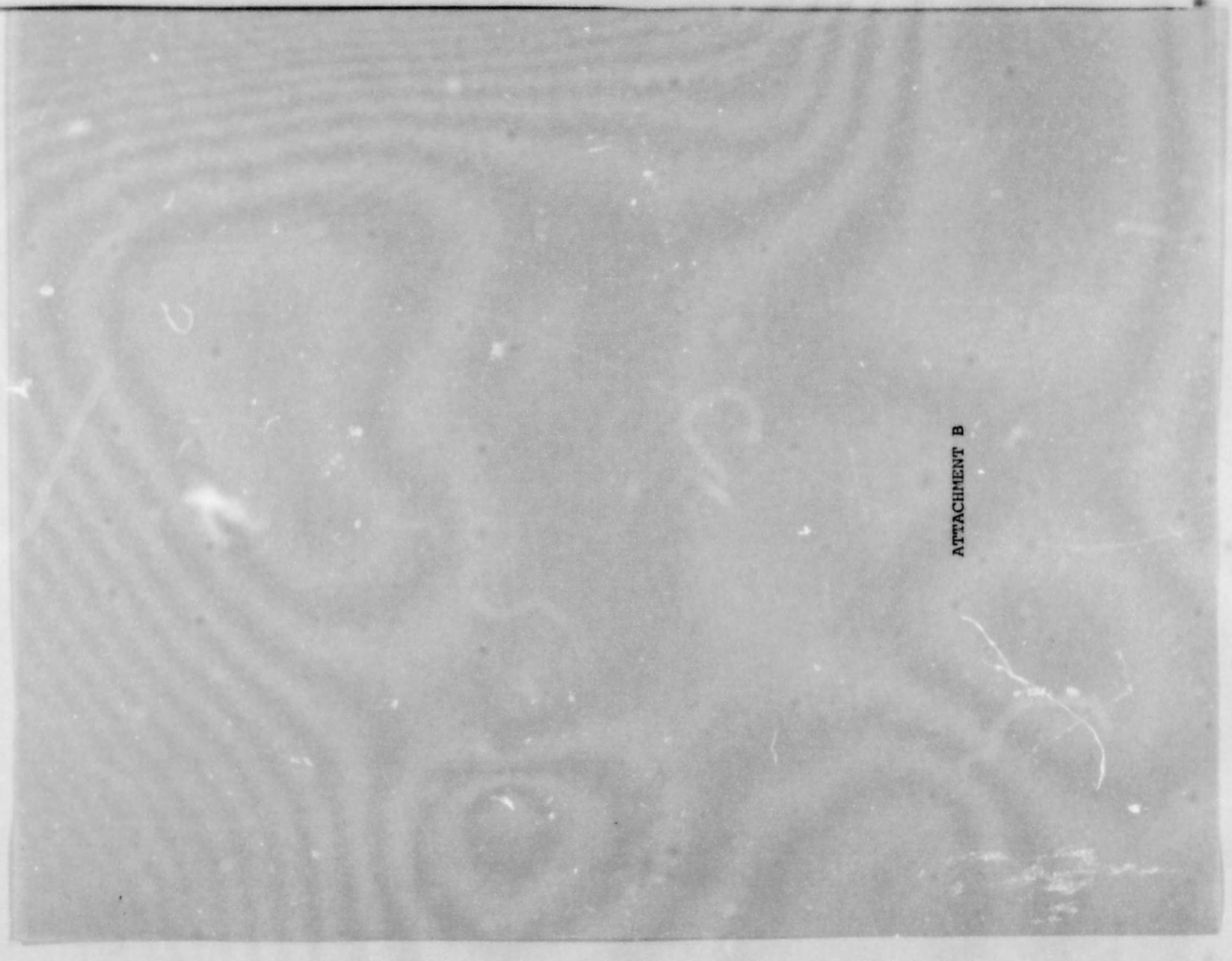

ATTACHMENT 8

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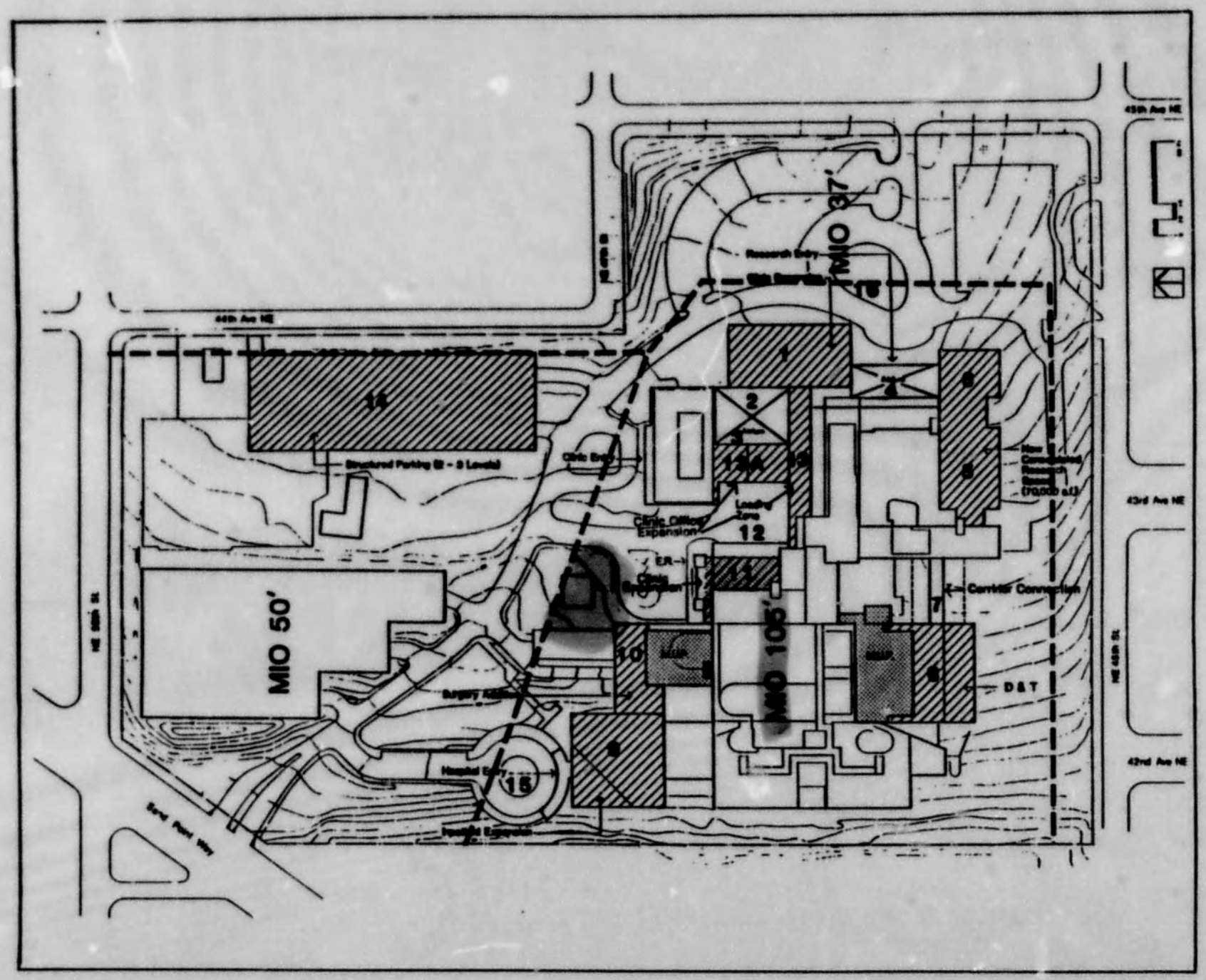

Proposed Height Standards

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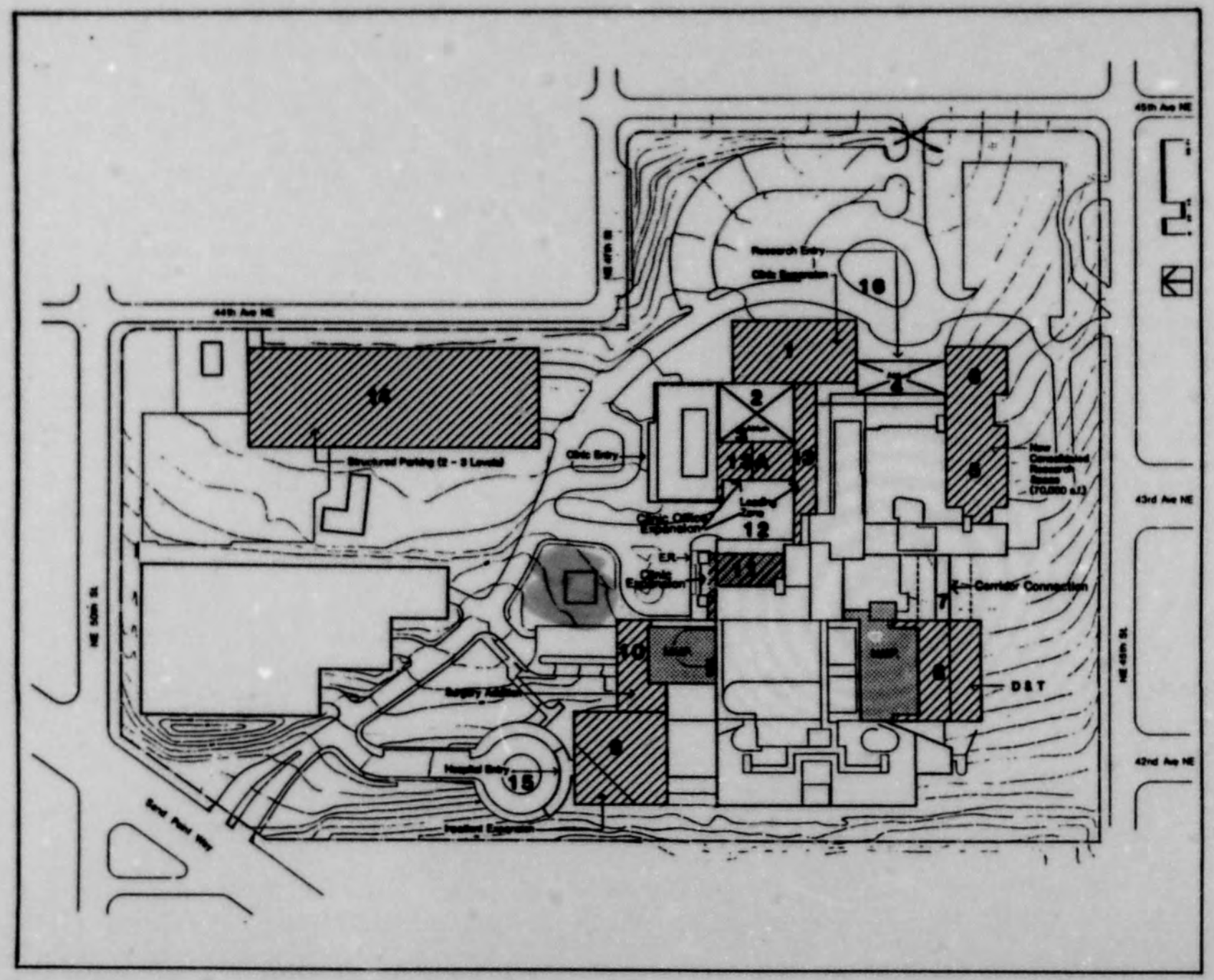

Seattle Campus Plan

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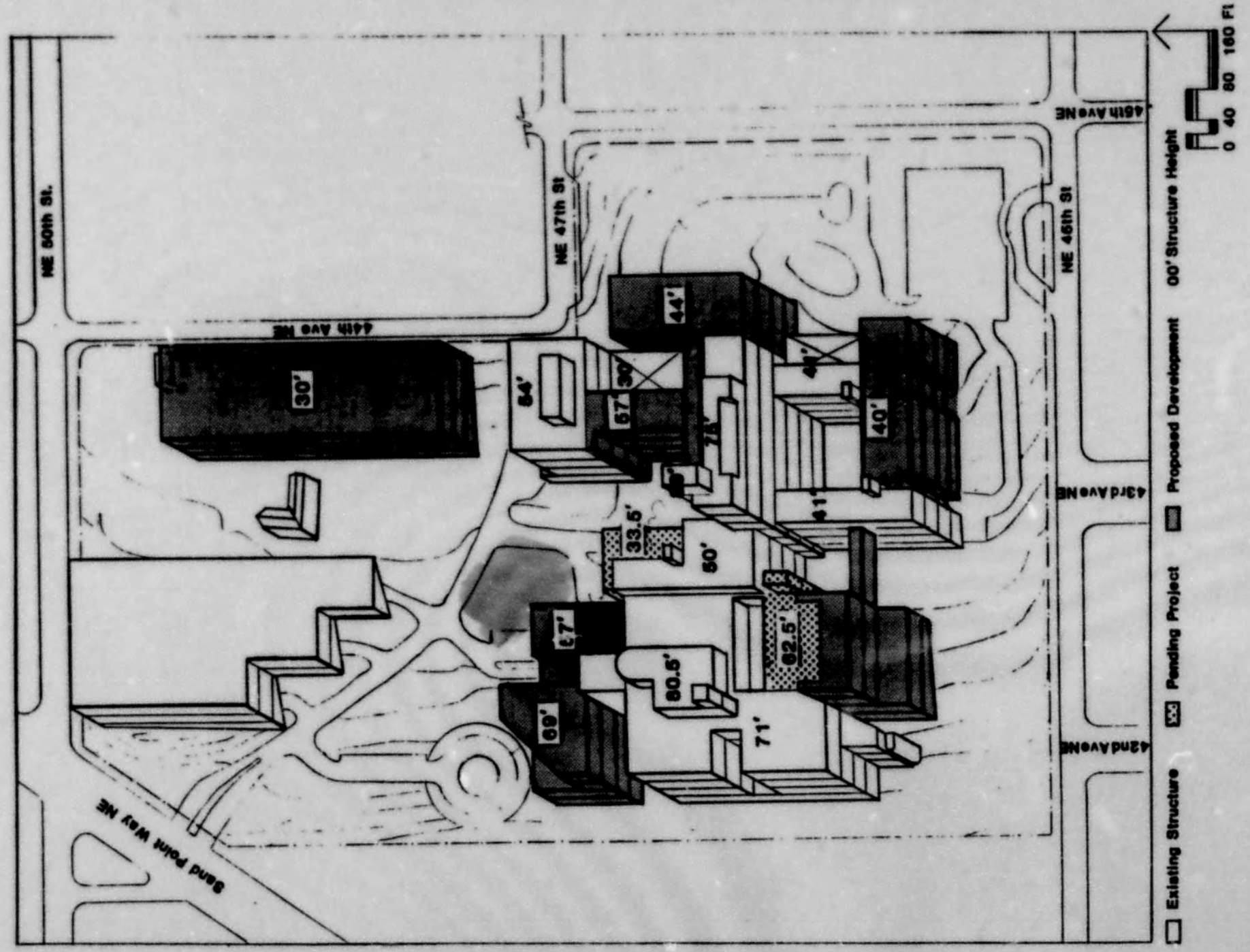

Proposed Master Plan Development

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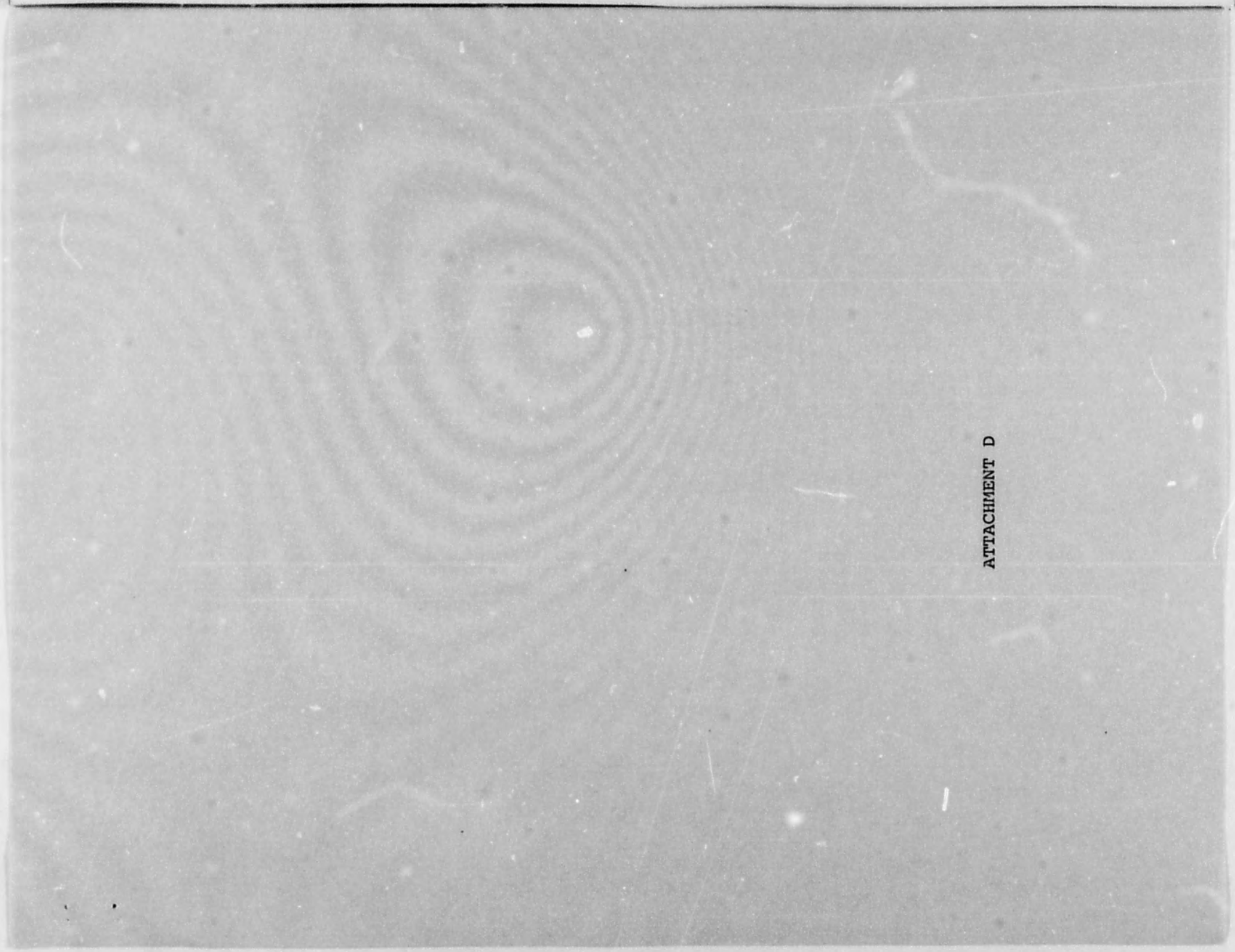

ATTACHMENT D

Table B-1
SUMMARY OF FAA RECOMMENDED HELISTOP DESIGN GUUIDELINES
AND CONSISTENCY OF KITCHEN GARDEN SITE WITH GUIDELINES

Helistop Specifications[1]	Helicopter Design Guidelines	Compliance[3]	Comment
TAKEOFF AND LANDING AREA Diameter: 85'	2.0 x rotor diameter	Agusta (72.0'): yes Huey (96.6'): no	
HELIPAD Length: 40' Width: 40'	1.5 x undercarriage length	Agusta (17.4'): yes Huey: yes	Minimally sized touchdown pads are not encouraged, but may be used in cases of economic or aesthetic necessity.
UNOBSTRUCTED AREA Length: 12' on each side of minimum (72')	Recommended: 1/3 x rotor diameter Minimum: 10' on each side	Agusta (12.0'): yes Huey (16.1'): no	An obstacle-free area surrounding the takeoff and landing area. Keep the area clear of parked helicopters, buildings, fences, etc. The three-foot fence surrounding the take-off and landing area would be an obstruction.
HELICOPTER PRIMARY SURFACE Diameter: 85'	2.0 x rotor diameter	Agusta (72.0'): yes Huey (96.6'): no	Imaginary plane overlying the takeoff and landing area. Area to be free of all obstacles.
HELICOPTER APPROACH SURFACE Length: 4,000' Inner width: 85'	4,000 feet 2.0 x Rotor Diameter	Yes Agusta (72.0'): yes Huey (96.6'): no	Approach and departure surfaces should not be penetrated by any objects that are determined to be hazards to air navigation. Several trees and light poles, that would be obstructions within the surfaces at Children's must be removed or relocated. At least one unobstructed approach and departure surface is required.
Outer width: 500'	500'	Yes	
Slope: 8:1 (horizontal to vertical)	8:1	Yes	

Table B-1 (continued)

Helistop Specifications[1]	Helicopter Design Guidelines	Compliance[3]	Comment
HELICOPTER TRANSITIONAL SURFACE			
Length: Full length of approach and primary surfaces	Full length of approach and primary surfaces	Yes	Surface should not be penetrated by objects.
Width: 250' from approach and primary surface center line	250' from approach and primary surface center line	Yes	
Slope: 2:1	2:1	Yes	

1 Sizes given are the dimensions of the proposed Kitchen Gardens helistop
2 Guidelines as set forth in FAA's Heliport Design Advisory Circular 150/5390-2; January 4, 1988.
3 Numbers in ( ) are recommended dimensions for each helicopter

BEFORE THE HEARING EXAMINER
OF THE CITY OF SEATTLE

In the Matter of the Petition of CHILDREN'S HOSPITAL AND MEDICAL CENTER	C.F File: 297288 and 298740 DCLU Application: 8405870 and 9106441
Council Conditional Use	NEFRN-PROPOSED MINIMUM CONDITIONS FOR THE HELISTOP AT THE KITCHEN GARDEN SITE

NEFRN proposes that the following minimum conditions be recommended by the Hearing Examiner for approval by City Council in the event the helistop Council Conditional Use is approved by the City:

1. Approval of the helistop at the Children's Hospital Medical Center (CHMC) Kitchen Garden site is temporarily granted for a period not to exceed two (2) years. During this time, the helistop proposal for the Kitchen Garden site shall be reviewed as part of the CHMC Master Planning process.

   If, through the Master Planning process, City Council approves a more permanent helistop at the Kitchen Garden site, conditions contained in this temporary approval of the helistop at the Kitchen Garden site shall be incorporated into the adopted CHMC Master Plan, together with any additional conditions that may be identified and required by City Council. The Kitchen Garden helistop shall cease operation at the end of this temporary approval period if the helistop is not approved in the CHMC Master Plan.

   [New NEFRN Condition]

2. Approval and operation of the Kitchen Garden helistop on the CHMC campus is dependent upon concurrent approval and operation of the Intramural Activities/Graves Field site. If, for any reason, the

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Graves Field helistop is not approved, or ceases operation after approval, the use of the Kitchen Garden site shall not be expanded in any way beyond this conditional approval.

[New NEFRN Condition].

3. Approval for the helistop on the CHMC campus is limited solely to the proposed Kitchen Garden site as shown on Figure 5 of the April 1991 Final Environmental Impact Statement. Location of the helistop on any other portion of the CHMC campus will require additional environmental review and new land use approvals, including as part of the CHMC Master Plan review process.

[New NEFRN Condition]

4. Only the most critical and life-threatening medical emergencies shall be allowed to land at CHMC. All other patients shall land at the Intramural Activities field site. The initial decision whether to land at the Kitchen Garden site or the Intramural Activities field is to made by the referring physician and/or attending medical team. For patients whose condition deteriorates in flight, the medical team on board the helicopter may decide to land at CHMC. The following conditions indicate a landing at CHMC is appropriate:

   a. unstable airway;
   b. inability to ventilate/oxygenate;
   c. inability to maintain adequate cardiac output;
   d. inability to maintain adequate cerebral bloodflow; or
   e. the persistence of unstable vital signs despite heroic attempts to control them.

[DCLU Condition No. 1]

5. Landings at the CHMC Kitchen Garden site shall not exceed an average of 6 landings per month (calculated for each three-month quarter) and shall not exceed 15 landings in any given month. Additional landings that are clearly due to catastrophic events shall not be subject to the above limitations.

[New NEFRN Condition]

6. Only Augusta 109 helicopters, with a four-bladed rotor, sha..l be permitted to land at the CHMC campus helistop, in order to reduce noise impacts and reduce the

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potential for helicopter accidents in the CHMC area. Should Airlift Northwest or another aeromedical vendor seek to establish regular flights to CHMC in helicopters other than the Augusta 109 studied in the EIS, a supplemental EIS must first be prepared to evaluate the noise impacts of the new equipment, and new land use approvals must first be obtained. Two-bladed rotor helicopters, such as but not limited to the Huey helicopters typically used by the Military Assistance to Safety and Traffic (MAST), Coast Guard, and Navy, are prohibited from landing at the CHMC campus.

To help ensure that the above restriction is observed, the size of the helicopter concrete landing pad at the Kitchen Garden site shall not exceed 20 feet by 20 feet.

[Revised DCLU Conditions No. 2 and No. 7]

7. A Medical Review Committee shall be established to review compliance with Conditions 4, 5 and 6, allowing only the most critically ill patients and only certain helicopters to land at CHMC. The Committee shall consist of the following 5 members:

a. One representative of CHMC selected by the Chief Executive Officer, who will co-chair the Committee with the representative from the Laurelhurst Community Club (LCC) described below;

b. One representative of the Laurelhurst residential neighborhood selected by the LCC, who will co-chair the Committee with the CHMC representative;

c. Two general non-CHMC-affiliated pediatric practitioners (primary care physicians), to be nominated and agreed upon by both the CHMC and LCC members in a) and b) above;

d. One representative with experience in emergency airlift services, to be nominated and agreed upon by both the CHMC and LCC members in a) and b) above.

Committee members will be appointed for up to a three year term, with replacements to be made by the original appointing authority. Committee members in b), c) and d) shall have no affiliation with CHMC, the University of Washington Hospital, Airlift Northwest or other organization that may present a potential conflict of interest, or the appearance of a conflict of interest. Nominees for positions c) and d) above shall submit to

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the CHMC and LCC Committee members a statement disclosing any potential conflict of interest, including but not limited to any past or present affiliation with CHMC, the University of Washington Hospital and Airlift Northwest, which can be evaluated by CHMC and LCC.

The Committee shall meet quarterly to review and evaluate helicopter transports to CHMC. To facilitate this review, CHMC will make available to the Committee all helicopter and medical data relating to each landing, including the number and type of helicopter landings, progress notes from the transport team and transfer notes from the referring institution and physician. It will be CHMC's responsibility to ensure patient-identifying information is removed prior to release of medical data to the Committee. The Committee shall evaluate the data to determine whether the use of air transport directly to the CHMC campus was justified in each case and whether the operation of the helistop complies with Conditions 4, 5 and 6. The Committee evaluations shall be included in a report submitted after each quarterly review meeting to the Department of Construction and Land Use (DCLU), the Chief Executive Officer of CHMC, LCC, the Airlift Northwest Executive Committee and Medical Director, and the Citizens' Advisory Committee for CHMC Master Plan. The report shall be made available to the public upon request and for a reasonable duplicating fee.

The Committee shall adopt rules and procedures as necessary to ensure compliance with laws and administrative rules governing confidentiality of patient medical records, while also providing for public input and review of the Committee's work. Each Committee member for positions b), c) and d) above will be compensated for his/her service on the Committee at the rate of $100.00 per landing, and all Committee members may be reimbursed for reasonable out-of-pocket expenses identified by the rules promulgated by the Committee. Compensation and expense reimbursement shall be paid by CHMC. CHMC shall provide administrative and staff support needed by the Committee, including assistance in preparing the quarterly report for Committee review and approval.

The Committee shall monitor CHMC helicopter landings for as long as there remains a helistop on the CHMC campus. Changes in Committee structure and operation shall be made only upon concurrence by CHMC, LCC and DCLU.

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[Revised DCLU Condition No. 3]

8. CHMC shall report on a quarterly basis to the Committee and to the community the number and nature of helicopter landings at the Intramural Activities/Graves Field site.

[Revised DCLU Condition No. 4]

9. Use of the CHMC campus helistop is limited solely to the transport of patients (and accompanying medical transport teams). Helicopters shall not be allowed to land at CHMC campus to transport medical staff prior to (or after) patient transport, or to transport organs, tissue, medical treatments, medical equipment or any other material not specifically required for and accompanying a patient.

[Revised DCLU Condition No. 5]

10. DCLU shall review the quarterly reports of the Medical Review Committee. More than one landing in violation of Condition No. 4, 5 or 6, above, in any given month shall be grounds for DCLU suspension of the helistop permit for the Kitchen Garden site. CHMC may request reinstatement of the suspended conditional use permit by appealing to the Hearing Examiner, who shall then hold a public hearing during which CHMC and the general public may offer testimony regarding the violations, suspension and requested reinstatement. The Hearing Examiner shall reinstate the helistop conditional use permit based only on effective, specific corrective measures that will be implemented to prevent repeated violations.

[Revised DCLU Condition No. 6.]

11. The flight paths for approach and departure to the CHMC and Intramural Activities/Graves Field helistops shall be strictly maintained as described in the Final EIS and shall to the greatest extent possible avoid residential areas. All helicopters shall follow the primary flight path along Northeast 45th Street and Sand Poirt Way, entering the CHMC campus from the north and northwest. The secondary flight path, which enters the CHMC campus from the northeast over the residential neighborhood, shall be followed only when winds out of the northwest quadrant are in excess of approximately 17 knots. Airlift Northwest and any other regular carrier shall establish a training program to introduce all pilots to the approved flight paths.

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More than one deviation from or unjustified use of the approved flight paths per month shall be grounds for DCLU suspension of the helistop permit at the Kitchen Garden site. CHMC may request reinstatement of the suspended conditional use permit by appealing to the Hearing Examiner, who shall then hold a public hearing during which CHMC and the general public may offer testimony regarding the violations, suspension and requested reinstatement. The Hearing Examiner shall reinstate the helistop conditional use permit based only on effective, specific corrective measures that will be implemented to prevent repeated violations.

[Revised DCLU Condition No. 8.]

12. Prior to beginning regular use of the Kitchen Garden helistop, all Airlift Northwest (ALNW) pilots shall make at least one test landing and take-off at the site. CHMC and ALNW shall schedule the training/test flights for a weekday between the hours of noon and 3:00 p.m. Advance notice of at least ten (10) days shall be given to the surrounding communities of the test/training time, date and expected number of flights. The number of flights shall be held to the minimum necessary to provide adequate training.

[DCLU Condition No. 9.]

13. New pilots shall make at least one landing at CHMC under supervision of a pilot experienced in landing at CHMC prior to unsupervised patient transport landings. Non-patient transport training flights, if desired, may be scheduled no more than twice per year without approval from DCLU. Notice of training flights shall be provided to surrounding communities as stated in Condition 13.

[DCLU Condition No. 10.]

Respectfully submitted this 24 day of June, 1992.

PETER J. EGLICK & ASSOCIATES

Peter J. Eglick
Attorneys for NEFRN

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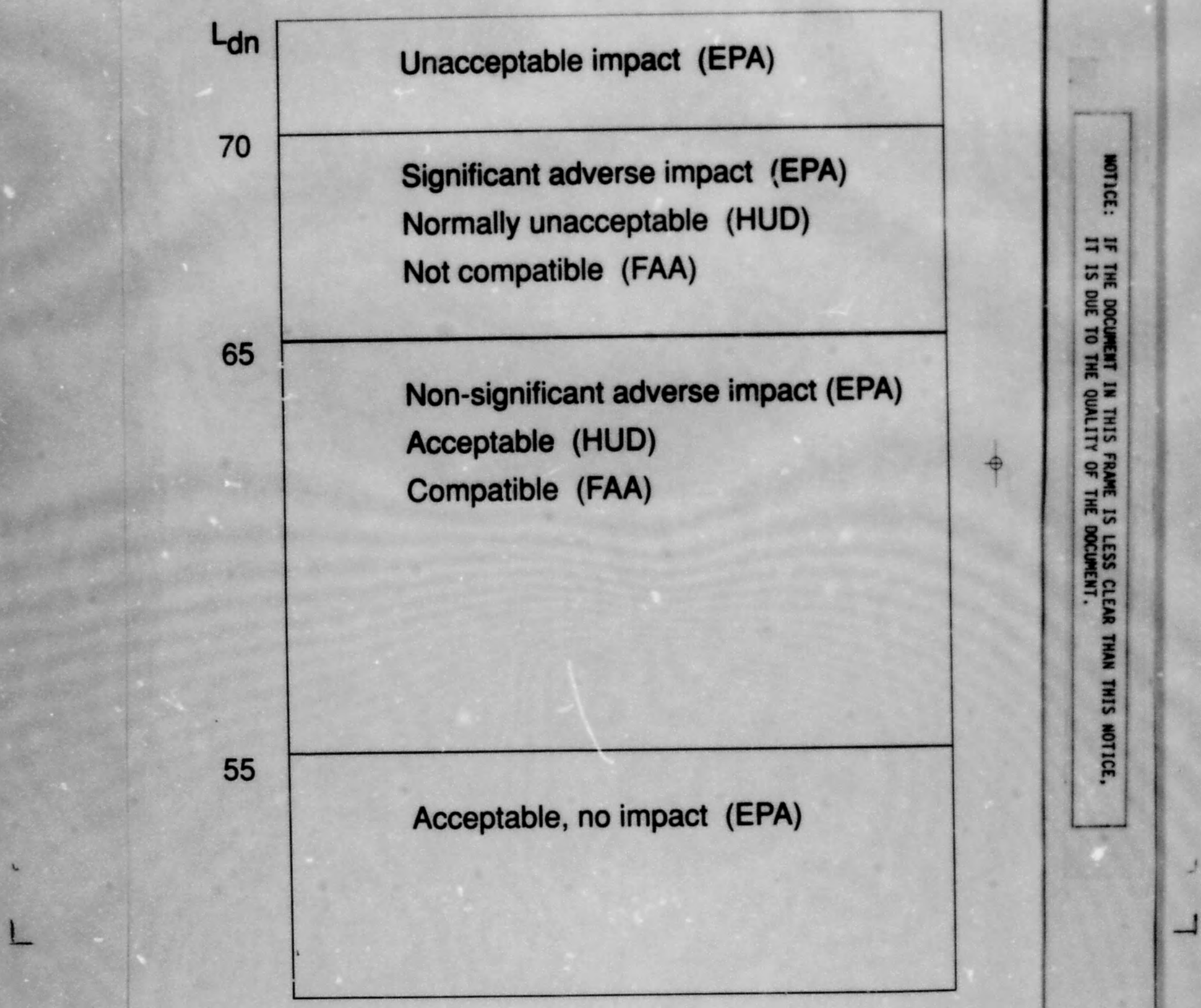
RESIDENTIAL NOISE CRITERIA



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Seattle Department of Construction and Land Use

Laura Gilbert, Acting Director
Norman B. Rice, Mayor

May 14, 1992

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MASTER USE PERMIT

NOTICE OF DIRECTOR'S RECOMMENDATION ON COUNCIL CONDITIONAL USE, ENVIRONMENTAL DETERMINATION AND PUBLIC HEARING

Children's Hospital and Medical Center has applied for a permit to allow an emergency helistop on the CHMC campus and a second, primary helistop on the University of Washington campus near the intramural fields.

Project numbers: 8405870 and 9106441
Addresses: 4800 Sand Point Way N.E. and 2501 N.E. 45th Street
CF numbers: 297288 and 298740

The Director's recommendation is that the Council Conditional Use be conditionally approved. Recommended conditions relate to limiting noise, improving safety and monitoring of landings (types of equipment used and flight paths).

ENVIRONMENTAL DETERMINATION

DCLU has determined that the Final Environmental Impact Statement (FEIS) adequately describes and assesses the adverse impacts of the proposal. The proposal has been conditioned to mitigate impacts. Although significant noise impacts occur, the benefits of the proposal have been found to outweigh the adverse impacts.

INFORMATION AVAILABLE

Copies of the Director's Report and Recommendation and the application materials are available at the DCLU Master Use Permit Information and Notification Center, 710 Second Avenue, Suite 200, Dexter Horton Building. Questions may be directed to Faith Lumsden, Senior Land Use Specialist, 684-8875, at DCLU.

PUBLIC HEARING

A public hearing to take public comment on the Director's recommendation and to establish the record for this application will be held on **June 23, 1992**, beginning at 9:00 a.m. in Room 1310 Alaska Building, 618 Second Avenue. The first two hours of the hearing have been scheduled for presentations by DCLU and CHMC. (This location is accessible.) Citizens may call the Office of Hearing Examiner in June to confirm timing for public testimony or to request accommodations for disability.

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WRITTEN COMMENTS

Written comments may be submitted through **June 23, 1992**. Comments may be sent to:

Office of Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

Those persons who want to receive a notice of the Hearing Examiner's recommendation should specify that request in their comment letter.

HOW TO APPEAL THE ENVIRONMENTAL DETERMINATION

Appeals of the decision finding the EIS to be adequate may be submitted to the Hearing Examiner through **May 29, 1992**. Appeals should be addressed to the Hearing Examiner at the address above.

Any appeal of the SEPA determination will be heard at the conclusion of the public hearing. A second day, June 24, 1992, is available for the appeal, if necessary.

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Open Immediately

Land Use Information
Concerning Your Neighborhood

City of Seattle
Department of Construction and Land Use
710 2nd Avenue Ste 700
Seattle WA 98104-1703

Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Norman B. Rice, Mayor

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MEMORANDUM

TO: Ruperta Alexis, Deputy Hearing Examiner

FROM: Faith Lumsden, Sr. Land Use Specialist FL

DATE: July 2, 1992

SUBJECT: Applicant's Proposed Findings and Conclusions
NEFRN Proposed Conditions

The Department of Construction and Land Use (DCLU) specifically objects to the applicant's proposed conclusion #6 if it includes the statement that "[r]emaining noise impacts are not significant at either helistop." This sentence should be deleted. A conclusion should be added confirming DCLU's conclusion that maximum noise impacts, L_{max}, to residences near the ER helistop remain significant, but that these impacts are outweighed by the benefits to be gained from the preferred alternative proposal.

Applicant's proposed findings E.4, E.5, E.6, E.7, and E.9 should be modified to clarify that DCLU does not accept the 24-hour average, L_{dn}, as an appropriate noise descriptor in situations where the noise is infrequent and unscheduled, especially whereas here, single very loud events result in little or no increase in the 24-hour average.

Finding E.4 should note that L_{dn} is a widely accepted noise descriptor and has been used to evaluate noise impacts and land use compatibility for airport and heliport uses (where noise occurs more frequently than would be expected at the ER or the IMA helistops). Finding E.4 should also state that L_{max} is a poor indicator of average noise impacts on a community.

Finding E.5 should be clarified to indicate that the noted 4 and 5 dBA increases relate to average sound levels over the course of 24 hours.

Finding E.6 should be deleted or should be modified to explain DCLU's position that average sound levels are not the most appropriate measure to consider when examining infrequent and unscheduled noise events. EPA and FAA criteria for average noise significance were only one of several issues considered by DCLU in our determination of significant noise impacts.

Finding E.7 should be modified to state that the maximum sound levels at nearby residences are expected to be about 84 dBA.

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Finding E.9 should be modified to delete the last sentence stating a 20-25% probability of awakening even without helicopter noise. There is no evidence in the record to clarify how this probability might relate to the probability of helicopter-caused awakenings.

DCLU reiterates our previous comments on the original proposed NEFRN conditions and has the following comments on the new or revised NEFRN conditions. NEFRN condition #3 is acceptable. DCLU has the same concerns voiced earlier about placing an upper limit on the number of permitted landings (condition #5). Rather than attempting to prohibit valid landings, if landings increase substantially over time, initiating a public review process through DCLU (similar to NEFRN condition #10) could be required to re-evaluate the landing criteria and other mitigation measures.

Regarding NEFRN condition #6, the discussion states a noise analysis, not a supplemental EIS, should be prepared. It may be the reference to "supplemental EIS" is an error.

NEFRN condition #10 sets out one reasonable approach for monitoring and enforcing the conditions of approval. DCLU expects to implement a system similar to this, but has not yet determined the reasonableness of the timing suggested by NEFRN, or whether preliminary measures such as meetings with the interested parties, short of a hearing process, could facilitate resolution of potential problems.

FLL:sh

cc: John Keegan
Carol Eychaner

flumsde:CHMC9

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BEFORE THE HEARING EXAMINER
OF THE
CITY OF SEATTLE

In the Matter of CHILDREN'S HOSPITAL AND MEDICAL CENTER, Application Nos. 8405870, 9105441	)	C.F. No. 297288 and 298740 APPLICANT'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS

The applicant, Children's Hospital and Medical Center ("Children's"), submits the following proposed findings of fact and conclusions for the subject applications. These findings and conclusions are supported by the record before the Hearing Examiner.

PROPOSED FINDINGS OF FACT

A. Background.

1. Children's has applied for Council conditional use permits to allow a helistop on the Children's campus outside the Emergency Room entrance (the "ER" helistop), and a second helistop on the University of Washington campus near the Intramural Fields (the "IMA Field" helistop). (The names used herein for the two helistops have been chosen for clarity. The ER helistop is also commonly known as the "Kitchen Garden" or the "Children's" or "CHMC" helistop; the IMA Field helistop is also known as the "Graves Field" helistop.)

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2. The Director issued a recommendation on May 14, 1992, that the Council conditional use permits be conditionally approved, pursuant to sections 23.48.005 and 23.69.012C, Seattle Municipal Code ("SMC"). See "City of Seattle Analysis and Recommendation of the Director of the Department of Construction and Land Use," (hereafter "Director's Report"). The Director recommended conditions which relate primarily to noise and safety.

3. Children's original application in this matter, made in November, 1984, No. 8405870, was a request for approval of a single helistop at the Children's campus.

4. Pursuant to the State Environmental Policy Act (RCW 43.21C), and the Seattle SEPA Ordinance, Chapter 25.05 SMC, a draft environmental impact statement (the "DEIS") was issued in September, 1986, and a final environmental impact statement (the "FEIS") was issued in April, 1991. The FEIS included a new alternative to the original proposal (the "Preferred Alternative"), which was developed in response to public comments. Under the Preferred Alternative, the large majority of helicopter flights with patients destined for Children's would land at the University of Washington's IMA Field. A minority of the flights, with the most critical patients, would land at the ER helistop.

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5. Based upon the FEIS, the Director recommended ten conditions for approval. See Director's Report at 19-22. At the hearing before the Examiner, the Director requested modifications to conditions 2 and 7. Condition 2 will no longer preclude landings by all military helicopters, but only by "Huey" helicopters and all other helicopters which are not of a type and design approved by DCLU. The purpose of this revision was to mitigate noise impacts, while allowing for the possibility of changes in the technology used by the military. Condition 7 will no longer limit Airlift Northwest and other aeromedical vendors landing at the ER helistop to use of a helicopter with a four-bladed rotor. Vendors seeking to establish regular flights to Children's ER helistop in helicopters other than the Agusta 109, which is currently used by Airlift Northwest, shall be required to make a showing to the DCLU proving that the noise impacts of the alternative equipment are no greater than for the Agusta 109.

6. Children's concurred in the ten conditions recommended by the Director, as modified by the Director at the hearing. In addition, Children's recommended that Condition 3(3) and (4), which describes two of the medical members of the Medical Review Committee, be revised to exclude appointment of any Children's-salaried physician, or selection by any Children's-salaried physician who may hold the position of president of one of those medical associations at the time of selection.

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B. **Medical Need Considerations**.

1. Children's is a regional pediatric tertiary care center for a four-state region (Washington, Montana, Alaska, and Idaho). Children's cares only for children, provides all essential elements of secondary and tertiary pediatric hospital health care, and provides that care in a comprehensive way. Children's is one of only twenty-five such comprehensive specialty care centers in the country. Testimony, Katz, Neff; Exhibit 11.

2. Children's has three service missions: patient care, education, and research. Its patient care mission includes providing advanced medical care to children regardless of their financial status. In 1991, for example, Children's provided approximately $19 million of uncompensated care. Testimony, Katz. Ability to pay is not a factor in determining which patients receive transportation by helicopter. Testimony, Katz, Copass.

3. Children's is one of the few providers of advanced pediatric tertiary care in the Pacific Northwest. There are no other such facilities in Seattle or King County. See Exhibit 5. Other pediatric tertiary care centers outside King County are listed in the FEIS, (Exhibit 3), Volume I, pp. 10-11, the closest being in Tacoma, Spokane, and Portland. Even among these centers, Children's is the largest, and offers tertiary care

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services not available anywhere else in Washington, Alaska, Montana, or Idaho. Testimony, Copass, Neff. The geographic origin of Children's patients covers a broad area. In 1990, for example, patients came from the following areas (percentages in parentheses): Seattle (27%); other King County (24%); Pierce, Snohomish and Kitsap Counties (25%); other Washington State (19%); and out-of-state (6%). Exhibit 6.

4. Pediatric care is a necessary specialty. Because children are a population infrequently seen by doctors and other medical personnel, and because of their small size, childhood illnesses and injuries require particular skills and experience. Testimony, Copass, Sampson. Even ordinarily routine medical tasks, such as the insertion of an intravenous needle, are often beyond the capabilities of those not specialized in pediatric care. Testimony, Held, Marsh, Sampson, Lozano.

5. Tertiary care is considered the most advanced of medical care services, beyond primary and secondary care. It involves provision of care by medical specialists, as necessary to deal with illnesses characterized by complex patho-physiologic processes. Exhibit 3, Volume I, at 10; Testimony, Neff.

6. In the Pacific Northwest, patients requiring tertiary care are referred to the appropriate provider through what is informally known as the "regional medical referral system." Exhibit 3, Volume I, at 10; Testimony, Katz, Copass.

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This system allows for sophisticated health care to be delivered to the region as a whole, by removing the costs of duplication and competition among specialized services. Testimony, Copass. Specialists at Children's include pediatric cardiologists, pediatric neurosurgeons, neonatologists, pediatric anesthesiologists, and a staff of pediatric nurses and pediatric technicians. Testimony, Neff, Lozano.

7. In conjunction with this regional system, referrals in emergency situations may be made either from hospital to hospital, by a referring physician, or from highly-trained paramedics in the field to the hospital, as a part of Washington's Emergency Medical Service ("EMS") System. Testimony, Katz, Copass, Marsh; see also Exhibit 16 (describing Seattle's paramedic training program). With one helicopter service and a designated trauma, burn and pediatric care center, Seattle and its Puget Sound neighbors have developed an EMS system recognized as a national model of collaboration between medical care providers. Testimony, Katz, Copass.

8. Timely transport of critically ill or injured patients to the referral hospital is a key element of the regional medical referral system. Exhibit 3, Volume I, at 13. Appropriate transport, within an acceptable time duration, means that the strengths of one hospital can be extended to the entire region. Testimony, Copass.

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9. The Director found, based on a report by Dr. Nicola, Director of the Seattle-King County Department of Public Health (Exhibit 3, Volume III, Appendix A) that some emergency patients, whether they are coming from other hospitals or the field, will have medical need of helicopter transport to a tertiary care center such as Children's in order to save their lives.

10. A medical need for helicopter transport can arise from a wide variety of situations and conditions. Typical of the children transported by helicopter to Children's (to either helistop) are those with admitting diagnoses of meningitis, severe asthma, near-drowning, seizures, epiglottitis, asphyxia, chemical poisoning, choking, near-SIDS, and other cardiac, respiratory, or cerebral disorders. Testimony, Neff, Sampson, Lozano; Exhibit 10. Premature infants and other neonates are also a significant group of patients requiring helicopter transport to Children's, with conditions such as congenital heart defects, meconium aspiration, diaphragmatic hernia, and others. Testimony, Copass, Neff, Marsh, Lozano, Sampson.

11. A need for helicopter transport can also be the result of an emergency condition for which ground transport might have been appropriate were it not for the great distance to be travelled, the land or water masses to be negotiated, or the fact

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that traffic patterns or gridlock would make sufficiently quick transport impossible. Testimony, Copass; Exhibit 17.

12. Although traumatized or severely burned patients may require helicopter transport, they would usually be referred to Harborview rather than to Children's. Director's Report at p. 17; Exhibit 3, Volume I, at 13; Testimony, Copass, Logerfo. However, Harborview is not a children's hospital and does not have the staff, skills, or equipment to handle the type of cases that Children's handles. Testimony, Copass, Logerfo.

13. Aeromedical transport, when accompanied by a certified nursing or physician team and appropriate equipment, is a first step in providing tertiary care to the patient. See Exhibit 3, Volume I, at 16; Testimony, Copass. Tertiary care continues with delivery to an appropriate referral hospital, such as Children's. Testimony, Copass, Sampson.

14. Airlift Northwest helicopter services operate 24 hours per day. Each of its two helicopters is staffed by two nurses, one specializing in adult care, and one in pediatric/neonatal care. Testimony, Childs, Sampson. In approximately one half of its pediatric transports, a pediatric physician is substituted for the adult nurse. Testimony, Sampson. The helicopters contain both standard equipment and specialized air transport and pediatric/neonatal equipment, as

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listed in the FEIS. Exhibit 3, Volume I, at 25; Testimony, Sampson.

15. The Director also found, based on the report by Dr. Nicola, that in some Children's-destined emergency cases the patient's condition is sufficiently critical to require transport directly to the emergency room entrance. The purpose is to minimize the number of minutes in transport, and/or the amount of patient manipulation. Exhibit 3, Volume III, Appendix A.

16. In other cases, the care provided by the specialized team within the helicopter is sufficient to stabilize a patient with a life-threatening condition to a point where a landing at the IMA Field, with ambulance transfer, is adequate. Testimony, Neff, Sampson. However, there have been instances in the past where a patient who landed at the IMA Field became unstable in transfer to and transport by an ambulance to the Children's emergency room. Testimony, Sampson.

17. Dr. Nicola found that it is possible for nurses and/or physicians attending to the patient at the time of transport to distinguish between the types of cases requiring transport to each of the two helistops, although this decision must necessarily involve the exercise of medical judgment. Exhibit 3, Volume III, Appendix A. The medical personnel currently involved in this decision process confirmed that, in their experience, it is possible to make appropriate decisions as

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to which helistop the child should be transported. Testimony, Neff, Sampson, Lozano.

18. In addition to Dr. Nicola, the medical need for Children's proposed ER and IMA Field helistops has been supported by the testimony of Dr. Michael Copass, Medical Director of Airlift Northwest; Dr. James Logerfo, Medical Director of Harborview; Dr. John Neff, Medical Director of Children's; Mr. Bill Marsh, Operations Manager, King County Medic I; Ms. Debbie Sampson, Chief Flight Nurse for Airlift Northwest; and Dr. Paula Lozano, Pediatric Resident. The record also contains many statements of medical need for the Children's helistops by physicians, hospitals and paramedics throughout Western Washington. One of the reasons identified in such statements is the lack of capability in these outlying areas to adequately treat critically ill children. See also Exhibits 11, 12, 13 and 14.

19. This section incorporates by reference the Proposed Findings below discussing Considerations Regarding Limitations of Usage to Life-Threatening Emergencies.

C. Considerations Regarding Limitation of Usage to Life-Threatening Emergencies.

1. This section incorporates by reference the Proposed Findings above discussing Medical Need Considerations.

2. Children's has been accepting helicopter transport referrals, which arrive either at the IMA Field or on an area of

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grass outside the Children's emergency room entrance, since the 1970s. Exhibit 3, Volume I, p.1. Summary profiles of every patient transported by helicopter to Children's emergency room entrance from August 1985 to March 1989 are contained in Appendix D of the FEIS, and from March 1989 until March 1992, in Exhibit 10.

3. Helicopter landings which presently occur at Children's emergency room entrance are made on an area for which Children's has no helistop permit. These landings are not, however, a violation of Seattle's Land Use Code. It is DCLU's policy to treat the landings as legal pending the City's final decision on the helistop application, which has been pending since November, 1984. This is the application which is being acted upon in this proceeding. Testimony, Lumsden.

4. The primary helicopter transport service operating within the Northwest's regional referral system has, since 1985, been Airlift Northwest. Airlift Northwest was started in 1982, and is a Seattle-based air ambulance service operated as a non-profit consortium by Children's, the University of Washington Medical Center, Harborview Medical Center, and Providence Medical Center. It is designed to support the regional medical referral system and specifically to make specialized critical care accessible to patients throughout the Pacific Northwest and Alaska. Testimony, Copass, Childs.

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5. The decision to use helicopter services is made either by a physician at the referring hospital, after communication with a physician at the receiving hospital, or by paramedics in the field, in consultation with a local emergency doctor. Testimony, Marsh, Sampson.

6. All of the Airlift Northwest transports destined for Children's involve life-threatening situations. Helicopter transport is necessary due to the exhaustion of skills, equipment, or other resources at the place of patient pickup, the length of time required for ground transport, and the critical condition of the patient. Testimony, Copass, Sampson. Use of the helicopters to transport patients whose condition is less than life-threatening is unlikely, given that the referring doctors and paramedics realize that if the helicopter is used unnecessarily, it may not be available for the patient who is in a life-threatening situation. Testimony, Marsh. Those patients who are flown to the IMA Field rather than to the ER helistop are patients who, while they were in a life-threatening condition at the time of pickup, have been adequately stabilized pre-flight or in-flight. Testimony, Sampson.

7. Airlift Northwest has, since 1989, operated according to standing orders by which its in-flight medical teams identify those emergency cases requiring helicopter transport directly to the Children's emergency room. These conditions are:

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1) unstable airway; 2) inability to ventilate/oxygenate; 3) inability to maintain adequate cardiac output; 4) inability to maintain adequate cerebral blood flow; and 5) the persistence of unstable vital signs despite heroic attempts to control them. See Exhibit 10, Medical Justification Form; Testimony, Copass, Neff, Sampson. The decision where to land is made, and can be changed, in-flight, depending on the condition of the patient. Testimony, Sampson.

8. The number of landings on the CHMC campus is quite small compared to the total number of patients brought to CHMC's emergency room. For example, in 1991, only 76 patients (0.3%) arrived by helicopter at the emergency room, compared to a total of 23,080 emergency room patients in the same year. See Exhibits 7 and 8.

9. Historically, approximately ninety percent of the patients transported to Children's campus by helicopter have entered one of Children's intensive care units. Testimony, Sampson. The condition of these patients is so critical that approximately twenty-five percent of them die despite heroic efforts to save them. Testimony, Neff. See Exhibit 10.

10. The evidence indicated that the average of ten extra minutes required to land at the IMA Field and transfer the patient by ambulance to Children's emergency room is critical and could mean the difference between life and death to those

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critically ill patients who have unstable airways, inability to ventilate/oxygenate, inability to maintain adequate cardiac output, inability to maintain adequate cerebral blood flow, or who exhibit the persistence of unstable vital signs. Testimony, Neff, Sampson, Lozano; see also Exhibit 10. In some cases, the manipulation required to transfer a patient from a helicopter to an ambulance at the IMA Field could jeopardize the life of the patient because of changes in temperature, loss of intravenous or other tubal connections, the dislocation of monitors, and/or unnecessary movement. Testimony, Sampson, Lozano.

11. Children's and Airlift Northwest currently conduct regular reviews of all cases of helicopter landings at the emergency room. The analysis of such information serves to determine whether the landing decisions have been appropriately made, and to instruct the referring physicians or medical team in how to handle similar future situations. Testimony, Neff, Copass.

12. Dr. Nicola reviewed the landings at Children's, and a sampling of those which went to Harborview. He found that, with only one possible exception, all of the landing decisions were appropriate given the patient's condition. Exhibit 3, Volume III, Appendix A.

13. Children's has agreed to DCLU's recommendation to form a Medical Review Committee to continue to monitor whether

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flights landing at the ER helistop are appropriately directed. The Committee will be composed of the Director of the Seattle-King County Department of Public Health or his or her appointee; a physician representative of the Washington State Medical Association; a physician representative of the Washington State Society of Pediatrics; a citizen from one of the neighborhoods surrounding Children's; and a representative from Children's. The Committee contains a balanced combination of interested and experienced members. Because the decision regarding whether an ER landing is necessary is primarily a medical one, and at times a difficult one even in hindsight, it is appropriate that the committee be primarily composed of physicians experienced in neonatology, pediatrics and emergency care. See Dr. Nicola, Exhibit 3, Volume III, Appendix A, p. A-6; Testimony, Sampson.

14. The Medical Review Committee can act as an effective check on the appropriateness of landings at the ER helistop. Not only will it advise as to future actions and decisions, but it will deter any inappropriate actions and decisions, by communicating them to the community. Testimony, Copass.

15. The DCLU shall review the semi-annual reports of the Medical Review Committee and of Children's. If it appears that inappropriate or non-medically necessary landings have occurred, DCLU shall work with Children's, the Public Health

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Director, the Medical Review Committee, and Airlift Northwest to ensure compliance. Failure by Children's to demonstrate clear improvement in implementation of the limited landing criteria may result in suspension of the permit and other enforcement action. Director's Report at p. 21.

16. The past and projected future numbers of helicopter landings at the IMA Field and ER helistops were reported in the FEIS at pp. 50-51, and 72. Implementation of the Preferred Alternative would lead to an average of four to five landings per month at the ER helistop for the years 1991 through 1995. Exhibit 3, Volume I, at 72. At the IMA helistop, between twelve and thirteen landings per month are projected in 1991 to 1992, and between 13 and fourteen landings per month from 1993 to 1995. Testimony, Carona.

D. **Safety Considerations**.

1. The FEIS examined the causes of accidents which have occurred among EMS helicopters in the past, and discussed the probability of accidents on Airlift Northwest helicopter flights of Children's-destined patients.

2. Based on the FEIS, the Director found that under the Preferred Alternative, an accident during the transport of a Children's-destined patient, whether occurring during takeoff from the base, in the field, or around Children's itself, could

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be statistically expected to occur less than once every 177 years. Director's Report at 13.

3. The FEIS did not separately calculate the probability of an accident in the area surrounding Children's itself. As pointed out by the Director, the probability of an accident in the Children's area should in fact be far less than the overall probability figure (i.e. the number of years between "expected" accidents should be greater than 177). Director's Report at 13. This is because a substantial amount of the flight time and at least one-half of the takeoffs and landings accounted for in the probability figures would occur away from Children's. The accident probability may be reduced still further in that there are many factors which have been found to contribute to helicopter accidents at "non-host" landing sites which would not occur, or would be less influential, at the ER helistop. These factors include pilot unfamiliarity with the area, poor visibility, and obstruction of the landing area. In fact, the ER helistop would offer safety features that many non-host landing sites do not have, including lighting, paving, and a glide slope indicator light. See Exhibit 3, Volume I, at 85.

4. Harborview Medical Center's helistop should not be considered a "safer" alternative than Children's ER helistop from the standpoint of the affected population. Harborview is located in a residential area, consisting of low-income and older

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persons' housing, that is more densely populated than the Laurelhurst area. Testimony, Logerfo.

5. Airlift Northwest has a safety committee, whose responsibility it is to ensure that safe operations are integrated into the EMS program. The Committee includes representatives of Airlift Northwest, Hospital Air Transport (Airlift Northwest's helicopter vendor), dispatchers, and flight nurses. Testimony, Childs. The Committee meets quarterly to engage in an ongoing discussion regarding safety issues, and it uses the results of its discussions pro-actively. Exhibit 3, Volume I, at 3; Testimony, Childs. Airlift Northwest is committed to the safety of the flight crew, patients, public, and aircraft. Exhibit 3, Volume I at 93; Testimony, Childs.

6. Airlift Northwest has not had a helicopter accident in the seven years that it has been in operation. Exhibit 3, Volume I, at 96; Testimony, Childs, Davidson. Airlift Northwest flights during this period numbered approximately 9,000. Testimony, Childs. There was one noninjury incident at Harborview in 1989.

7. To minimize the possibility of human error, Airlift Northwest requires that its pilots meet higher standards than those required by the FAA. Exhibit 3, Volume I, at 94; Testimony, Childs. Airlift Northwest deliberately chooses pilots who are experienced and professional. Testimony, Davidson.

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Airlift Northwest pilots are all "factory-trained" by the Agusta manufacturer and return for yearly follow-up training. In addition, pilots each take a "check ride" every six months to test their knowledge of emergency and other procedures. Testimony, Davidson.

8. Airlift Northwest has sought to minimize the possibility of weather-related accidents by keeping its pilots "instrument current" and "instrument rated." In short, they are able to fly without the ground being visible. Testimony, Childs.

9. Airlift Northwest does not fly when weather conditions reduce visibility below certain minimums; the minimums used by Airlift Northwest are consistent with the minimums recommended by the AAMS, and stricter than the FAA weather guidelines. Exhibit 3, Volume I, at 94; Testimony, Davidson. Airlift Northwest has a policy of not flying in winds in excess of 40 knots.

10. Airlift Northwest pilots have authority over whether to discontinue operations in marginal weather conditions, are provided with guidelines for making this decision, and are not put under pressure to fly. Exhibit 3, Volume I, at 94; Testimony, Davidson. Where a patient has been picked up but adverse flying conditions on the way to Children's make continuation of the flight unsafe, the helicopter may change

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course for Boeing Field, where it can land under instrument flight rules. Exhibit 3, Volume I, at 94; Testimony, Davidson.

11. The Agusta 109 helicopter chosen by Airlift Northwest has a number of features which minimize the possibility of mechanical failures. The Agusta 109 is twin-engined, unlike most traffic and news helicopters, and has state-of-the-art instruments. It also has complete redundancy in its hydraulic and electrical systems; in other words, if the primary systems fail, a complete backup system will take over. Testimony, Davidson. Worldwide, the Agusta 109 has to date been involved in only three EMS-related accidents and four incidents, none of which resulted in fatalities or injuries. Exhibit 3, Volume I, at 90.

12. The ER helistop meets the FAA design guidelines for horizontal clearance and clear area requirements for takeoff and landing, and for the distances between the approach and transitional surfaces and obstructions. Exhibit 3, Volume I, at 101; Testimony, Miller, Van Eaton. The helistop lighting and markings will also meet FAA guidelines, and will include nighttime landing lights and a glide slope indicator light. Exhibit 3, Volume 1, at 59; Testimony, Miller, Van Eaton. In order to reduce the possibility of obstacle strikes, Children's plans to remove several trees and light poles, and will place

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obstruction lights on the boiler stacks. Exhibit 3, Volume I, at 100; Testimony, Miller.

13. The ER helipad will be constructed in accordance with applicable FAA design guidelines for the size of the Agusta 109 helicopter. Testimony, Miller, Van Eaton. The helipad is not intended for the large Huey helicopters used by MAST and other military operations, and does not meet the FAA guidelines for helicopters of that size. Children's policy has always been to discourage landings by large military helicopters. Exhibit 3, Volume I, at 59, 100. Landings by Huey and other non-approved military helicopters are prohibited in the conditions recommended by the Director. Testimony, Lumsden.

14. The 40 foot by 40 foot concrete pad to be constructed at the ER helistop is appropriate not only for helicopter landing safety, but to provide adequate space for unloading the patient from the helicopter, and to accommodate the numerous medical personnel attending to the patient during unloading and transfer into the emergency room. Testimony, Van Eaton, Miller, Davidson.

15. Children's proposed master plan for future hospital expansion will not affect the location or safety features of the ER helistop. Exhibit 3, Volume I, at 100; Testimony, Miller.

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16. During Children's upcoming expansion of the North and South wings and the emergency room entrance (presently scheduled to commence in July of 1992), coordination with the project contractors and others during construction has been planned to ensure unobstructed helicopter landings. Procedures for such coordination, including communications and plans for removing or lowering cranes or machinery during landings, were developed and utilized during earlier construction, and no problems are anticipated in implementing these procedures once again. Testimony, Scheibe, Davidson.

17. The proposed IMA Field helistop location is considered to be safe, with very few obstructions. Testimony, Davidson, Van Eaton. The flight path has been revised to avoid the possibility of a bird strike. Exhibit 3, Volume I, at 102. The IMA Field helipad will also be constructed in accordance with applicable FAA design guidelines for landing surface, size, weight, lighting and markings, and other features, with sufficient room to accept Agusta or MAST helicopters. Testimony, Van Eaton; Exhibit 3, Volume I, at 61, 101.

E. <u>Noise Considerations</u>.

1. The Seattle Noise Ordinance does not apply to use of the proposed helistops. The ordinance specifically exempts noise from emergency as well as aircraft operations. Exhibit 3, Volume I, at 108; Testimony, Hauge.

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2. Based on the projected flight figures for the Preferred Alternative, any noise impacts on the residential community around the Children's ER helistop will occur five to six times per month, or ten to twelve times when including the two overflights (landing and takeoff) necessary for each transport. An estimated average of less than one landing per month would occur during nighttime hours. Exhibit 3, Volume I, at 120.

3. The FEIS findings regarding noise levels and impacts were based on a study by Towne, Richards & Chaudiere ("TRC"), which itself was based in part on a 1985 Seton, Johnson & Odell ("SJO") study. Both studies presented a "worst case" analysis of noise impacts, as they were based on projections of 40 landings (80 overflights) per month at the ER helistop. These projections assumed that (1) all helicopter flights with Children's-destined patients would land at the ER helistop, and (2) the number of overflights per patient would be doubled, because each mission would involve two landings, one to pick up the medical crew and one to drop off the patient. Testimony, Hauge. In fact, under the Preferred Alternative, not only will the majority of patients go to the IMA Field, but any needed medical personnel will be picked up at the IMA Field or at Harborview. The noise analysis, therefore, substantially

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overstates the actual noise impacts of the Preferred Alternative. Testimony, Hauge; Exhibit 3, Volume I, at 105.

4. In the neighborhood surrounding Children's, the SJO study measured the noise associated with actual helicopter landings in A-weighted decibel levels ("dBA") (a measurement which is adjusted to reflect the sensitivity of the human ear). The study projected the dBA over a 24 hour period to evaluate the cumulative sound level ("Leq"), then added a 10 dBA penalty for the portion of the noise occurring at night, to arrive at the day-night sound level ("Ldn"). The Ldn is the most widely accepted noise descriptor in the U.S. and is used by the EPA, HUD, and the FAA to evaluate noise impacts and land use compatibility. Testimony, Hauge. The study also measured the maximum instantaneous sound level (Lmax); which, although a poor indicator of the impact of noise on a community, can be used to estimate the likelihood of sleep interference from single-noise events. Exhibit 3, Volume I, at 107; Testimony, Hauge.

5. Actual measurements of sound levels in the area around the ER helistop showed an existing Ldn sound level, without any helicopters, of between 52 and 68 Ldn. Under the assumption of 40 round trip flights (a total of 80 overflights) per month to the ER helistop, the range of sound levels increased to between 54 and 68 Ldn. The largest increases were 5 dBA at

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one receptor, and 4 dBA at another receptor. Exhibit 3, Volume I, at 115, Table 18; Testimony, Hauge.

6. These measurements and increases are below the recommended significant impact criteria or other standards of any of the relevant federal agencies. Exhibit 19; Testimony, Hauge. The EPA recommends that noise not exceed an Ldn of 65 dBA, and not increase by more than 5 dBA. Exhibit 3, Volume I, at 107, 115-116; Exhibit 19; Testimony, Hauge. Similarly, HUD standards state that Ldn sound levels of 65 dBA or less are acceptable for HUD-assisted projects. The FAA's land use compatibility criteria state that residential and hospital use is not compatible where the yearly Ldn is 65 dBA or above. Exhibit 19; Testimony, Hauge. Although sound levels of 68 Ldn were found at one location (along Sand Point Way), the Ldn level there is the same with or without helicopter flights. Testimony, Hauge; Exhibit 3, Volume I, at 116.

7. The helicopter noise heard in the residential area near Children's will be infrequent and short-term in nature. Because the rise in this noise will be gradual, startle effects will not occur. Exhibit 3, Volume I, at 116, 118.

8. The primary flight path now used to land at the ER helistop was developed in order to meet the FEIS-recommended mitigation measures that flights be at high altitude over Sand Point Way N.E., and use a noise abatement approach and departure

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that reduces disturbances to residences by primarily following waterbodies and arterials. Exhibit 3, Volume I, at 54-56, 120. Airlift Northwest pilots are trained in, and routinely follow this path. Testimony, Davidson. The previously-proposed flight path was modified so that helicopters come in higher and stay farther from the Laurelon Terrace Apartments directly west of Children's. This modification results in 7-9 dBA lower maximum levels around Laurelon Terrace. Exhibit 3, Volume I, at 115; Testimony, Hauge.

9. The FEIS noted that there would be some sleep disturbance associated with the nighttime landings (projected under the Preferred Alternative to be approximately one per month). Exhibit 3, Volume I, at 117. At the residences closest to the helistop, the estimated Lmax sound levels are expected to cause about a 20 percent probability of awakening with windows closed. With windows partly open, the probability would rise to 30 per cent. Exhibit 3, Volume I at 117. However, this should be compared to the 20-25% probability that residents of this neighborhood with their windows partly open will be awakened by existing sounds even with no helicopters. Testimony, Hauge.

10. The impulse noise caused by blade slap was also considered in evaluating noise impacts. Exhibit 3, Volume I, at 107. The Agusta 109 Mark II meets the mitigation measure proposed in the FEIS that the helistop be used primarily by a

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"modern, multi-blade helicopter representing near current low-noise technology." Exhibit 3 Volume I, at 112, 120; Testimony, Hauge. The Agusta 109 Mark II's main feature is that it has four blades, which reduces the blade-slap associated with two-bladed helicopters. Exhibit 3, Volume I, at 112; Testimony, Hauge. The Agusta 109 also has a cap on the rotor head to reduce the air flow angle into the blades, and a vortex generator to further reduce blade slap noise. Exhibit 3, Volume I, at 112; Testimony, Hauge.

11. Based on the projected landing figures for the IMA Field helistop, any noise impacts on the surrounding area would occur 12 or 13 times per month in 1991 to 1992 (or 24 to 26 when taking into account the two overflights per landing); and between 13 and 14 times per month from 1993 to 1995 (or 26 to 28 when taking into account the two overflights necessary per landing). Testimony, Carona. However, the FEIS found that landings at the IMA Field would not cause significant noise impacts, because residences are a substantial distance from the helistop. Exhibit 3, Volume I, at 118, 120. The flight path was also chosen to minimize impacts on wildlife in the nearby ecological area. Exhibit 3, Volume I, at 62.

12. The noise analyst for the FEIS concluded that the noise impacts associated with the ER helistop and the IMA Field helistop were less than significant. Testimony, Hauge.

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F. **Cumulative Impact Considerations.**

1. The Director found that it was unlikely that approval of the Children's helistop would begin a trend toward siting helistops at other Seattle-area hospitals. Director's Recommendation at 14-15. This possibility was addressed during the FEIS process. A survey of Seattle's major medical facilities indicated that no other hospital helistops were being considered. Exhibit 3, Volume I, at 122. Every tertiary care provider in Seattle is already part of the Airlift Northwest consortium, and all except Children's already have a helistop on their campus or access to one nearby. Testimony, Childs. Other than Harborview and the University of Washington, no major institution hospital has a helistop in their adopted or pending master plans. Testimony, Lumsden, Miller. In addition, the review process itself would act as a deterrent against any plans to establish a helistop. Testimony, Lumsden.

G. **Alternative Location Considerations.**

1. The Director's report considered whether alternative sites would accomplish the purpose of the helistop, while having a lesser impact upon the surrounding area. The "Preferred Alternative" under present consideration is itself the result of the examination of alternative locations which took place during the EIS process. Director's Report at 3.

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2. The IMA Field was chosen for incorporation into the Preferred Alternative as the most feasible among other off-campus possibilities, including a rooftop helistop at the University of Washington, (no longer being considered by the University); Harborview Medical Center; and Boeing Field. Exhibit 3, Volume I at 48.

3. Among other possible sites on the Children's campus, the Director found that the ER location best achieved both the purposes of the helistop and the goal of mitigating impacts. The location allows transports from the helicopter directly, and across flat surfaces into the emergency room. Exhibit 3, Volume I at 47. Other locations would require transport over longer distances using circuitous and/or steep routes. Also, the alternative locations are all located closer to neighboring residential and educational properties than the proposed ER helistop. Exhibit 3, Volume I at 120; Testimony, Lumsden.

PROPOSED CONCLUSIONS

1. The Hearing Examiner has jurisdiction over these parties and the subject matter pursuant to Chapter 23.76.052 SMC.

2. The standards for consideration of a helistop accessory to a major institution are found in SMC section 23.48.005. While superseded by SMC 23.69.012.C in 1990, this section remains applicable based on the 1984 date of Children's application. In

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any case, the two sections are substantially similar, and use of the later section would not change the analysis and conclusions herein.[1] Section 23.48.005 provides that:

> 1. a helistop may be permitted as a Council conditional use if the Council finds that:
>
> a. The helistop is needed to save lives;
>
> b. The helistop is located so as to minimize impacts upon surrounding residential property;
>
> c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.
>
> 2. The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas.

3. Both the ER and IMA Field helistops are needed to save lives. Children's is a unique and important tertiary care

---

[1] SMC 23.69.012.C provides that a helistop may be permitted as a council conditional use where:

> 1. The helistop is needed to save lives; and
>
> 2. Use of the helistop is restricted to life-threatening emergencies; and
>
> 3. The helistop is located so as to minimize impacts on the surrounding area.

The section also requires that:

> The Director's report to the Council shall examine alternative locations for the helistop as identified by the major institution, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon the surrounding area.

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facility within the Pacific Northwest to which children with life-threatening emergencies are routinely and systematically referred. For these children, ground transport would be inadequate because it would take too long to reach them and begin the process of tertiary care, and because it would take too long to transport them to Children's to continue such tertiary care. The consequence of not having such helistops would be the loss of life for an indeterminate number of patients.

4. As part of the region's Emergency Medical System, use of the ER and IMA Field helistops have historically and will continue to involve life-threatening emergencies. Referring physicians and paramedics limit their use of helicopter transport of children to situations involving life-threatening emergencies. Use of the ER helistop will be even further restricted. Decisions made by the helicopter transport medical team and the referral physician or paramedic would limit the ER helistop's use to situations in which the patient exhibits unstable airways, an inability to ventilate or oxygenate, or to maintain adequate cardiac output, and/or other signs of medical instability. The decision as to whether a patient's condition is so serious as to be life-threatening or so critical as to require transport to the ER helistop is a matter of medical judgment for which appropriate latitude should be given for the sake of the patient's health and survival.

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5. Restrictions on use of the ER helistop would be monitored by the proposed Medical Review Committee, which will be an effective means of deterring misuse and guiding future use of the helistop.

6. Measures taken to minimize noise at the ER and IMA Field helistops are reasonable and effective. They include the selection of a location and a flight path that reduce, to the extent practicable, noise to surrounding residences; the limitation to helicopters with low-noise features at the ER helistops; and the reduction of the number of flights to the ER helistop through implementation of the Preferred Alternative. Remaining noise impacts are not significant at either helistop.

7. Measures taken to reduce safety risks at the ER and IMA Field helistops are reasonable and effective. They include reducing the number of takeoffs and landings; using technologically-advanced helicopters; emphasizing pilot, aircrew, and groundcrew safety training and quality control; implementing policies regarding adverse or marginal weather conditions; taking measures to prevent bird strikes at the IMA Field; locating the helistop in a clear area; and removing trees and poles near the ER helistop. The proposed helipads comply with applicable FAA guidelines.

8. As required, the Director examined alternative locations for the helistop, including sites outside Children's

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boundaries, which might accomplish the purpose of the helistop with a lesser impact upon the surrounding area. Among the alternatives mentioned, the Preferred Alternative, in which the majority of landings would be made at the IMA Field site, with the most critical patients landed at the ER helistop, appears to best balance the medical purpose of the helistops with the goals of minimizing impacts on the residential and other uses which surround Children's.

RECOMMENDATION

Based upon the extensive evidence in the Examiner's Record demonstrating that the proposed helistops meet the Council Conditional Use Permit criteria, Children's Hospital and Medical Center respectfully requests that the Examiner recommend approval to the City Council of such helistops. Children's concurs in the ten conditions requested by the Director. In addition, Children's concurs with the modifications to the conditions made by the Director at the hearing, subject to the restriction concerning Condition 3 described in proposed finding A(5) above. All other requests for modification of the conditions by opponents of the helistop should be rejected because the effect of such modifications would be to substantially impair the

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reasonable functioning of this very necessary life-saving process and facility.

Thank you for your consideration of Children's application.

Respectfully Submitted this 1st day of July, 1992.

DAVIS WRIGHT TREMAINE
Attorneys for Children's Hospital
and Medical Center

John E. Keegan
Craig A. Gannett
Ilona M. Bray

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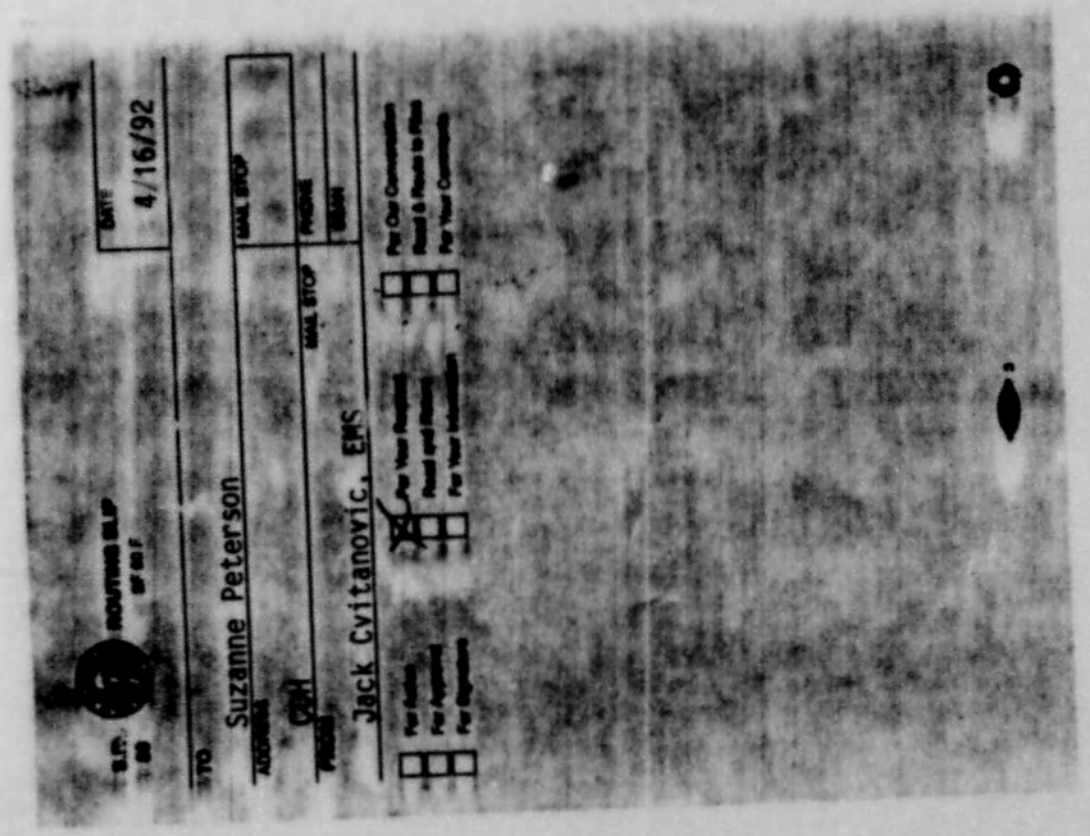

(?) allows direct two-way communication, from both the driver's and patient's compartments, with all hospital(s) in the service area of the vehicle;
(?) incorporates appropriate encoding and selective signaling devices; and
(?) allows communications with designated EMS/TC facilities state-wide.

WAC 246-976-280 AIR AMBULANCE SERVICES.

[NOTE: These standards are for inter-facility transport. Do we need a separate section for "field" air ambulance operation?]

(1) The department shall:
(a) Issue licenses to air ambulance services and aircraft which meet the following standards;
(b) The department shall exclude from licensure requirements Military Assistance to Safety and Traffic (MAST), National Search and Rescue (SAR) units and other military or civil aircraft that may be called into service to initiate the emergency air lift at the scene of the emergency and transports the patient to the nearest available treatment facility or rendezvous point with other means of transportation. Air ambulance services and vehicles shall comply with all regulations pertaining to ground ambulance services and vehicles, except as specifically modified in this section.

(?) [STAFF RECOMMEND DELETE: Air ambulance services shall comply with all regulations pertaining to ground ambulance services and vehicles, except as specifically modified in this section];

(?) Air ambulance services shall provide the following personnel:
(a) A physician director who is:
(i) Trained and experienced in emergency, trauma and critical care; and
(ii) Responsible for supervising and evaluating the quality of patient care provided by the medical flight crew.
(b) A medical flight crew with sufficient personnel to provide adequate patient care, to include:
(i) One specially trained, experienced registered nurse or paramedic; and
(ii) One other person who may be a physician, nurse, physicians assistant, respiratory therapist, paramedic, EMT, or other appropriate specialist appointed by the physician director.
(c) All medical flight crew shall:
(A) Be trained in emergency, trauma and critical care;
(B) Be certified in ACLS;
(D) Be trained in:
(?) Altitude physiology;
(?) EMS communications;

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(?) Aircraft and flight safety; and
(?) The use of all patient care equipment on board the aircraft;

(E) Be familiar with:
(?) The use of extrication devices; and
(?) Survival techniques appropriate to the terrain;

(F) Perform under protocols;

(H) Have their physical well being ensured through periodic examination. The results of the examination shall be provided to the service physician director;

(c) Helicopter pilot must:
(i) Have commercial rotor-craft certification;
(ii) Have a minimum of 2,000 rotor-craft flight hours as pilot in command;
(iii) Have at leave five hours in the specific type of aircraft before flying as a pilot in command on patient missions;
(iv) Have extensive mountain flying experience if assigned in mountainous terrain.
(v) If flying IFR, have instrument certification with a minimum of 250 hours of instrument flying time, to include no more than 125 hours of simulated time.

(d) Helicopter mechanic must be:
(i) A certified air frame and power plant mechanic with two years of experience; and
(ii) Factory trained or the equivalent in the specific type of aircraft flown.

(e) Fixed wing pilots must have:
(i) A commercial airplane multi-engine instrument certification;
(ii) A minimum of 2,000 airplane pilot flight hours, with 50 hours as pilot-in-command;
(iii) At least five flight hours in the specific type of aircraft flown; and
(iv) If flying IFR, instrument certification with a minimum of 250 hours of instrument flying time, to include no more than 125 hours of simulated time.

(3) Minimum standards for services, vehicles and medical equipment that are necessary for licensing will be described in department procedures and guidelines:

(?) All aircraft operated as air ambulances shall::
(i) Be configured in such a way that the medical attendants have adequate access to the patient within the cabin to give advanced life support;
(ii) Allow loading by two attendants without excessive maneuvering of the stretcher;
(?) Have radio communication with hospitals, medical control, air traffic control facilities, and public safety vehicles;
(?) Appropriate navigational aids;

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(v) Be equipped with the following:
(A) Airway management equipment, including:
(I) Oxygen;
(II) Suction;
(III) Intubation equipment;
(IV) Pediatric ventilation and intubation equipment;
(B) Cardiac Monitor/Defibrillator;
(C) Supplies, equipment, and medication necessary for emergency, cardiac, trauma, pediatric care and other missions as required by the program physician director; and
(vi) Have adequate interior lighting for patient care arranged so as not to interfere with the pilots vision.
(?) Additionally, fixed-wing aircraft operated as air ambulances shall:
(i) Be multi-engined;
(?) Be pressurized
(4) In instances where aeromedical evacuation of a patient is necessary because of a life threatening condition and a licensed air ambulance is not available, patient transportation may be accomplished by the nearest available aircraft that can accommodate the patient. The physician ordering the transport shall justify the need to transport the patient in writing to the department within 30 days after the incident.

WAC 246-976-300 AMBULANCE AND AID SERVICES -- RECORD REQUIREMENTS.
(1) Each ambulance and aid vehicle service shall maintain a record of:
(a) Current certification levels of all personnel;
(b) [OPTION TO DELETE: Current CME status of all certified personnel;]
(c) Make, model, and license number of all vehicles; and
(d) A record of each patient contact with at least the following information:
(i) Names and certification levels of driver and attendants;
(ii) Date and time of medical emergency;
(iii) Age of patient;
(iv) Applicable components of system response time as defined elsewhere in this chapter;
(v) Patient vital signs;
(vi) Procedures performed on the patient;
(vii) [OPTION TO DELETE: Level(s) of certification;]
(viii) Mechanism of injury or type of illness;
(x) Patient destination;
(xi) Other data points identified in this chapter for the Trauma Registry.
(?) [STAFF RECOMMEND DELETE - ADEQUATELY COVERED ELSEWHERE] In addition to the requirements of paragraph(???) above, prehospital services shall submit required trauma registry

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LAND USE BILLING INFORMATION

Part I (Complete at application intake)

Project #: 9106441 **Project Address:** 2501 NE 45th St

Pre-Application Fee: _____ **Computer Contact Fee:** _____
Flat Fee: 1100.00 **Valuation Fee:** _____
Deposit for Hourly Fee: 1100 **Receipt #:** 223112

Hourly, additional component(s), or other fees:

___Single family access	___MDNS	___Research
___Council Cond. Use	___Master Plan	___Revision
___Design Departure	___PCD	___Overtime
___Design Review	___Rezone	___Notice Fee
___Greenbelt	___Shoreline Revision	___Renotice Fee
___EIS	___Subdivision	___Soils
___DNS	___Supplemental EIS/ Addendum	___Fee Ordinance Increase
		___Other_____

To be billed on IO:
Company Name: _____
Address: _____
_____
Agency Charge #'s: _____
Agent Signature: _____

Land Use Technician Signature: C. Phillips
_____

Part II (Land Use Specialist complete before publishing decision/recommendation)

SEND BILL TO: _____
_____
_____

OTHER CHARGES:
Subject Fee Ordinance increases? (Y)_ (N)_
Were components/reviews added after intake? (Y) (N)
If yes, which components?_____
Was there additional notice required? (Y) (N) How many?_____

DCLU BILLABLE HOURS:
Timesheet hours on report: **Date report run:**_____
Total hours from report:_____
Billable hours from report:_____(attach printout of report)
Hours not on report:
Timesheet date:_____ Hours:_____
Timesheet date:_____ Hours:_____
Total hours:_____
Billable hours:_____
Number hours estimated to complete:_____
Estimated billable hours:_____

Total billable hours (report+not on report+estimated):_____

SED BILLABLE HOURS (To be provided by SED, if any):_____

Land Use Specialist Signature: _____

(over)

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Page Two
Land Use Billing Information

Part III (Zoning Plans Examiner completes before publishing decision/recommendation)

Updated Valuation: _____
Updated Fee based on valuation: _____
Difference between valuation fee paid and fee owed (+/-):_____
Terminal screens have been updated regarding valuation?____Yes

Zoning Plans Examiner Signature_____

_____

Part IV (Land Use Support Staff Supervisor completes before publishing decision/recommendation

FEE CALCULATION:

Fee Ordinance Increase:
New fee:_____
Less fees paid:_____
Amount owed:_____

Components Added:
Amount owed:_____

Additional Notice:
Amount owed:_____

Billable Hours:
Fee (@ $110.00/hour):_____
Less deposit paid:_____
Amount owed:_____

SED Hourly Fee:
Fee (@ $ .00/hour):_____
Less deposit paid:_____
Amount owed:_____

Total Fees Owed:

Total paid to date:_____
Total fees:_____
Total owed (+/-):_____

Is an IO Fee form necessary?____YES____NO If yes, is form prepared?_____

Date sent to accounting for bill preparation: _____

_____ Land Use Routing computer screen updated.

Date fee paid and project released for publication _____

Land Use Support Staff Supervisor Signature: _____

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REV 11/89

CITY OF SEATTLE

ZONING RECEIPT

DEPARTMENT OF CONSTRUCTION AND LAND USE RECEIPT

date 12-13 1991 payor Childrens Hospital

proj. address 2501 NE 45th St

written dollar amt. Twenty two hundred and no/00

phone no.

dollars $ 2200.00

project no. 9106441

amt. received $ 2200.00

change $ ———

letter inv.#

check no. 54026

	fee	option	amount	fee	option	amount	
Z1	lot boundry/ short plats	Z15		street use (DCLU)	Z12		Z11
Z2	cert. of land use	Z16		pre-app. conf.	Z18		Z12
Z3	design review/ departure	Z17		EIS	Z07		Z17
Z4	rezone	Z01		legal bldg. letter	Z19		Z24
Z5	admin. cond. use	Z13		council conditional use	Z02		Z26
Z6	demolition	B07		temporary use/ special exception	Z03		Z27
Z7	variance	Z04		flood plain devel.	FLD		Z28
Z8	use/zoning plan check		2200 00				
Z9	shoreline subs. development	W01					
Z10	SEPA check (DNS)	A01					

TOTAL $ 2200 00

Z 23112

by db

Dept. of Construction and Land Use

NORTHWEST BUSINESS FORMS INC. SEATTLE, WASH. 27143B-C1

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CITY COUNCIL TRANSMITTAL

C.F.# 297288

TO: Dennis Milleran, Director
DLLL

Date Sent: 8/8/89

Reply Requested By: ASAP

FROM: Paul Kreabel, Chair
Urban Redevelopment Committee

Subject: CCU of Childrens Orthopedic Hospital + Medical Center to build a helistop at 4800 Sand Point

ATD

ACTION Required

	Review and Return File With Your Answer to Sender
	Review and Answer Petitioner, Return File and Copy of Answer to Sender
X	Review and Make Recommendations, Return File and Recommendations to Sender ( ) In Duplicate
	Prepare Legislation and Return File to Sender

Additional Information: _____

Beverly Bassett for PK
Signature

LDI-110-5002 CS 20.19

CITY COUNCIL TRANSMITTAL

C. F. #

TO: William Jurster, Director DCLU

Date Sent: 1/8/85

Reply Requested By:

FROM: Jim Strut

Subject: Attached letter

ACTION required

	Review and Return File With Your Answer to Sender
	Review and Answer Petitioner, Return File and Copy of Answer to Sender
	Review and Make Recommendations, Return File and Recommendations to Sender ( ) In Duplicate
	Prepare Legislation and Return File to Sender

RECEIVED
JAN 10 1985
City of Los Angeles
Dept. of Planning & Land Use

Additional Information: Please add this to the file you are maintaining on the Children Orthopedic Hospital.

Karen Campbell
Signature

LDI – 110–5002 CS 20.19

CITY COUNCIL TRANSMITTAL

C. F. #

TO: William Juster, Director
ACLU

Date Sent: 2/1/85

Reply Requested By:

FROM: Jim Stivel, Chair, Land Use

Subject: Children's Orthopedic Helipad

RECEIVED
FEB 4 1985
DEPT OF CONSERVATION & LAND USE
LAND USE DIVISION

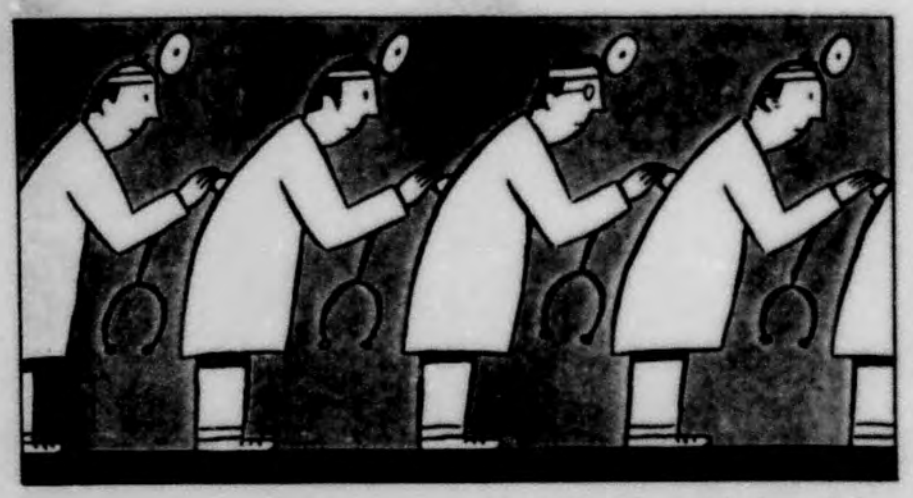
ACTION required

	Review and Return File With Your Answer to Sender
	Review and Answer Petitioner, Return File and Copy of Answer to Sender
	Review and Make Recommendations, Return File and Recommendations to Sender ( ) In Duplicate
	Prepare Legislation and Return File to Sender

Additional Information: Please add to file

Karen L. Campbell
Signature

LDI – 110–5002 CS 20.19



THE LAW

TRUST VERSUS ANTITRUST

No one wants bad doctors, but procedures for barring them from practice may run afoul of federal law

THE AMERICAN PUBLIC has told American doctors forcefully in recent years that it wants the medical profession to prevent incompetents from practicing medicine. But much of the public is unaware of an intimidating problem that a doctor may face in trying to intervene when a colleague's performance is not up to standard: he may be sued for violation of the Sherman Antitrust Act—for conspiracy in restraint of trade or for attempt to monopolize.

Doctors are competitors. They also must determine who among them will be allowed to ply his trade. When a group of physicians reviews a colleague's medical record—an undertaking known as peer review—it has the authority to recommend suspending his hospital privileges (if the peer-review committee has been empaneled by a hospital) or even his license to practice (if the committee is a state board of medical examiners). Antitrust law does not look kindly on such collaboration in any other business, and the Sherman Act is therefore settling awkwardly on doctors who engage in peer review. A case now before the Ninth Circuit Court of Appeals in San Francisco, *Patrick* v. *Burget* et al., has prompted hundreds of phone calls to the American Medical Association and the Federal Trade Commission from doctors and state medical boards worried about what liability they might incur if they conduct honest, and tough, reviews of their fellow doctors. The American Medical Association, the Oregon Medical Association, and the Joint Commission on Accreditation of Hospitals have together filed an *amicus curiae* brief in behalf of the defendants in the case.

Patrick v. *Burget* resulted in 1984 in a $2.2 million antitrust judgment against eleven physicians who had been sued for conspiracy to monopolize the market in medical care in the town of Astoria, Oregon. *Patrick* has already had a chilling effect on peer review in the Pacific Northwest. Many physicians are now afraid to sign their names even to the stringent evaluations that constitute routine peer review in all hospitals; these regular critiques, aimed at promoting quality, often form the starting point for a disciplinary review that can result in suspension of hospital privileges. At some hospitals doctors are conducting reviews but not maintaining written records. Other doctors, though continuing to attend peer-review meetings, are simply keeping their mouths shut. "If this is the system we're left with, then we have some serious problems, bigger than this case," James Kronenberg, the associate executive director of the Oregon Medical Association, told me recently. "We're doing stop-gap things, but they're not acceptable in the long run."

A case like *Patrick* reflects a transformation in American medicine. There is far more competition in the health-care business now than there was only a decade ago, and antitrust law has to a considerable extent shaped that competition. It has done so owing largely to the U.S. Supreme Court's 1975 decision in *Goldfarb* v. *Virginia Bar*, which declared that lawyers, doctors, and other professionals were not to be considered immune from the antitrust laws regulating competitive industry.

Since then antitrust law has exerted great influence on health-care services. Doctors are now allowed to advertise. Chiropractors, still regarded with some suspicion by other health-care providers, are suing for access to hospitals. Insurance groups are asking doctors for discounts and forcing them to offer competitive prices. The medical profession, once governed chiefly by medical ethics and peer review, is now governed increasingly by business ethics and the courts.

Hundreds of antitrust lawsuits are being brought each year involving some aspect of the medical profession. The largest number of health-care antitrust cases now in litigation concern the allocation or denial of hospital staff privileges and physician licenses.

Patrick is of special interest not only because its particulars illustrate how untidy antitrust issues can be but also because the case is one of only a handful of medical-staff-privilege antitrust cases to have reached the federal circuit-court level. A decision by the Ninth Circuit Court is expected shortly. Whichever way the court rules, an appeal to the U.S. Supreme Court is likely.

ASTORIA, OREGON, is a logging and fishing town, with a population of 10,000, situated at the mouth of the Columbia River. The Astoria Clinic, which figures at the heart of *Patrick* v. *Burget*, has served for more than fifty years as the predominant private practice in the community, providing multi-specialty care for at least three quarters of the local population. At the time when the lawsuit was filed, in 1981, there were thirteen doctors on the clinic's staff, twelve of them partners in the clinic. Although other doctors practiced in Astoria, most of them, including all but seven of those on the staff at the local Columbia Memorial Hospital, were somehow affiliated with the clinic. This is not an unusual situation for doctors in small-town America; half of America's community hospitals are located outside metropolitan areas, and many, perhaps most, face no real competition.

Under federal law, monopolies are not, per se, illegal. Attempting to maintain a monopoly, or to acquire one, is almost always illegal, under Section 2 of the Sherman Act. Therefore the motives of a monopoly group are critical in determining liability in any Section 2 antitrust

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case. When those conducting a peer review are also those with a stake in an existing monopoly (as the Astoria Clinic was arguably close to being), the motives behind the peer-review process itself become open to question. Yet doctors are required by law and by their ethical code to participate in peer reviews. Peer review is mandated by the federal government as a condition for receiving Medicare payments, and it is also mandated by hospital-licensing laws in all fifty states.

Dr. Timothy Patrick came to Astoria in 1972 to work as a surgeon with the Astoria Clinic. A year later he was offered a partnership. He declined the invitation and instead opened a private practice. In the years after Patrick left the clinic, relations between Patrick and other doctors in Astoria began to deteriorate. Some doctors refused to refer cases to Patrick, to consult on his surgeries, or to cover for him when he was out of town. What Patrick came to see as evidence of a conspiracy, Gary M. Boelling, an internist at the Astoria Clinic, explains as the result of a growing lack of trust in Patrick's professional judgment. "Quite frankly, [we] did not want to be associated with him," he said in a recent interview. "It got to the point . . . that I really dreaded being asked to consult cases for him, and did things to avoid it."

By early 1980 the Oregon Board of Medical Examiners had received several complaints about Patrick's performance and decided to review fifteen of Patrick's cases. Among the charges that the board investigated were that Patrick had left patients without adequate backup care when he went out of town and that he had performed unnecessary surgeries. After reviewing Patrick's file the board sent a letter of reprimand to Patrick. It also sent a letter chiding Columbia Memorial's medical staff for having been remiss in not monitoring Patrick's clinical practice more closely. Patrick, in response, filed a civil suit against the state board. Further board investigation of Patrick found no clear violation of the Medical Practices Act, the criterion for a full state board review. Because letters of concern are normally sent only to the physician under review, the board retracted its letter.

Late in 1980, before the letter was retracted, Dr. Patrick, in a case that was referred to him, performed an appendectomy on a fifteen-year-old boy with abdominal pain. He did so without examining the boy for the cause of the pain. When the pain persisted, Patrick three weeks later performed exploratory surgery, again without a prior examination. A consulting physician was called in to examine the boy, and he immediately diagnosed (as it turned out, correctly) testicular cancer. The boy sued Patrick for malpractice. This was the second malpractice suit Patrick had recently sustained. Citing these incidents, as well as the state board's previous letter of reprimand, the chief surgeon at Columbia Memorial Hospital requested corrective action.

In March of 1981 the hospital's executive committee, on which several Astoria Clinic partners served, recommended suspension of Patrick's privileges. An ad hoc committee was subsequently appointed to hear testimony and recommend final action to the hospital's board of trustees. Before the month was out, Patrick lodged an antitrust complaint in the U.S. District Court for the State of Oregon against the partners of the Astoria Clinic, claiming a conspiracy to monopolize the local medical trade.

On the recommendation of the medical staff's legal counsel the in-house disciplinary process continued. The ad hoc committee was convened in November of 1981 and heard testimony until April of 1982, when Patrick resigned from the hospital staff, charging that the committee was biased and the outcome a foregone conclusion. He subsequently added the hospital as a defendant in his original antitrust action. However, on the eve of trial Columbia Memorial settled out-of-court with Patrick, for $100,000, leaving the Astoria Clinic doctors, who had undertaken the peer review on the hospital's behalf, to fend for themselves. The peer review was never completed.

In his antitrust claim Patrick contended that his peer review to date had been discriminatory and unfair. He charged that Astoria Clinic physicians refused to refer patients to him, and that patients who preferred him were coerced into using a clinic surgeon. (The clinic physicians involved pleaded justifiable cause.) He asserted that the clinic's doctors had refused to extend him routine professional courtesies (as they themselves admitted, though again pleading justifiable cause). He later pointed out that the letter of reprimand from the Oregon Board of Medical Examiners, though signed by the board's chairman, had in fact been drafted by a partner in the Astoria Clinic. (He was a member of the state board but at earlier stages in the board's scrutiny of Patrick had excused himself, citing a conflict of interest.)

Because Patrick charged the clinic's partners with conspiracy to monopolize, the case revolved almost entirely around the question of motive. Determining whether the prime concern of the clinic doctors was public health or economic self-interest depended on the jury's interpretation of numerous confusing but largely indisputable facts. In December of 1984 the jury found for Dr. Patrick and awarded him the largest judgment yet against individual doctors in a staff-privilege antitrust suit. (Triple damages are frequently awarded in antitrust judgments, and such awards are difficult to pay off; insurance companies often refuse to cover anything except legal fees, on the grounds that they should not indemnify criminal activity). Patrick remains in private practice in Astoria and has staff privileges at a nearby hospital in Ilwaco, Washington. Of the eleven defendants, three have retired, four have left Astoria, two have left the clinic, and two still practice there. The Astoria Clinic is on the verge of bankruptcy and is seeking a buyer.

THE PATRICK CASE is in many respects unusual. It involves a single clinic with a large share of the market, a single hospital to serve a town, a settlement between the hospital and Patrick that left the clinic doctors to defend against charges without backing from the hospital board, years of animosity and mistrust, and an uncompleted peer review. Precisely because all of these circumstances are atypical, the case highlights some specific problems that the AMA, state medical boards, and legal analysts would like to see corrected.

The AMA's prime concern is legal protection for the peer-review process. One reason that the jury's 1984 verdict surprised many doctors is that Oregon state law explicitly protects physicians from almost any legal liability in conducting peer reviews. Under state law, peer-review documents are not admissible as evidence in court. Such protections—deriving as they do from what have always been deemed legitimate state regulatory activities—have rarely been challenged in federal courts. However, the district-court judge held that federal law in this case pre-empted the Oregon statutes. The judge's decision is one of the issues being appealed.

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By introducing the peer-review records Patrick's attorneys were able to subject them to meticulous examination. Had the records not been opened, the jury would not have known who drafted the letter from the state medical board, or that one physician tied fishing lures during review hearings. In addition, testimony that physicians gave to the review committee, in confidence, about their own medical practices could not have been revealed and used against them. The American Medical Association and state medical boards maintain that immunity and confidentiality are essential to effective peer review. One of Patrick's lawyers, Barbee Lyon, counters that disclosure can be essential and that it threatens only those physicians who have ulterior motives. Lyon has said, "So long as physicians avoid bias and conflict of interest, whatever they do will be upheld in court." Representative Ron Wyden, of Oregon, has introduced legislation in Congress that, without exempting doctors from the provisions of federal antitrust law, would provide some measure of legal insulation for doctors participating in peer review.

Another problem doctors face is that the courts themselves seem bewildered. When the U.S. Supreme Court in 1975 broadened the interpretation of antitrust law to include the professions, the Court did not specify how antitrust law should be applied. Despite the large number of antitrust lawsuits in the health-care field since then, the legitimate scope of the law has yet to be adequately defined. How should the Sherman Act apply to cases in which ensuring the quality of a service is arguably as important as promoting competition? According to Susan Philp, an attorney specializing in medical antitrust issues, the nation's district courts, lacking experience in health-care matters, are not only ruling inconsistently but also producing few well-reasoned written opinions.

In an article on physicians and antitrust law, published in the *Duke Law Journal*, Clark C. Havighurst, a professor of law at Duke University, writes that antitrust law should uphold the self-policing that doctors take part in, "only because [peer reviews] promote competition and efficiency and not because they are in some other sense 'in the public interest' or because they are undertaken by professionals, as distinct from ordinary businessmen. Antitrust law does not, as a general rule, tolerate competitor collaboration simply because it serves worthy purposes, professional or otherwise." Elizabeth Gee, a Federal Trade Commission official in charge of health-care antitrust enforcement, has stated that peer review is not *necessarily* anti-competitive—that indeed it can be a beneficial form of self-regulation and, when conducted in a reasonable way, even pro-competitive. Proper peer review can provide information to consumers (or to their representatives) even as it enables hospitals to offer high-quality service and physicians to enhance their skills. The AMA has asked the Justice Department for a statement to the effect that peer review is not necessarily anti-competitive, so far to no avail.

Certainly among the Astoria Clinic doctors' worst problems were that they were competing in the same market as the doctor whose performance was under review and that they held a large share of that market—circumstances that apply to hundreds of small hospitals and clinics, and therefore potentially are problems for them, too. The AMA has been looking into the appropriateness of calling in outside physicians to conduct peer reviews—a growing custom among Oregon hospitals. The Oregon Medical Association, however, fears that this procedure can never match, in thoroughness or insight, a review conducted by local doctors of one of their own. Judgment under fire and routine daily decision-making, as much as technical proficiency, determine a physician's competence. Yet while physicians who work together have a deeper knowledge of each other's competence, they also have emotional and economic ties that may influence their actions. Havighurst says that in staff-privilege antitrust cases the courts should keep the law from turning on motive; in his view, actual effects on the competitive process—not just on one competitor—should determine antitrust liability. The best protection for a hospital and a medical staff, he believes, is for the hospital board to assume, and not relinquish, the central decision-making role. Hospitals as competitive enterprises, with a legitimate concern for maintaining high quality, lack the conflicts of interest that the medical staff may have.



In emphasizing medicine's commercial aspects antitrust law is changing not only the practice but also the character of American medicine. The public has been quick to notice such changes as advertising and flexible fee schedules. Peer review is not a prominent activity of the medical profession. But to many doctors it is a matter of profound significance. Peer review is at the heart of the professional and social contract that physicians make with the public—an implicit promise of high quality in exchange for popular trust.

Dr. Arnold Relman, the editor of the *New England Journal of Medicine*, believes that neither the public nor the federal and state governments would be satisfied if medicine were run simply as a business. "It is fashionable to believe that everything is a market," he says. "The fact is, we don't live in an economy, we live in a society. Economic laws are imperfect at best and properly applied only to certain aspects of society. I believe that at some point in the future it will become clear to everyone that the consequences of taking a commercial view of health-care services are going to include a great deal of inequity." What Relman sees in the "doctor as businessman" is the tarnished image of a once golden profession. On the one hand, Relman says, the public seems reluctant to trust doctors to place their patients before their pocketbooks; on the other hand, the public still *wants* to trust doctors to do so. "You can't be angry at us for being businessmen and at the same time, when we try to be professionals, say we're being hypocritical," he says. "Doctors can do a lot to improve their own performance, but are they to be guided by the ethics of professionalism or by the rules of the marketplace?"

In a sense Relman's question is what *Patrick* v. *Burget* is all about. One way or another, it will be the American public, not the medical profession, that decides the answer.

—*Katrin Bridget Snow*

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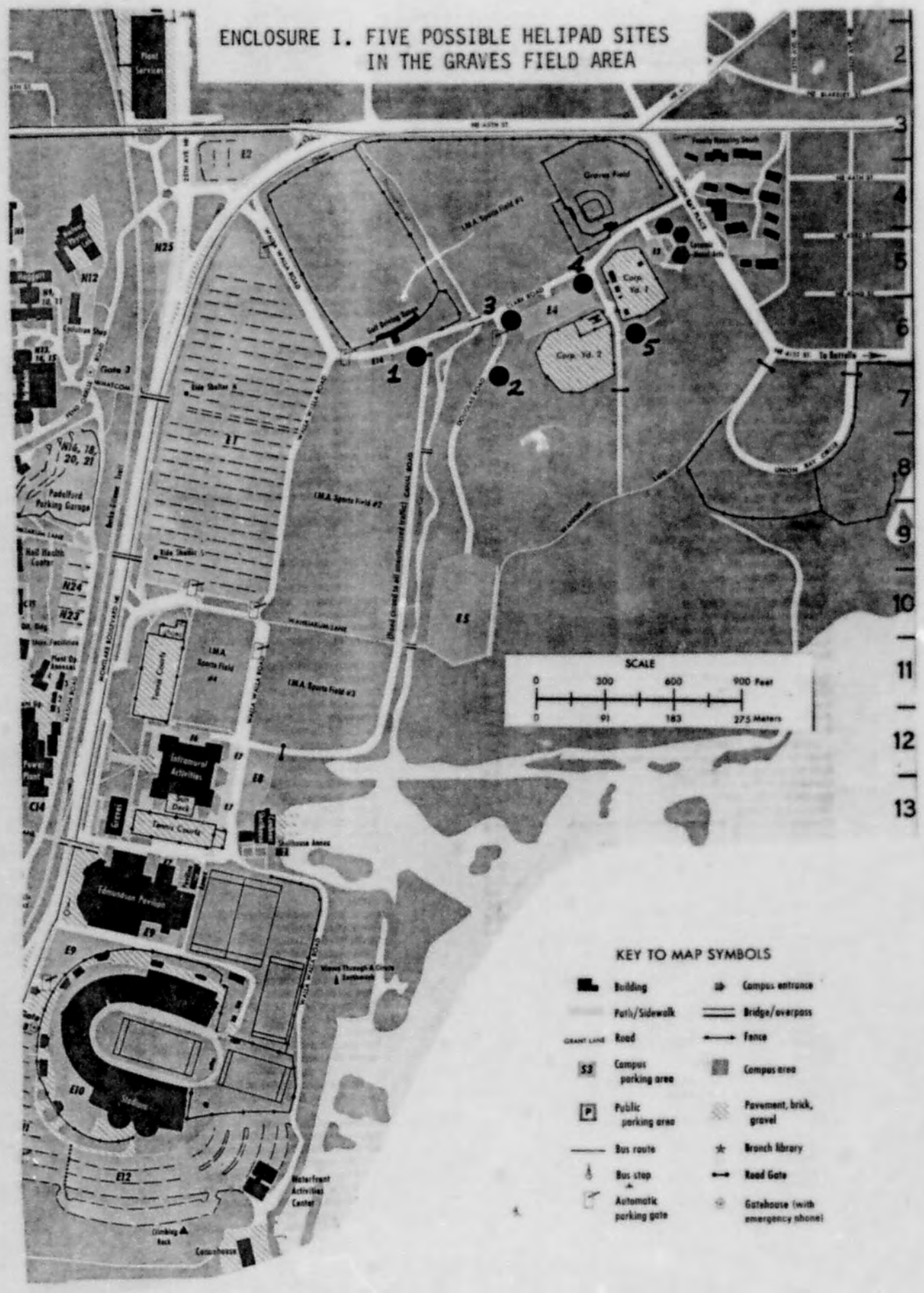
ENCLOSURE I. FIVE POSSIBLE HELIPAD SITES
IN THE GRAVES FIELD AREA



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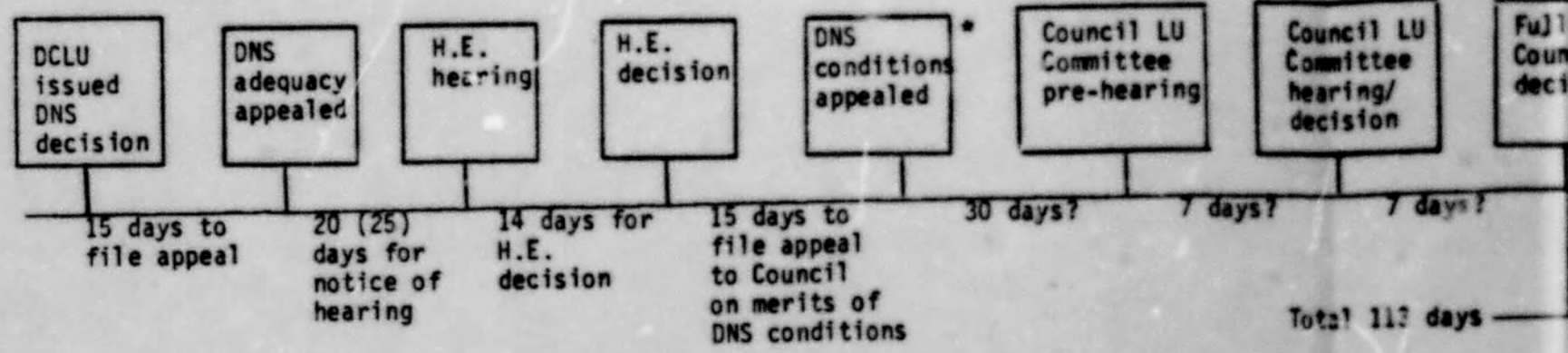
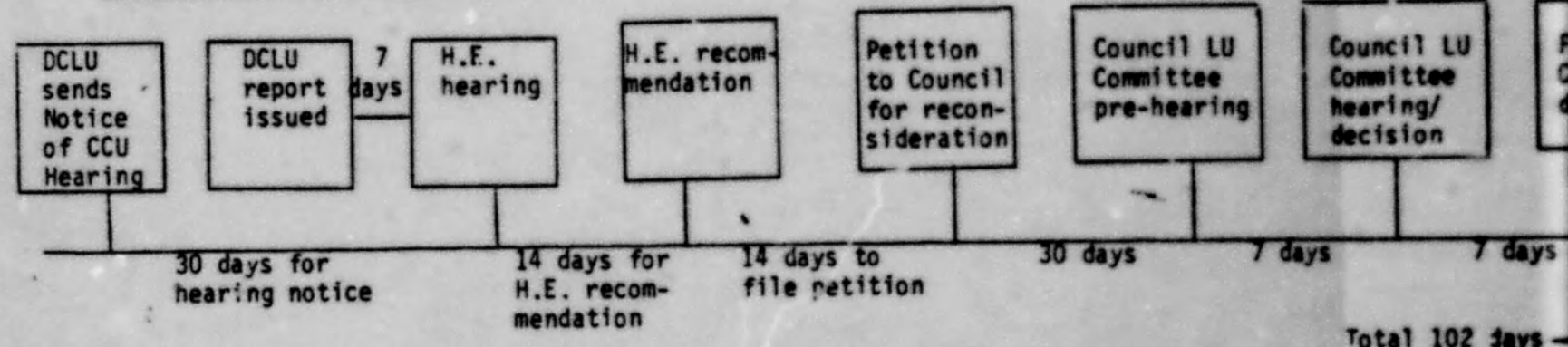
COH Helistop Proposal (CC84-022)

PROCESS I: DCLU will complete Environmental Review (SEPA) before moving to Council Conditional Use (CCU) review/report. This requires separate hearings of Hearing Examiner.

A. SEPA PROCESS:

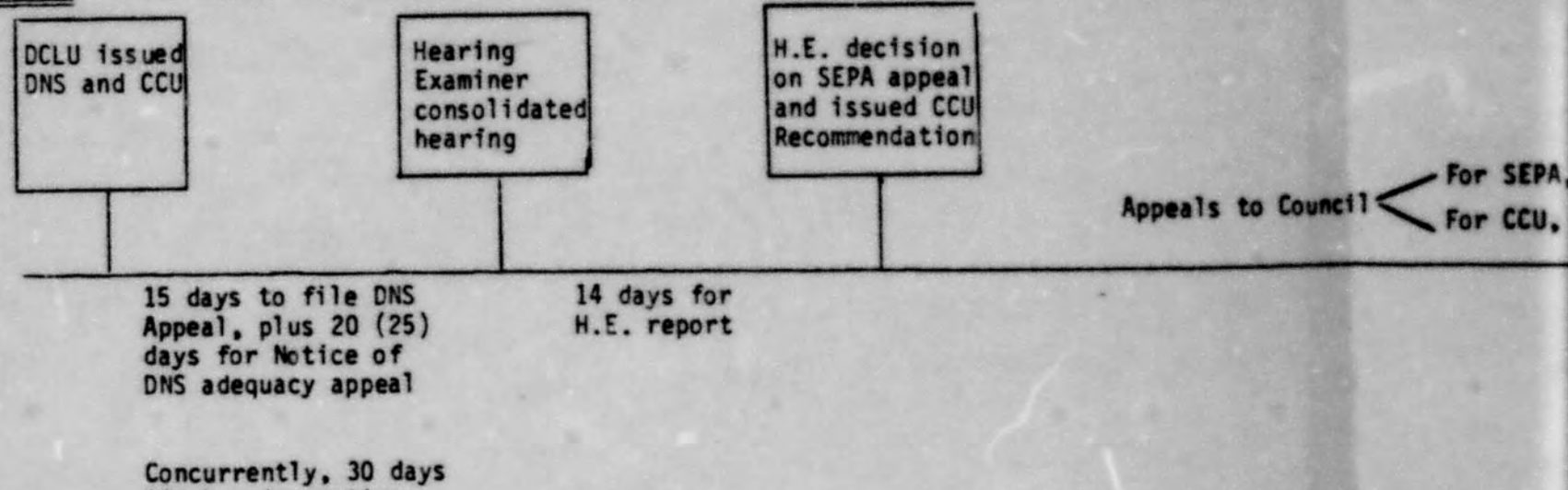


B. Council Conditional Use Process:



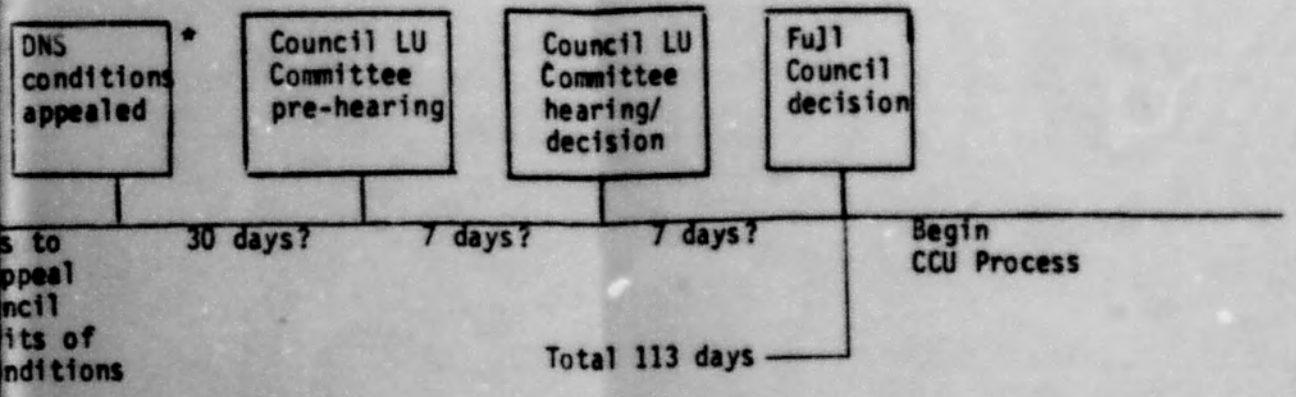
* Council may decide not to proceed at this point. If so, DCLU may begin Process B.

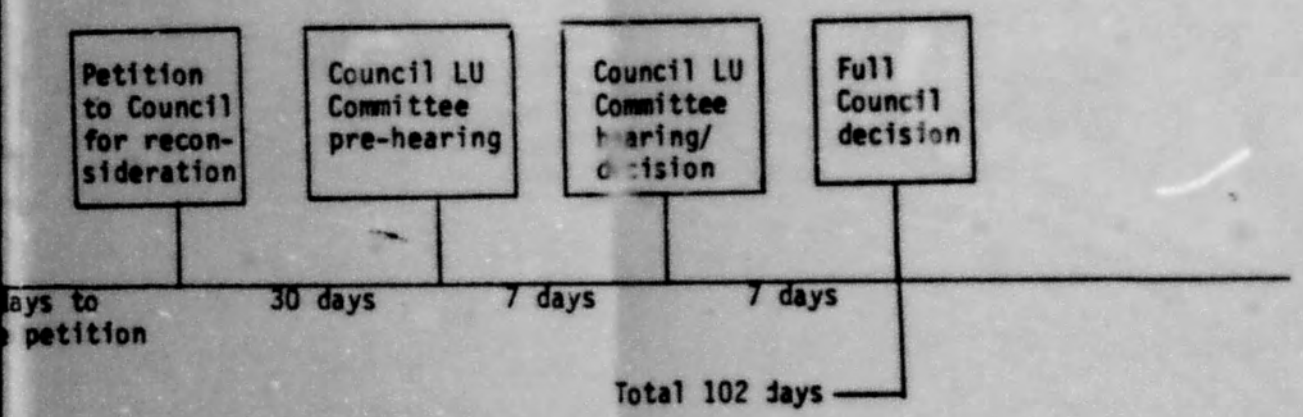
PROCESS II: DCLU issues SEPA Decision and CCU report at the same time. Hearing Examiner conducts consolidated hea



( ) days in parenthesis included time for clerical processes.

before moving to Council Conditional
e hearings of Hearing Examiner.





If so, DCLU may begin Process B.

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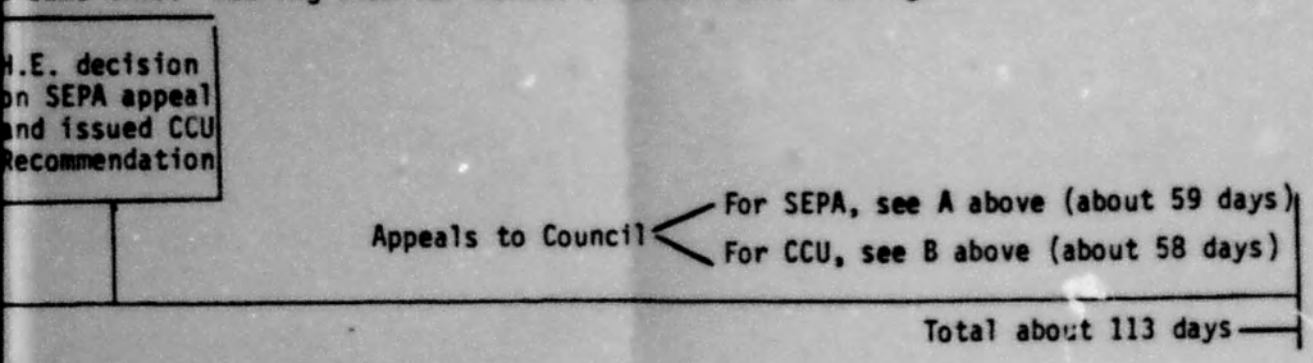
same time. Hearing Examiner conducts consolidated hearing.



processes.

CITY COUNCIL TRANSMITTAL

TO: Meredith Getches
15-13-01

C. F. #

Date Sent: 6/9/92

Reply Requested By:

Subject: Helistop at Children's Hospital

FROM: PAULA HOFF / Councilm

ACTION required

	Review and Return File With Your Answer to Sender
	Review and Answer Petitioner, Return File and Copy of Answer to Sender
	Review and Make Recommendations, Return File and Recommendations to Sender ( ) In Duplicate
	Prepare Legislation and Return File to Sender
X	Enter into Record

RECEIVED BY
92 JUN 10 PM 3:11
OFFICE OF
HEARING EXAMINER

Additional Information: Thank you!

Paula Hoff
Signature

LDI – 110–5002 CS 20.19

Reply Requested By:

92

listop at Children's
lospital

ver to Sender

mendations to Sender

RECEIVED BY
92 MAY 19 PM 3:11
OFFICE OF
HEARING EXAMINER

Paula Pst

Signature

REV 11/89

CITY OF SEATTLE

ZONING RECEIPT

DEPARTMENT OF CONSTRUCTION AND LAND USE RECEIPT

date 5/4 1992 payor Childrens Hospital

proj. address 4800 Sandpoint Way NE

written dollar amt Six Hundred Ninety Eight 50/100

phone no. dollars $698.50

project no. 9106441 amt. received $698.50

letter inv.# change $ —

check no. W-53970

	fee	option	amount	fee	option	amount	
Z1	lot boundry/ short plats	Z15		street use (DCLU)	Z12		Z11
Z2	cert. of land use	Z16		pre-app. conf.	Z18		Z12
Z3	design review/ departure	Z17		EIS	Z07		Z17
Z4	rezone	Z01		legal bldg. letter	Z19		Z24
Z5	admin. cond. use	Z13		council conditional use	Z02	698.50	Z26
Z6	demolition	B07		temporary use/ special exception	Z03		Z27
Z7	variance	Z04		flood plain devel.	FLD		Z28
Z8	use/zoning plan check						
Z9	shoreline subs. development	W01					
Z10	SEPA check (DNS)	A01					

TOTAL $698.50

Z 23647

by D.E. Dept. of Construction and Land Use

NORTHWEST BUSINESS FORMS INC. SEATTLE, WASH. 27143B-CI

IT'S DUE TO THE QUALITY OF THE DOCUMENT.

REV 11/89

CITY OF SEATTLE

ZONING RECEIPT

DEPARTMENT OF CONSTRUCTION AND LAND USE RECEIPT

date 5/4 19 92 payor Children's Hospital

proj. address 4800 Sandpoint Wy NE

written dollar amt Twenty One Thousand Five Hundred Eighty Four dollars $ 21,584.00

phone no.

project no. 8405870 amt. received $ 21,584.00

change $ —

letter inv.# —

check no. W-53976

	fee	option	amount	fee	option	amount	
Z1	lot boundry/ short plats	Z15		street use (DCLU)	Z12		Z11
Z2	cert. of land use	Z16		pre-app. conf.	Z18		Z12
Z3	design review/ departure	Z17		EIS	Z07		Z17
Z4	rezone	Z01		legal bldg. letter	Z19		Z24
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Z6	demolition	B07		temporary use/ special exception	Z03		Z27
Z7	variance	Z04		flood plain devel.	FLD		Z28
Z8	use/zoning plan check						
Z9	shoreline subs. development	W01					
Z10	SEPA check (DNS)	A01	5964				

TOTAL $ 21,584.00

Z 23646

By J. E. [illegible]
Dept. of Construction and Land Use

NORTHWEST BUSINESS FORMS INC. SEATTLE, WASH. 271438-C1

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Seattle Department of Construction and Land Use

Laura Gilbert, Acting Director
Norman B. Rice, Mayor

May 14, 1992

MASTER USE PERMIT

NOTICE OF DIRECTOR'S RECOMMENDATION ON COUNCIL CONDITIONAL USE, ENVIRONMENTAL DETERMINATION AND PUBLIC HEARING

Children's Hospital and Medical Center has applied for a permit to allow an emergency helistop on the CHMC campus and a second, primary helistop on the University of Washington campus near the Intramural fields.

Project numbers: 8405870 and 9106441
Addresses: 4800 Sand Point Way N.E. and 2501 N.E. 45th Street
CF numbers: 297288 and 298740

The Director's recommendation is that the Council Conditional Use be conditionally approved. Recommended conditions relate to limiting noise, improving safety and monitoring of landings (types of equipment used and flight paths).

ENVIRONMENTAL DETERMINATION

DCLU has determined that the Final Environmental Impact Statement (FEIS) adequately describes and assesses the adverse impacts of the proposal. The proposal has been conditioned to mitigate impacts. Although significant noise impacts occur, the benefits of the proposal have been found to outweigh the adverse impacts.

INFORMATION AVAILABLE

Copies of the Director's Report and Recommendation and the application materials are available at the DCLU Master Use Permit Information and Notification Center, 710 Second Avenue, Suite 200, Dexter Horton Building. Questions may be directed to Faith Lumsden, Senior Land Use Specialist, 684-8875, at DCLU.

PUBLIC HEARING

A public hearing to take public comment on the Director's recommendation and to establish the record for this application will be held on **June 23, 1992**, beginning at 9:00 a.m. in Room 1310 Alaska Building, 618 Second Avenue. The first two hours of the hearing have been scheduled for presentations by DCLU and CHMC. (This location is accessible.) Citizens may call the Office of Hearing Examiner in June to confirm timing for public testimony or to request accommodations for disability.

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WRITTEN COMMENTS

Written comments may be submitted through **June 23, 1992**. Comments may be sent to:

Office of Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

Those persons who want to receive a notice of the Hearing Examiner's recommendation should specify that request in their comment letter.

HOW TO APPEAL THE ENVIRONMENTAL DETERMINATION

Appeals of the decision finding the EIS to be adequate may be submitted to the Hearing Examiner through **May 29, 1992.** Appeals should be addressed to the Hearing Examiner at the address above.

Any appeal of the SEPA determination will be heard at the conclusion of the public hearing. A second day, June 24, 1992, is available for the appeal, if necessary.

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Open Immediately
Land Use Information
Concerning Your Neighborhood

City of Seattle
Department of Construction and Land Use
710 2nd Avenue Ste 700
Seattle WA 98104-1703

Seattle Department of Construction and Land Use

Laura Gilbert, Acting Director
Norman B. Rice, Mayor

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9005954

Seattle
Department of Construction and Land Use

10/1/84

ENVIRONMENTAL CHECKLIST

Purpose of Checklist.

The State Environmental Policy Act (SEPA), chapter 43.21 RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants.

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do no know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of Checklist for Nonproject Proposals.

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

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A. BACKGROUND

1. Name of proposed project, if applicable:

Meadowbrook Nursing and Convalscent Center

2. Name of applicant:

Mr. and Mrs. Louis Sternberg

3. Address and phone number of applicant and contact person:

3540 NE 110th
Seattle, WA 98125

Mr. Louis Sternberg, Owner 363-7733
Mr. Albert Nelson, Architect/Owner Representative
The Schemmer Associates Inc. 3650-131st Ave. SE. Ste. 536
Bellevue, WA 98006 643-6993

4. Date checklist prepared:

2/21/91

5. Agency requesting checklist:

Department of Construciton and Land Use

6. Proposed timing or schedule (including phasing, if applicable):

Phase I - Start Construction 1/11/92
Phase II - Start Construction 5/1/92

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

None

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

DSHS approval through design development

10. List any government approvals or permits that will be needed for your proposal, if known.

None

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11. Give brief, complete description of your proposal, including the proposed uses and the site of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) An addition of 34 beds tothe existing 47 is planned resulti in a total finished project of 81 beds. The existing facility is being upgraded to meet all applicable life/safety codes. The kitchen is being relocated on the main floor. Additional parking and landscaping is being provided.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range our boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

3540 NE 110th, Seattle, WA 98125

Lot 20 Lake Side City Add:
N 60 FT of S 240 FT of W 160 FT of E 280 FT
S 180 FT of W 160 FT of E 280 FT Less S 120 FT of E 20'

TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): (Flat,) rolling, hilly, steep slopes, mountainous, other: _____.

b. What is the steepest slope on the site (approximate percent slope)?

2%

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Sandy, gravelly loam

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

None

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

None

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No Yes, minor

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

63%

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Water retention/detention systems Comply with Grading & Drainage Control Ordinance Not

2. Air

a. What type of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known. Minimal, all parking areas to be paved. Small increase in vehicular traffic. Kitchen filtered exhaust which presently occurs but will be replaced with new improved equipment.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None Compliance with PSAPCA regulations when applicable NGT

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

None Thorton Creek → Flows into Lake Washington NGT

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No Yes, part of the proposed addition is within 200 ft of Thorton Creek NGT

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

None, basic water retention/detention systems

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No- Yes, the extreme southwest corner of the site is within a 100 year floodprone area

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals ...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.
All surface water will be disposed of through the City of Seattle storm water system. System will be designed to meet all applicable code requirements.
A Drainage Control Plan will be required by S.E.D. (detention w/ controlled release)

2) Could waste materials enter ground or surface waters? If so, generally describe.

No

d. Proposed measures to reduce or control surface, ground, or runoff water impacts, if any:

Planting and retention Comply with DRAINAGE CONTROL ORDINANCE NGT

4. Plants

a. Check or circle types of vegetation found on the site:

X deciduous tree: alder, maple, aspen, other
X evergreen tree: fir, cedar, pine, other
X shrubs
X grass
__ pasture
__ crop or grain
__ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
__ water plants: water lily, eelgrass, milfoil, other
__ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Native material, blackberries, weeds

c. List threatened or endangered species known to be on or near the site.

None

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

See Landscape Plan

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

5. Animals

a. Circle any birds and animals that have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, (songbirds), other:

mammals: deer, bear, elk, beaver, other:
None

fish: bass, salmon, trout, herring, shellfish, other:
None

b. List any threatened or endangered species known to be on or near the site.
None

c. is the site part of a migration route? If so, explain.
No

d. Proposed measures to preserve or enhance wildlife, if any:
New planting

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
Natural Gas

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
None (one story building)

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
. Solar
. Insulation
. Minimal Windows
project will comply w/ Energy Code NGT

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EVALUATION FOR AGENCY USE ONLY

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

No

1) Describe special emergency services that might be required.

Aid car, Ambulance

2) Proposed measures to reduce or control environmental health hazards, if any:

No Environmental Health Hazards. All exhausted air will be filtered to meet EPA requirements.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment operation, other)?

No equipment noises, minimal traffic and garbage disposal

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from site? Minimal air conditioning equipment, short term construction noise during daytime hours (weekdays), generator, noise from staff and patients NOT noise from emergency vehicles, delivery trucks

3) Proposed measures to reduce or control noise impacts, if any:

Planting screens to all adjoining properties and streets

Comply with Noise Ordinance. SMC 25.08 and limit hours of construction activity to 7:30 a.m.-6:00 p.m, non-holiday weekdays NOT

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

Nursing Home (no change) Adj. properties: Single family homes NOT

b. Has the site been used for agriculture? If so, describe.

No

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c. Describe any structures on the site.
Existing (1) story nursing home with 47 beds and ancillary required spaces.

d. Will any structures be demolished? If so, what?
Yes, [redacted] which needs to be upgraded in use and code requirements
a single family dwelling

e. What is the current zoning classification of the site?
SF 7200

f. What is the current comprehensive plan designation of the site?
Single Family

g. If applicable, what is the current shoreline master program designation of the site?
N/A

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.
~~No~~ Yes, the extreme southwest corner is within the 100 year Flood Prone Area

i. Approximately how many people would reside or work in the completed project?
81 beds, 30 staff average during daytime use, 10 at night 28 maximum.

j. Approximately how many people would the completed project displace?
None

k. Proposed measures to avoid or reduce displacement impacts, if any;
N/A

l. Proposed measures to ensure the proposal is compatible with existing and project land uses and plans, if any:
See Conditional Use Narrative
Comply with Seattle Zoning Code Not

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing?

81 beds Medicade/~~Medicare, Private~~ NGT

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing?

~~None~~ One single family home (MIDDLE) NGT

c. Proposed measures to reduce or control housing impacts, if any: Need nursing care beds and 81 have been approved for this site by the State of Washington.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

25 feet, wood, brick, sloping roofs, 1 story structure

b. What views in the immediate vicinity would be altered or obstructed?

None

c. Proposed measures to reduce or control aesthetic impacts, if any: Stepping of exterior facades, low residental profile, small residential scale gable roofs

Adherence to Land Use Codes NGT

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Minimal parking lot lighting

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

c. What existing off-site sources of light or glare may affect your proposal?

None

d. Proposed measures to reduce or control light and glare impacts, if any:

Planting screens, parking lot lighting shielding

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
N/A

b. Would the proposed project displace any existing recreational uses? If so, describe.
No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
~~Walking~~

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.
No

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.
None

c. Proposed measures to reduce or control impacts, if any:
N/Ap

14. Transportation

a. Identify public streets and highways serving the site, and describe the proposed access to the existing street system. Show on site plans, if any.
NE 110th St, 36th Ave NE

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop.
Yes

c. How many parking spaces would the completed project have? How many would the project eliminate?
23 total (6 added) A parking study will be completed by the applicant NOT

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d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

~~No~~ Yes, per requirements by the Seattle Engineering Department NGT

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No

f. How many vehicular trips per day would be generated by (see below also) the completed project? If known, indicate when peak volumes would occur. Peak volumes- 2:00-2:30, weekdays (shift change) NGT

~~2:00 p.m., 30 trips~~, staff & visitors ITE figures= WEEKDAY TRIPS = 88 trips
A.M.-P.M. PEAK = 6 trips
SATURDAY PEAK = 13 trips
SUNDAY PEAK = 14 trips

g. Proposed measures to reduce or control transportation impacts, if any.

. Metro
. Car Pooling

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No

b. Proposed measures to reduce or control direct impacts on public services, if any.

Very little impact

f. continued- TRUCK DELIVERY

Garbage - 3 days a week
Food- 1 a week
Laundry - 2 a week
Milk - 1 or 2 a week
Oxygen- varies

> # of times and time of delivery will not change NGT

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16. Utilities

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Existing utility services will be utilized.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand the lead agency is relying on them to make its decision.

Signature: Allen W Noble OWNER-CONTRACT ARCHITECT-THE SCHEMMER ASSOC.

Date submitted: 2/26/91

This checklist was reviewed by NATHAN TORGELSON, Environmental Specialist, Department of Construction and Land Use. Any comments or changes made by the Department are entered in the body of the checklist and contain the initials of the reviewer.

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS
(Do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

Proposed measures to protect or conserve energy and natural resources are:

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Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Norman B. Rice, Mayor

April 25, 1991

Final Environmental Impact Statement
Master Use Permit No. 8405870
4800 Sand Point Way N.E.
Children's Hospital and Medical Center Helistop

This document has been prepared in compliance with the State Environmental Policy Act (RCW 43.21C) and the Seattle SEPA Ordinance, Chapter 25.05, SMC. Copies of this document are available for public review at the Master Use Information and Notification Center, 408 Seattle Municipal Building and the following branches of the Seattle Public Library:

Downtown Branch - 1000 4th Avenue, Seattle 98104
Governmental Research Assistance Library - 3rd Floor, Seattle Municipal Building, Seattle 98104
North East Branch - 6801 35th Avenue N.E., Seattle 98115
University Branch - 5009 Roosevelt Way N.E., Seattle 98105

Copies of the document are also available at the University of Washington Suzzallo and Health Sciences Libraries.

A limited number of copies for public distribution are available at the Land Use Information Center, 684-8467.

This Final Environmental Impact Statement (EIS) includes a new alternative to the original proposal which was developed in response to comments. Under this alternative, the majority of the helicopter flights with patients destined for Children's Hospital would land at the University of Washington's Intramural Field or Harborview Medical Center. A minority of the flights, with the most critical patients destined for Children's Hospital, would land on the Children's Hospital Laurelhurst campus.

The EIS does not include a transcript of the public hearing on the Draft EIS. After review of the comments submitted on the Draft EIS, DCLU determined the issues were sufficiently covered by the responses to the written comments.

The Department of Construction and Land Use will issue a recommendation on whether to grant, condition, or deny the project described above no sooner than seven days after the date of this document. A public hearing for citizens to comment on the proposal and recommendation will be scheduled at that time.

An equal opportunity affirmative action employer
Seattle Department of Construction and Land Use, 400 Municipal Building, Seattle, Washington 98104

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The final decision will be made by the Seattle City Council. Notice of the decision will be published either on a Monday or a Thursday in tne Daily Journal of Commerce. Notice of the decision will also appear in the Department's twice weekly Land Use Information Service bulletin and will be mailed to those who request a copy of the decision.

Sincerely,

Rebecca R. Herzfeld

REBECCA HERZFELD
Director
Land Use Division

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RECEIVED
MAY 0 9 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Seattle Department of Parks and Recreation

Holly Miller, Superintendent
Norman B. Rice, Mayor

May 3, 1991

John T. Doan
Department of Construction and Land Use
Room 405 - Municipal Building

Subject: Children's Hospital & Medical Center
Helistop: Final EIS

Dear Mr. Doan:

We reviewed portions of this Final EIS. The many ways to minimize accident risks and community impacts appear to be very thoroughly covered. We did note that recreation impacts were not considered significant and therefore were not discussed. Is that judgment still valid with the new alternative that would shift a majority of the landings to the UW's Intramural Field or Harborview? It is not really in this Department's jurisdiction, but the UW provides recreation space for a large campus population and we would be at least indirectly interested if their capacity to provide for it is being diminished by this proposal.

Thank you for the opportunity to comment.

Sincerely,

Holly Miller

Holly Miller,
Superintendent

HM:pst
D20C:LTRJDOAN.PLT

cc: Fritz Hedges

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Seattle Department of Construction and Land Use

10/1/84

ENVIRONMENTAL CHECKLIST

Purpose of Checklist.

The State Environmental Policy Act (SEPA), chapter 43.21 RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants.

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do no know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of Checklist for Nonproject Proposals.

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

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A. BACKGROUND

1. Name of proposed project, if applicable:
   Emergency Helistop for The Children's Orthopedic Hospital & Medical Center

2. Name of applicant:
   The Children's Orthopedic Hospital & Medical Center
3. Address and phone number of applicant and contact person:
   4800 Sand Point Way N.E.
   Seattle, WA 98105 contact: Dorothy Teeter, 526-2004

4. Date checklist prepared:
   October 16, 1984
5. Agency requesting checklist:
   DCLU
6. Proposed timing or schedule (including phasing, if applicable):
   Propose to construct immediately after receiving all necessary approvals.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

   None.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

   No others

10. List any government approvals or permits that will be needed for your proposal, if known.

    Seattle Conditional Use
    Seattle Building Permit
    FAA Approval

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11. Give brief, complete description of your proposal, including the proposed uses and the site of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) Construction and use of an emergency heilstop and use of same for transporting critically ill or injured children rapidly into the hospital for treatment.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range our boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The Children's Orthopedic Hospital & Medical Center
4800 Sand Point Way N.E.

85 feet due north of the existing emergency entrance

TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): (Flat), rolling, hilly, steep slopes, mountainous, other: _____.

b. What is the steepest slope on the site (approximate percent slope)?

10°

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Clay loam.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

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e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

We will use fill from other location on hospital site.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

50%

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Retaining wall and drainage system to storm drains.

2. Air

a. What type of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Small amounts of jet engine exhaust during landing and take off.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No.

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2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Does not apply.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals ...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Does not apply.

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EVALUATION FOR AGENCY USE ONLY

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Water runoff will not be changed and existing storm drains will continue to be utilized.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No.

d. Proposed measures to reduce or control surface, ground, or runoff water impacts, if any:

None.

4. Plants

a. Check or circle types of vegetation found on the site:

X deciduous tree: alder, maple, aspen, other
X evergreen tree: fir, cedar, pine, other
X shrubs
X grass
__ pasture
__ crop or grain
__ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
__ water plants: water lily, eelgrass, milfoil, other
__ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

130 sq. ft. of grass
3 trees removed

c. List threatened or endangered species known to be on or near the site.

None.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Returned to previous condition.
Wildlife plantings on western slope.

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

5. Animals None.

a. Circle any birds and animals that have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds, other:
None.

mammals: deer, bear, elk, beaver, other:
None.

fish: bass, salmon, trout, herring, shellfish, other:
None.

b. List any threatened or endangered species known to be on or near the site.
None.

c. Is the site part of a migration route? If so, explain.
No.

d. Proposed measures to preserve or enhance wildlife, if any:

Not applicable.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Electric for lighting the helistop.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Does not apply.

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

No.

1) Describe special emergency services that might be required.

Fire Department/Aid Unit response.

2) Proposed measures to reduce or control environmental health hazards, if any:

Not applicable.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment operation, other)?

None.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from site?

There will be helicopter noise for the brief intervals it is arriving & departing. Hours of noise will vary depending on time of the emergency.

3) Proposed measures to reduce or control noise impacts, if any:

Controlled flight paths to minimize impact in neighborhood, and prudent helicopter blades to reduce noise.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

Hospital grounds and hospital.

b. Has the site been used for agriculture? If so, describe.

No.

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

c. Describe any structures on the site.

None.

d. Will any structures be demolished? If so, what?

No.

e. What is the current zoning classification of the site?

I-3

I-2 (35,500 sq ft official max ps.

f. What is the current comprehensive plan designation of the site?

Hospital grounds

g. If applicable, what is the current shoreline master program designation of the site?

Does not apply.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

Does not apply.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any;

Does not apply.

l. Proposed measures to ensure the proposal is compatible with existing and project land uses and plans, if any:

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing?

Does not apply.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing?

Does not apply.

c. Proposed measures to reduce or control housing impacts, if any:

Does not apply.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

There is no structure.

b. What views in the immediate vicinity would be altered or obstructed?

None.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Aesthetics should remain unchanged.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

No glare. Ground lighting only used for emergency night landing.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

Use of lights only for emergencies.

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

None.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Does not apply.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None

c. Proposed measures to reduce or control impacts, if any:

Does not apply.

14. Transportation

a. Identify public streets and highways serving the site, and describe the proposed access to the existing street system. Show on site plans, if any.

Does not apply.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop.

Does not apply.

c. How many parking spaces would the completed project have? How many would the project eliminate?

Does not apply.

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

No.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Yes, helicopter transporting critically ill or injured children.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

None.

g. Proposed measures to reduce or control transportation impacts, if any.

Does not apply.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

No impact.

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

16. Utilities

a. Circle utilities currently available at the site: (electricity) (natural gas) (water) (refuse service) (telephone) (sanitary sewer) septic system, other.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Electricity for emergency lighting. Storm drains for rain water runn off.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand the lead agency is relying on them to make its decision.

Signature: Dorothy F. Treter

Date submitted: _____

This checklist was reviewed by _____, Environmental Specialist, Department of Construction and Land Use. Any comments or changes made by the Department are entered in the body of the checklist and contain the initials of the reviewer.

_____

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS
(Do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

Proposed measures to protect or conserve energy and natural resources are:

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

   Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

   Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

   Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

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THE FOLLOWING EXHIBITS FROM CHILDREN'S HOSPITAL AND MEDICAL CENTER ARE SEPARATE FROM THE BROWN FOLDER AND ARE LARGE EXHIBITS. THEY ARE AS FOLLOWS:

EXHIBIT 1	TWO LARGE BOXES CONTAINING CHMC MATERIALS/DOCUMENTS
EXHIBIT 5	REGIONAL PEDIATRIC TERTIARY CARE FACILITIES AND ORIGIN OF PATIENTS
EXHIBIT 6	GEOGRAPHIC ORIGIN OF ALL CHILDREN'S INPATIENTS (FY 1990)
EXHIBIT 7	PATIENT TRANSPORTS TO CHILDREN'S ER BY TRANSPORT MODE (1991)
EXHIBIT 8	MONTHLY AIRLIFT NORTHWEST TRANSPORTS (Jan, 1987 - May, 1992)
EXHIBIT 9	STANDING ORDERS FOR CHILDREN'S LANDINGS
EXHIBIT 19	RESIDENTIAL NOISE CRITERIA
EXHIBIT 20	SOUND LEVELS OF VARIOUS NOISE SOURCES
EXHIBIT 22	LARGE TOPOGRAPHIC MAP
EXHIBIT 23	HELISTOP DIAGRAM
EXHIBIT 24	CAMPUS PLAN
EXHIBIT 4	PLANS

THERE ARE DUPLICATE EXHIBITS FOR SOME OF THE LARGE EXHIBITS. THE SMALL EXHIBITS ARE LOCATED IN THE BROWN FOLDER.

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FILE COPY

Children's Hospital and Medical Center Helistop

Draft Environmental Impact Statement

September 1986

City of Seattle
Department of Construction & Land Use

The intent and purpose of this Draft Environmental Impact Statement is to satisfy the procedural requirements of the State Environmental Policy Act (RCW 43.21c), City Ordinance 111866, as amended. This document is not an authorization for an action, nor does it constitute a decision or a recommendation for an action; in its final [illegible] and will be considered in making the final decision on the proposal.

APPELLANT
DEPARTMENT ✓
APPLICANT
FILE # 349587 9906441 297296 299749
EIS 2

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Seattle
Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

Subject: Draft Environmental Impact Statement
for Children's Hospital Helistop
4800 Sandpoint Way N.E.
Application #8405870

To Whom It May Concern:

This document has been prepared in compliance with the State Environmental Policy Act, RCW 43.21C and the Seattle SEPA Ordinance, Chapter 25.05, SMC.

Comments are invited and will be received until 5:00 p.m., October 2, 1986. Written comments should be addressed to:

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Copies of this document are available for public review at the Land Use Information Center, Room 408, Seattle Municipal Building and the following branches of the Seattle Public Library:

Downtown Branch - 1000 4th Avenue, Seattle, WA 98104
Governmental Research Assistance Library - 3rd Floor,
Seattle Municipal Building, Seattle, WA 98104
University Branch - 5009 Roosevelt Way N.E.

A limited number of copies for public distribution are available at the Land Use Information Center.

A public hearing on this document will be held on September 23, 1986 at 6:00 p.m. at Laurelhurst Elementary School, 4530 - 46th Avenue N.E. Members of the public are invited to attend. A copy of the document of the document will be available for public review at the hearing.

A final Environmental Impact Statement (EIS) will be prepared to address comments made on the proposal and draft EIS. If you wish to be notified when the final EIS is available, please call the Land Use Information Center at 625-5200.

Sincerely,

Holly Miller

HOLLY MILLER
Director

T01/8405870

An equal employment opportunity - affirmative action employer
Seattle Department of Construction and Land Use, 400 Municipal Building, Seattle, Washington 98104

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Seattle Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

MASTER USE PERMIT

September 1, 1986

DRAFT ENVIRONMENTAL IMPACT STATEMENT - PUBLIC HEARING

Seattle's Department of Construction and Land Use has issued a Draft Environmental Impact Statement (EIS) for the proposed:

Project Description

4800 SAND POINT WY NE ZONE I-4/I-2/SF 5 PROJ #8405870/KROLL 16W TO CONSTRUCT AN EMERGENCY HELISTOP FACILITY ACCESSORY TO AN EXISTING HOSPITAL/ MEDICAL CENTER (CHILDREN'S HOSPITAL & Medical Center).

The following Master Use Permit components are part of this application
SEPA ENVIRONMENTAL DETERMINATION
COUNCIL CONDITIONAL USE
TO ALLOW A HELISTOP WITHIN A MAJOR INSTITUTION ZONE.

Further Information Available:
A copy of the Draft EIS is available for public review at the downtown Seattle Public Library, 1000 Fourth Avenue the Governmental Research Assistance Library, Seattle Municipal Building, and the branch library in the neighborhood in which the project is located.

Additional information and a limited number of copies of the draft EIS are available through the Master Use Information and Notification Center, Room 408, Seattle Municipal Building (625-5200).

Opportunity For Public Involvement

A public hearing to gather comments on the environmental impacts of the proposal will be held on
SEPTEMBER 23, 1986 at LAUREL HURST ELEM SCHOOL 06:00PM.
4530 46th Ave. N.E.
In addition, written comments may be submitted through OCTOBER 02, 1986

Comments should be addressed to: Director, Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.
If you wish to receive notice of the decision(s) on this project or to receive notice of the availability of the Final EIS (which responds to comments made at the public hearing or on the Draft EIS), please return the completed form below to: Seattle Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.

****

APPLICATION 8405870

____ I wish to receive notice of the decision.

____ I wish to receive notice of the availability of the Final EIS.

Name _____ Address _____

_____ ZIP _____

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Open Immediately
Land Use Information
Concerning Your Neighborhood

City of Seattle
Dept. of Construction & Land Use
400 Municipal Building
Seattle, WA 98104

DRAFT
ENVIRONMENTAL IMPACT STATEMENT
FOR CONSTRUCTION
OF A HELISTOP
AT CHILDREN'S HOSPITAL AND MEDICAL CENTER

City of Seattle
Department of Construction and Land Use

Prepared in Compliance with

The State Environmental Policy Act of 1984
Chapter 43.21C, Revised Code of Washington

SEPA Rules, Effective April 4, 1984
Chapter 197-11, Washington Administrative Code

City of Seattle Ordinance 111866

Date of Issue: September 2, 1986

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FACT SHEET

Title and Description	The proposed action is for approval of a Council Conditional Use Permit to allow development of a helistop outside the Emergency Room entrance of Children's Hospital and Medical Center (Children's). Implementation of the Proposed Action would allow 15-20 critically ill children to be brought by helicopter to Children's each month without exposing the child to the risk of life-threatening delays or transfers associated with ground transport. Alternatives to the Proposed Action include the construction of a helistop at University of Washington's Intramural Field, or sharing a helistop with University Hospital, both of which involve ground transport of critically ill patients to Children's, a Limited Landings at Children's Alternative involving no construction of the Proposed Action or alternatives and landing of helicopters at Boeing Field and Harborview with ground transport to Children's and with only a few helicopter flights (with destabilizing patients) landing on the grassy area outside Children's Emergency Room entrance. In addition, a No Action Alternative is characterized by all flights landing at Boeing Field, Harborview or other helistop, with ground transport of patients to Children's.
Action Sponsor	Children's Hospital and Medical Center 4800 Sand Point Way N.E. Seattle, Washington 98105
Approximate Date of Implementation	Construction would be completed within approximately two months of approvals.
Lead Agency	City of Seattle Department of Construction and Land Use
Responsible Official and Contact Person for Questions, Comments and Information	Julia Gibb City of Seattle Department of Construction and Land Use Room 408, Municipal Building Seattle, Washington 98104 Phone: (206) 625-4509
Licenses, Permits, and Approvals	City of Seattle Council Conditional Use Permit City of Seattle Building, Electrical Permits FAA Approval

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Authors and Principal Contributors to EIS

This Environmental Impact Statement (EIS) was prepared under the direction of the City of Seattle, Department of Construction and Land Use. Research and analysis were provided by the following firms:

Shapiro and Associates, Inc., Environmental Consultants - Glenn Bachman, Ray Sachs, Susan Killen

Towne, Richards and Chaudiere - Jan Hauge

Location of Background Data

Land Use Review Section
Department of Construction and Land Use
Room 408, Municipal Building
Seattle, Washington 98104
Phone: (206) 625-4509
Refer to File No. 8405870

Shapiro and Associates, Inc.
Suite 1812, The Smith Tower
506 Second Avenue
Seattle, Washington 98104
Phone: (206) 624-9190

Issue Date of Draft EIS

September 2, 1986

Date Comments Due

October 2, 1986

Public Hearing

September 23, 1986

Public Agency Review and Response

In accordance with the SEPA guidelines, the Draft EIS is being circulated for a 30-day review period. Information on the availability of this Draft EIS will appear in the Seattle Daily Journal of Commerce and will be included in the Department of Construction and Land Use (DCLU) Land Use Information Bulletin; notice will also be posted within the Department of Construction and Land Use. The Department invited suggestions on items to be covered in the scope of this document. These letters are on file in the Department and are available for review there.

Comments on this Draft EIS are welcome and should be addressed to:

Holly Miller, Director
Department of Construction and Land Use
408 Municipal Building
Seattle, Washington 98104

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Approximate Date of Final Action by Lead Agency	December 22, 1986
Type of Agency Decisions	Council Conditional Use to grant, conditionally grant, or deny permits for the Proposed Action.
Cost to Public	Copies of this Draft EIS have been printed and made available for reference at the Seattle Public Library, Downtown, Northeast and University Branches, University of Washington Library, and the Governmental Research Assistance Library. Until the supply runs out, some free copies of this DEIS are available at the Department of Construction and Land Use. Additional copies are available from the Land Use Review Section, Department of Construction and Land Use, at the cost of production ($.25 first page, $.10 each additional page).

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ELEMENTS OF THE ENVIRONMENT

Following is a list of Elements of the Environment as set forth in Chapter 25.05.444 of the Seattle Municipal Code. Items marked "Reviewed" are discussed in this document, on pages specified in the preceding Table of Contents. Items marked "Not Reviewed" have impacts deemed to be non-significant, for reasons briefly stated thereafter.

1. Natural Environment

a. Earth

i. Geology	Not reviewed; no unusual conditions exist on this urban site.
ii. Soils	Not reviewed; no unusual conditions exist on this urban site.
iii. Topography	Not reviewed; no unusual conditions exist on this urban site.
iv. Unique Physical Features	Not reviewed; no unique physical features exist on this urban site.
v. Erosion/Enlargement of Land Area (Accretion)	Not reviewed; construction-related erosion would not be significant.

b. Air

i. Air Quality	Not reviewed; helicopter emissions would not be significant.
ii. Odor	Not reviewed; helicopter emissions not expected to generate significant odor.
iii. Climate	Not reviewed; construction of helistop and operation of helicopter would not result in significant impact.

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c. Water		
i.	Surface Water Movement/ Quantity/Quality	Not reviewed; no surface water on site.
ii.	Runoff/Absorption	Not reviewed; amount of impervious surfaces would not be significant.
iii.	Floods	Not reviewed; not applicable to this urban site.
iv.	Groundwater Movement/ Quantity/Quality	Not reviewed; not applicable to this urban site.
v.	Public Water Supplies	Not reviewed; water consumption of proposal expected to have no impact on overall City of Seattle supply.
d. Plants and Animals		
i.	Habitat for and Numbers or Diversity of Species of Plants, Fish or other Wildlife	Not reviewed; currently only usual urban birds or small mammals can reasonably be expected on site.
ii.	Unique Species	Not reviewed; none exist on site.
iii.	Fish or Wildlife Migration Routes	Not reviewed; not applicable to site.
e. Energy and Natural Resources		
i.	Amount Required/Rate of Use/Efficiency	Not reviewed; insigificant amounts of energy consumed.
ii.	Source/Availability	Not reviewed; energy requirements would have insignificant effect on overall supplies.
iii.	Nonrenewable Resources	Not reviewed; the only use of resources would be for normal building materials, and energy requirements.
iv.	Conservation and Renewable Resources	Not reviewed; no significant impacts on conservation and renewable resources.
v.	Scenic Resources	Not reviewed; no significant impacts on scenic resources.

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2.	**Built Environment**	
	a. Environmental Health	
	i. Noise	Reviewed
	ii. Risk of Explosion	Reviewed; discussed under Traffic Hazards (Helicopter Safety).
	iii. Releases or Potential Releases to the Environment Affecting Public Health, such as Toxic or Hazardous Materials	Not reviewed; proposal involves no significant hazard in this area.
	b. Land and Shoreline Use	
	i. Relationship to Existing Land Use Plans and to Estimated Population	Not reviewed; proposal involves no significant departure from land use.
	ii. Housing	Not reviewed; proposal has no significant impact on housing.
	iii. Light and Glare	Not reviewed; increase in light and glare determined to be non-significant.
	iv. Aesthetics	Not reviewed; proposal involves no significant changes to aesthetic character.
	v. Recreation	Not reviewed; no significant demand for recreation resources would be generated.
	vi. Historic and Cultural Preservation	Not reviewed; no affected historic or cultural resources have been identified.
	vii. Agricultural Crops	Not reviewed; small therapeutic garden on-site would be relocted.
	c. Transportation	
	i. Transportation Systems	Not formally reviewed; the proposed action by its nature would alter the transport of pediatric medical teams and patients; discussed under Introduction, Description and Traffic Hazards (Helicopter Safety).
	ii. Vehicular traffic	Not reviewed; proposal not expected to have significant impact on vehicular traffic.

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iii.	Waterborne, Rail and Air Traffic	Not reviewed; proposal would generate relatively insignificant amount of air traffic, which is quantified in description of proposed action.
iv.	Parking	Not reviewed; not applicable to site or proposed action.
v.	Movement/Circulation of People or Goods	Not reviewed; proposal would not have significant impact on movement/circulation.
vi.	Traffic Hazards	Reviewed
d.	Public Services and Utilities	
i.	Fire	Not reviewed; existing and future services not significantly affected.
ii.	Police	Not reviewed; existing and future services not significantly affected.
iii.	Schools	Not reviewed; no significant increase in school population is anticipated to result from development of this project.
iv.	Parks or Other Recreational Facilities	Not reviewed; not applicable to site.
v.	Maintenance	Not reviewed; owner would contribute taxes to pay for maintenance of public systems.
vi.	Communications	Not reviewed; proposed action not expected to disrupt communications.
vii.	Water/Storm Water	Not reviewed; project would be served by existing system with minimal upgrade.
viii.	Sewer/Solid Waste	Not reviewed; project would not require sanitary sewer or generate solid waste.
ix.	Other Governmental Services or Utilities	Not reviewed; provision of energy discussed in energy section; demand for government services would be small.

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U.S. Department of Housing and Urban Development
U.S. Department of Commerce
U.S. Department of Transportation, Federal Aviation Administration
U.S. Army, MAST

State of Washington

Office of the Governor
Washington State Department of Ecology
Washington State Department of Social and Health Services
Washington State Historic Office
Washington State Department of Transportation
Washington State Planning and Community Affairs
Washington State Commerce and Economic Development

Regional Agencies

Puget Sound Council of Governments
Puget Sound Air Pollution Control Agency
Puget Sound Health Systems Agency
METRO

City of Seattle/King County

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Seattle-King County Department of Public Health
Seattle City Council
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Seattle Times
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General Interest Groups and Individuals

League of Women Voters
Allied Arts of Seattle
University of Washington, Public Archaeology
University of Washington, University Hospital
King County Medical Society
King County Emergency Medical Society
King County Emergency Medical Services Coordinating Council
Harborview Medical Center
Washington State Medical Association
Washington State Hospital Association
Seattle Area Hospital Council
Dr. Jay Kranz
Dr. Lothar Pinkers
Airlift Northwest
Citizens Concerned About Helicopter Transport

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EXECUTIVE SUMMARY

Introduction

This environmental impact statement examines the University District and Laurelhurst neighborhoods of northeast Seattle and the potential impacts associated with construction and operation of the proposed Children's Hospital Helistop. The proposed action is the approval of a Council Conditional Use Permit to allow development of the Children's helistop located on the campus of the Children's Hospital and Medical Center at the northeast corner of Sand Point Way N.E. and N.E. 47th Street. The sponsor of the project is the Children's Hospital and Medical Center.

The sponsor's objective in developing the proposal is to create a landing pad for helicopters transporting critically ill or injured children to Children's. The specific objectives of the proposed action are to minimize both the patient transport time and the number of potentially destabilizing patient transfers from the place of patient pickup to the Emergency Room entrance at Children's while maintaining appropriate medical treatment and to construct a helistop and to operate the helicopter service so as to minimize potential environmental impacts.

The Children's campus is located in the Laurelhurst neighborhood, less than one mile east of the University of Washington. The Children's campus is situated on an east-facing hillside and consists of one large hospital building and a detached parking garage along the north edge of the campus boundary. The proposed helistop pad would be located approximately 120 feet north of the Emergency Room entrance, somewhat southwest of the parking garage and in the central portion of the campus.

Description of the Proposed Action and Alternatives

The proposed action would relocate the existing "Kitchen Garden" to a new site on campus and would remove three tall trees and assorted shrubbery prior to grading and construction of the helistop. The 40-foot-square helistop would be marked by a large red "H" and would be surrounded by a fence 2.5 to 3.5 feet tall. The helistop would be identified from the air by the red "H" and at night by ground lights that would be turned on for emergency landings. The helistop would initially involve ten patient transports per month and over time would receive up to an estimated 15-20 critically ill patients each month. For the near-term, approximately ten patients per month are expected to be transported by helicopter to Children's. The majority of these flights would be performed by Airlift Northwest (ALNW), a Seattle vendor based at Boeing Field; although flights could occur by other ambulance services, U.S. Army MAST helicopters, or private helicopters. Two takeoffs and two landings would be associated with each ALNW patient delivered to Children's--one landing and takeoff for the pickup of the pediatric medical team, the other for the delivery of the patient and departure of the helicopter.

Nearly all of these flights would approach Children's from the southwest, along Sand Point Way N.E., before turning to the south over the parking garage and making final approach to the helistop from the north. In

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rare conditions of strong winds from the northwest quadrant, the helicopter would approach and land from the northeast (final flight paths would be approved by the FAA). Upon arriving at the helistop, the engine would be shut down, a ground crew would assist the on-board medical team for transporting the patient to the Emergency Room. The patient would be removed from the helicopter, placed on a gurney, and wheeled to the Emergency Room entrance. Once the patient is inside the Emergency Room and medical equipment is retrieved, the pilot would restart the engines and depart, following approximately the same flight path as the approach, but with greater altitude.

There are four alternatives to the proposed action discussed in the EIS. The University of Washington Intramural Field Helistop Alternative would consist of construction of a secured helistop at Graves Field on the University of Washington athletic field complex. The helistop would receive a similar number of Children's-destined flights as the proposed action. As with the proposed action, four flights wold be associated with each patient delivery. Patients landing at the Intramural Field Helistop would be transferred to a ground ambulance for the trip to Children's Emergency Room. Total transfer and transport time from helicopter touchdown to entry to the Children's Emergency Room would be a minimum of 10 minutes.

The University of Washington Hospital Helistop Alternative would consist of receiving approval by the Seattle City Council for a Conditional Use Permit on an already constructed, secured helistop on the roof of the hospital's expansion wing. As with the Intramural Field Helistop Alternative, this alternative would receive a similar number of Children's-bound patients as the proposed action in addition to an undetermined number of University of Washington-destined flights. As with the Intramural Field Helistop Alternative, this alternative would require the transfer of Children's-bound patients to a ground ambulance for the transport to Children's. Total transfer and transport time from landing to Children's Emergency Room is estimated at a minimum of 17 minutes.

The third alternative examined in this document is the Limited Landings Alternative, under which Children's-destined patients would be flown to Boeing Field and/or Harborview Hospital, stabilized, and transferred to a ground ambulance for transport to Children's. Occasional landings of destabilizing patients would occur in the grass area outside the Children's Emergency Room.

The final alternative is the No Action Alternative under which all Children's destined patients would be flown to Boeing Field and/or Harborview Hospital, stabilized and transferred to a ground ambulance for transport to Children's. No landings would be allowed on the Children's campus.

Impacts on patient outcome are expected to be more favorable under the proposed action than under the Intramural Field Helistop Alternative, the University Hospital Helipad Alternative, Limited Landings or the No Action Alternative. The increased time of transport and increased manipulation of patients that would result from any of the alternatives other than the proposed action could result in suffering, the need for prolonged treatment, or even death.

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Environmental Impacts of the Proposed Action and Alternatives

Through the mandatory scoping process, two elements of the environment were identified as warranting analysis in the EIS. These elements are Noise and Vibration, and Helicopter Safety. "Cumulative Impacts" was added as a scoped element because of the possibility that the proposed action could serve as a precedent for the development of other helistops in Seattle.

An evaluation of noise and vibration impacts expected to be caused by the proposed action indicates that although helicopter noise would be noticeable, it would not cause significant impact during daytime hour, when three-quarters of the patient transports are expected to occur. During sleeping periods, helicopter flights could cause sleep disturbance of varying degrees to 15-30% at the closest, line-of-sight residences. The worst case impact of monthly helicopter noise exposures would increase ambient levels of 55-58 dBA by 3-5 dBA at residences closest to the helistop, which does not represent a significant increase over existing levels. Structural vibrations due to helicopter flights are not expected to be significant, although helicopter-induced vibrations could cause movement of small household objects, such as dishes, in the residences nearest the flight path. The Intramural Field Helistop Alternative would not be expected to create noise impacts when the primary approach and departure paths are used, although some impact could occur to the occupants of the University of Washington dormitories and classrooms when the secondary path over the University of Washington is used. The University Hospital Helistop Alternative would result in noise impacts for residents south of the Montlake Cut; due to a slightly greater distance from the flight path, these impacts would be slightly less than those impacts expected for residents in the vicinity of the Children's Helistop. Under the Limited Action Alternative, helicopter flights and resultant Ldn noise levels are expected to remain at current levels, resulting in occasional but not significant impacts. Under the No Action Alternative, there would be no noise impacts from helicopter operations at Children's or in the vicinity; however, there would be noise at Boeing Field and Harborview Hospital. Any alternatives to the proposed action could result in ambulance sirens being used between the landing area and Children's. These sirens are approximately as loud as the helicopter.

Helicopter safety impacts associated with the proposed action would be similar to those associated with the Intramural Field Helistop Alternative and the University Hospital Helistop Alternative. The difference between the three would be the probable location of potential helicopter accidents. Based on available data, the worst case expected statistical frequency of a helicopter accident on a flight destined for one of the proposed helistops would be one in every 5,459 flights, which, assuming an average of 20 patient transports a month, translates to a worst case of an accident occurring once every 23 years. Such an accident could occur anywhere along the flight path. Since the number of helicopter flights in the area would be less under the Limited Landings or No Action Alternatives than any of the other alternatives, the resulting helicopter safety impacts on the University/Laurelhurst area would be expected to be less as well, with the potential for impacts displaced to the other approach and departure loca-

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tions, i.e. Boeing Field and Harborview Hospital. It should be noted that limited landings in the grassy area do pose some public safety risks because the site is not secured.

In addition to helicopter safety, there are safety issues associated with ground ambulance transport and the natural gas meter house located near the site of the proposed action. In the case of a helicopter accident on the Children's site that breached the natural gas supply line, the natural gas would flare until shut off at the main valve across from Children's on Sand Point Way N.E. Under the Intramural Field Helistop Alternative, the University Hospital Helistop Alternative, and the Limited Landings and No Action Alternatives, patients destined for Children's would require ground transport from the Intramural Field, the University Hospital, and Boeing Field, Harborview Hospital, respectively, creating the possibility of traffic accidents that would not exist under the proposed action. Although specific statistics are not available regarding the frequency of traffic accidents involving ground ambulances, it is considered to be higher than the frequency associated with non-emergency vehicles.

The potential for cumulative impacts associated with the action alternatives centers around the likelihood of helistops proliferating at additional Seattle-area hospitals. There are three primary factors that would tend to discourage the improper use and proliferation of helicopter services in Seattle. First, the land use criteria used by the City of Seattle to evaluate helistop applications limit the use of helistops to those facilities that can demonstrate that the helistop is needed to save lives. (Only a few Seattle area hospitals that serve as tertiary care centers, offering specialized services to the region, are routinely involved in treating life-threatening emergencies that are referred from other hospitals and physicians in the region.) Therefore, the few hospitals in the Seattle area that can demonstrate the need or unique medical services and capabilities would be the only likely candidates for helistops. Second, the Puget Sound Health Systems Agency (PSHSA) has written two proposals to develop guidelines for the siting of helistops and to develop policy options for integrating helicopter services with regional and statewide Emergency Medical Service planning efforts. The Washington State Medical Association is drafting guidelines for assisting referring physicians in the selection of appropriate emergency medical transport. Finally, through the Certificate of Need process, the State Department of Social and Health Services (DSHS) will evaluate all future helistop installations at hospitals. (It should be noted that DSHS has exempted the Children's helistop proposal from the Certificate of Need process and, therefore, has not reviewed this proposal.) It is assumed that only those institutions with a demonstrated need for a helistop would be granted DSHS approval.

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I. INTRODUCTION

The purpose of this document is to provide decision-makers, regulatory agencies, and interested citizens with a review of pertinent background information, a description of the construction and operation of a proposed helistop that would allow critically ill patients to be brought by helicopter to Children's Hospital and Medical Center (Children's), a description of alternative means of transporting critically ill patients (including alternative helistop locations), and an analysis of the potential impacts and mitigation associated with the proposed action.

This document is organized into three primary chapters: Background Information, Description of the Proposed Action and Alternatives, and Affected Environment, Significant Impacts and Mitigating Measures. The chapter on background information is intended to provide the reader with a context for the consideration of the proposed action. The chapter profiles the provision of general health care and describes the unique medical services offered by Children's; describes the conditions of patients who have been and would be transported to Children's by helicopter; characterizes the transport of critically ill patients--highlighting the role of helicopter transport; and reviews the authority of various public and private agencies with respect to the helistop construction approval and the provision of emergency helicopter transport services.

The chapter on the Proposed Action and Alternatives identifies the proponent's objectives, describes the process used to identify potential helistop sites; explains the derivation of the number of anticipated flights; and for each alternative characterizes flight operations and flight paths, and describes the transfer of the patient from the helicopter to the Emergency Room entrance at Children's.

The chapter on the Affected Environment, Significant Impacts and Mitigating Measures provides a detailed analysis of the elements of the environment that were determined to be significant during the scoping process. These elements are noise and vibration, helicopter safety, and cumulative impact.

Although the issue of medical need is not within the scope of this EIS, it is a requirement of the City Council's Conditional Use Permit and, therefore, is related to this proposal. At the request of the Seattle Department of Construction and Land Use, a report on medical need issues was prepared by Dr. Nicola, Director of the Seattle-King County Health Department. Dr. Nicola's report is appended to this document.

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II. BACKGROUND INFORMATION

Health Care Services

The evolution of medicine has been characterized by increasing sophistication of both medical professionals and the capabilities of technical support equipment. The complexities of the medical system are reflected in the emergence of numerous specialty disciplines within the medical profession. In simple terms patients with complex illnesses or injuries are now commonly referred to specialists who have the particular expertise and equipment for their effective treatment. Because of the relative infrequency of need of their expertise (on a per capita basis), medical specialists are generally affiliated with regional medical centers located in populated areas, with patients coming from the surrounding urban center, as well as from rural and remote areas (Nicola, 1986). This aspect of the provision of health care is referred to as the regional medical referral system.

The provision of medical services can also be considered from the perspective of the age of the patient: neonatal (less than one month old), children, adults and the elderly. Each of these stages in life development are unique in that the health care of the individual requires attention to specific physiological and psychological conditions. Pediatrics is the specialized branch of medicine that deals with the development, care and diseases of children.

In the Pacific Northwest, many clinics, hospitals and medical centers offer pediatric services; however, Children's is the largest medical center that is equipped and, with 1,050 active physicians, staffed to offer full service, tertiary care for children and as such is an integral component of the regional health care network. Tertiary care is defined, by Children's and University Hospital, as those services necessary to deal with illnesses characterized by complex patho-physiologic processes. The most effective management of these illnesses requires integrated diagnostic and therapeutic services provided by multiple specialists. Tertiary care services require continuous management from the presentation of an illness to its resolution. Complex illnesses may present numerous conditions, such as severe congenital anomalies, multiple organ system trauma, prematurity in newborns, poisonings and neuropsychiatric disorders (Neff, 1985). Children's is recognized as the regional, tertiary referral center for children in the Pacific Northwest. A summary of 1984-1985 cases indicate that of the 621 Children's patients affiliated with the Blue Cross system, 64% were categorized as unique cases (defined as patients diagnosed with illness or medical need common to no other or one other patient affiliated with the Blue Cross system).

In the Puget Sound area, hospitalized neonatal emergencies are generally admitted to the Neonatal Intensive Care Unit (NICU) at Children's, which has 19 beds, or to the NICU at the University of Washington Medical School Hospital (University Hospital), which has 12 beds. The only other NICU beds in the Puget Sound area are the twelve located at Tacoma General Hospital. The only other neonatal intensive care beds in the state are located in Spokane. Pediatric medical emergencies in the Puget Sound region

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that require hospitalization are generally admitted to the Pediatric Intensive Care Unit (PICU) of Children's, which has 17 beds. Children's, through its formal affiliation agreement, is the pediatric teaching hospital for the UW School of Medicine. There are an average of 450 occupied pediatric beds (excluding NICU beds) in the state of Washington; one-third of these are locted at Children's.

The University Hospital high-risk obstetrical program uses the University Hospital's NICU beds so that most low birthweight babies born at the University Hospital do not have to be transported between hospitals. Even with an excellent maternal transport program, there are still mothers who deliver low birthweight babies in community hospitals; many of these babies need to be stabilized and transported to a tertiary care hospital (Nicola, 1985). Because the University Hospital's NICU is often busy caring for the babies of mothers who delivered at University Hospital, low birthweight babies born in outlying hospitals are frequently transported to Children's. The two institutions have developed a system for coordinating the transport of these infants to either hospital based on the child's needs and the availability of services.

Children's has seven of the ten Board-certified pediatric surgeons in Washington, Alaska, Montana and Idaho. These surgeons offer a variety of unique capabilities including bone marrow and kidney surgery. Much of the pediatric surgery in the four-state region is currently performed at Children's.

Traumatized and severely burned children in the Puget Sound region generally go first to the region's recognized trauma center, Harborview Medical Center, but may be transferred to Children's for follow-up surgery or treatment and stabilization. (Harborview Medical Center is a County institution that is administered by the University of Washington.) Children's is not a trauma center, as it does not meet all criteria necessary to be so designated.

In 1985, Children's admitted 11,612 inpatients and 66,006 outpatients. As Table 1 indicates, 55% of these patients were from King County; 22% from Snohomish, Pierce and Kitsap Counties; 11% from other counties west of the crest of the Cascades; 7% from east of the Cascades; 2% from Alaska; 1% from Montana; and the remainder from other states and countries. The distribution of origins is displayed in Figure 1.

Emergency Transport of Patients

A key element of the regional medical referral system is the transport of the critically ill or injured patient to the referral hospital. This referral may occur either for a patient in a clinic or hospital who needs the services offered by a more sophisticated and/or specialized medical facility, or for a patient in the "field" (home, work, play or the scene of an accident).

The Emergency Medical Service (EMS) system refers to the extension of medical services to critically ill patients and, if necessary, the transport of these patients to appropriate medical facilities. The State of Washington's Department of Social and Health Services coordinates EMS

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Table 1

CHILDREN'S OUTPATIENT AND INPATIENT ORIGIN IN FISCAL YEAR 1985
(by area)

Service Area/ County	Outpatients (1985)	Inpatients (1985)	Percentage of Inpatients
Primary Service Area			
Seattle	20,961	3,654	31.5%
King County	14,997	2,760	23.8%
(Subtotal)	45,958	6,414	55.3%
Secondary Service Area			
Snohomish County	7,615	1,606	13.8%
Pierce County	1,654	554	4.8%
Kitsap County	1,541	380	3.3%
(Subtotal)	10,810	2,540	21.9%
Tertiarty Service Area (all Washington Counties west of Cascades other than King, Pierce, Kitsap, or Snohomish)	5,221	1,325	11.4%
All Other Washington Counties (east of Cascades)	2,618	807	6.9%
Alaska	546	260	2.2%
Montana	191	115	1.0%
Idaho	165	53	.5%
Oregon	179	52	.4%
(Subtotal AMIO)	1,081	480	4.1%
Other States & Countries	318	46	.4%
GRAND TOTAL	66,006	11,612	100.0%

Source: Children's Orthopedic Hospital and Medical Center, 1986

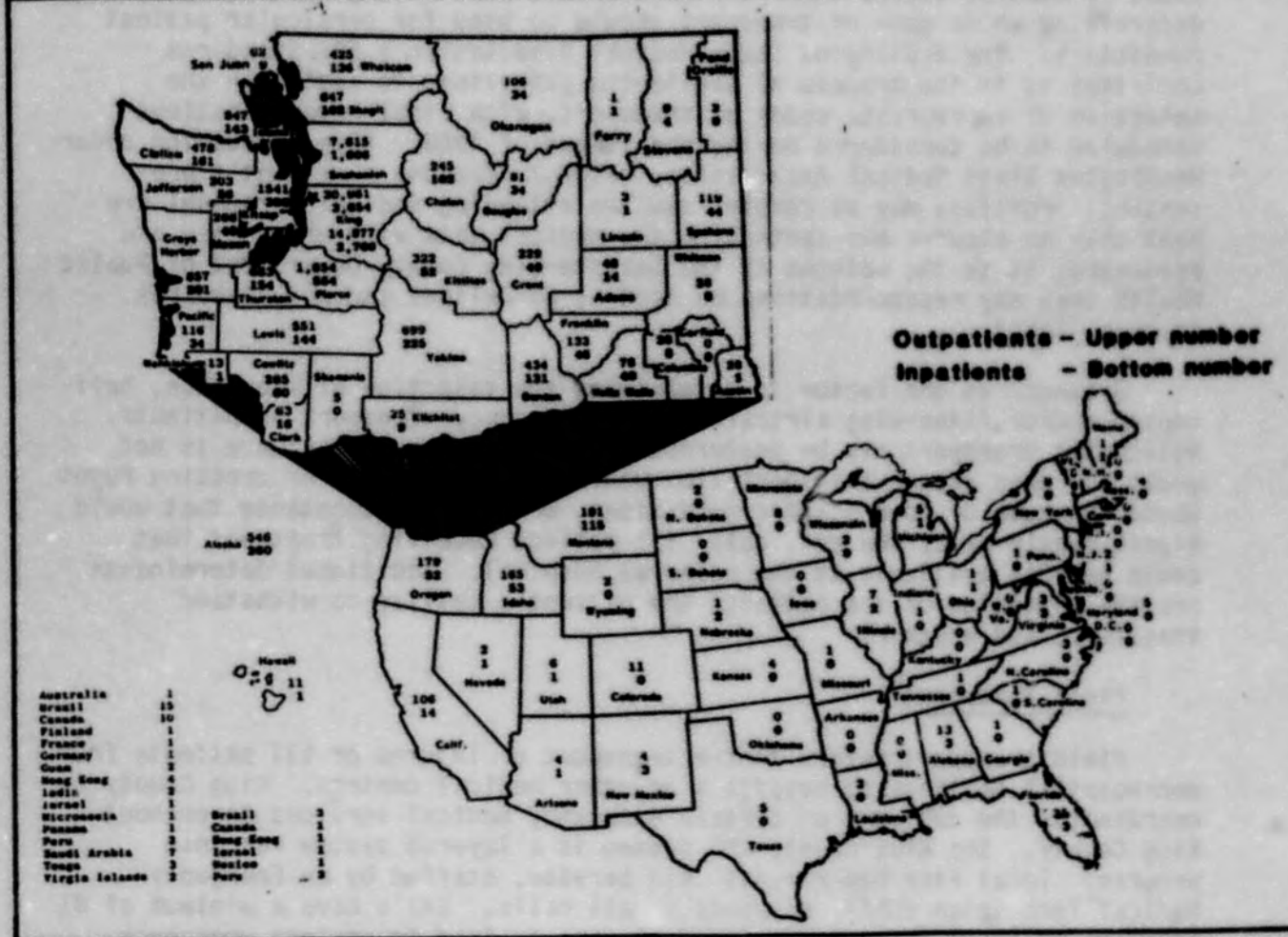

FIGURE 1

DISTRIBUTION OF CHILDREN'S OUTPATIENTS AND INPATIENTS IN FISCAL YEAR 1985

SHAPIRO & ASSOCIATES

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planning for the entire state. The EMS transport system in the central Puget Sound region is comprised of Medic One units, Fire Department aid units, private ground ambulance, military and private helicopter services and the specific emergency medical services offered by area hospitals.

Transporting critically ill children to Children's has long been a service offered by the hospital. Sending a specially trained transport team to referral hospitals has ensured specialized medical care en route and increases the potential for better outcomes for the patients brought to Children's. The Children's/University Hospital pediatric ground transport team has been in operation about ten years and currently brings more than 300 transports per year to the intensive care units at both hospitals.

Interhospital Transport

Under emergency conditions the interhospital transport of patients may occur by ambulance, by helicopter, by fixed wing aircraft or by a combination of these modes. Although there are existing medical guidelines and standards for patient care while being transported (American Academy of Pediatrics and American College of Obstetricians and Gynecologists, 1985 as cited in Nicola, 1985), there are no standard published guidelines for determining which mode of transport should be used for particular patient conditions. The Washington State Medical Association's EMS Standards Committee is in the process of developing guidelines to assist in the selection of appropriate modes of transport, with final recommendations scheduled to be considered during the summer of 1986. (See discussion under Washington State Medical Association, below.) Because a patient's presenting conditions may be complex and the attending medical personnel are best able to observe and synthesize the medical data with which they are presented, it is the opinion of the Seattle-King County Department of Public Health that any recommendations be used as guidelines and not standards (Nicola, 1986).

Distance is one factor in determining the selection of ambulance, helicopter and/or fixed-wing aircraft in the emergency transport of patients. Helicopter transport may be preferred in instances where distance is not great but when ground transport time would be long because of crossing Puget Sound, because of poor traffic conditions, or other circumstance that would significantly delay the critically ill patient receiving treatment that could only be available at the referral hospital. Additional determinants are the condition of the patient, the patient's ability to withstand transfers, and weather.

Field Transport

Field transport refers to the transport of injured or ill patients from non-hospital settings to hospitals or other medical centers. King County coordinates the delivery of certain emergency medical services throughout King County. The King County EMS system is a layered system response program: local Fire Departments' Aid Service, staffed by an Emergency Medical Technician (EMT), responds to all calls. EMT's have a minimum of 81 hours of training while paramedics, who are trained to perform emergency work in the field, have at least 1500 hours of training. Thus, paramedic units are dispatched to the more severely injured or ill patients in the

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field, including patients facing life-threatening medical situations. In King County, seven area hospitals provide medical control to paramedics:

Auburn General	Auburn
Evergreen General	Kirkland
Harborview Medical Center	Seattle
Highline Community	Burien
Overlake	Bellevue
Northwest	Seattle - Shoreline
Valley Medical Center	Renton

Volunteer medic units are also located in Carnation, Duvall, Enumclaw, Issaquah and on Vashon (Call, 1986b).

Paramedics operate as an extension of the physician services offered at the base hospital. Unless otherwise stipulated by the patient or patient's physician, paramedics will recommend transport of those patients requiring advanced treatment to the closest facility that provides the appropriate level of care. To that end, the King County Medical Society, the King County Emergency Medical Society, the King County Emergency Medical Services Coordinating Council and EMS Division of the Seattle-King County Department of Public Health have developed a classification of hospitals according to the services that they provide. The King County EMS Division has prepared a Patient Distribution Guide to assist field and base hospital medical staff in determining the appropriate medical center for treating the patient. The King County Medical Society has assumed responsibility for periodically updating the Guide.

The Patient Distribution Guide classifies Children's as both a Group A and Group B hospital. The Group A hospitals, of which there are 25, are characterized by the following services (King County Division of Emergency Medical Services, 1978):

- 24-hour Emergency Room Physician, trained in resuscitative measures
- Intensive Care Unit, staffed and operated at all times
- Coronary Care Unit, staffed and operated at all times
- Laboratory and X-ray unit services available at all times
- Major sub-specialty services available (on call) within one hour of notification

The 15 Group B hospitals satisfy the criteria for categorization as Group A and also have a neurosurgeon "actively involved with the hospital and [who] will examine and operate on patients in that hospital if it becomes necessary" (King County Division of Emergency Medical Services, 1978).

Only Harborview Medical Center is categorized as either a Group C (operating room staffed 24 hours a day) or Group D (intensive burn patient care) hospital.

Group E hospitals are subgrouped into specialized services including alcohol, psychiatric, neonatal, cardiac bypass and hyperbaric treatment. Only two hospitals--Children's and University--offer neonatal services, while Children's is one of six designated hospitals that can perform cardiac

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bypass surgery. Although not a formal subgroup, pediatric emergency services involving critically ill or injured patients are generally referred to Children's (Call, 1986b). In 1985, there were a total of 141 patients who were served by the County's EMS system and subsequently transported to Children's--two of these by helicopter (Call, 1986b). Additional EMS ground transports were made by the Seattle Fire Department, which provides comparable services in incorporated Seattle.

The County's EMS Division has established guidelines for paramedics in South King County in order to assist in selecting air or ground transport for critically ill patients (Call, 1986a). The underlying principle is the consideration that air transport provides a rapid method for getting the appropriate medical help to the patient, not that the patient gets to the hospital quickly (Call, 1986a). The following guidelines are used by EMS paramedics in South King County in order to assess the need for helicopter transport (Call, 1986a):

"1. Must be an extremely ill patient [such] that the arrival at a hospital capable of providing specialized care will immediately save their life or reverse their medical deterioration.

   Examples of presenting medical problems that would most likely indicate use of a helicopter in order to expedite transport of a patient are as follows:

   a. Gunshot wound with vitals of blood pressure (BP) less than 80 and heart rate (HR) over 120 with possible respiratory problems

   b. Aneurysm (aortic) with BP less than 100 and dropping, or other internal bleeding signs requiring immediate intervention.

   c. Major medical problems in a pediatric patient where time is critical for survival of the mother and/or baby.

   d. Multiple injuries that indicate bleeding of such a nature that the patient is in danger of bleeding out within minutes.

   e. Obstetrical problems that require immediate medical intervention and that are not generally handled at local hospitals.

   f. Major head injuries.

2. Time must be the major consideration when using a helicopter. Overall, the time discussed means the helicopter must be able to reach the designated receiving hospital, in less time than the paramedic unit could reach the hospital if they scooped and ran. The time on scene is always a major concern and under no circumstances should there be a delay at the scene waiting for a ride from the helicopter. If a patient is committed to a ground vehicle, under most circumstances transportation should continue in the vehicle to avoid unnecessary delays or interruption in treatment by the ground vehicle.

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3. Generally, a helicopter should only be used in areas in eastern and southeastern King County when the patient must be transported for specialized care to a distant hospital such as:

Harborview Medical Center	- Major trauma, head injuries, burns
Children's Orthopedic Hospital	- Pediatric medical emergencies that would be delayed by ground transportation
University Hospital	- Obstetrical emergencies

4. Permission to use any helicopter by a paramedic must be obtained from the medic unit's base hospital physician.

5. Helicopters should only be requested when there are qualified emergency medical personnel on scene who can evaluate the patient's needs. Paramedics should be responsible for requesting helicopter transport as they are usually the most qualified medical personnel. While in route to an accident, it may be appropriate for paramedics to consult with EMTs on scene regarding the patient's condition.

6. Under no circumstances should paramedics request dispatch centers to get comparative estimated time of arrival from MAST and Airlift Northwest. The paramedics are expected to make a decision regarding which helicopter transport service can best serve the needs of the patient, and to request it. If the first service of choice is not available, then the second helicopter service should be requested."

The Role of Helicopters in the Transport of Patients in Western Washington

The Korean conflict was the first to recognize that the helicopter's ability to land nearly anywhere and then to transport the patient rapidly to Mobile Army Surgical Hospitals (MASH) greatly increased the ability of wounded soldiers to receive medical treatment. During the Vietnam War, the airborne MASH teams provided rescue, medical stabilization, and evacuation to approximately one million military and civilian personnel. Postwar studies on the application of military helicopters in a civilian context provided the basis for the development of medevac operations that were inaugurated by the Maryland State Police in 1970. The first civilian helicopter ambulance service in the United States was initiated in 1972 at Saint Anthony's Hosital in Denver. In the past 14 years, this concept has expanded to include 75 hospital-based helicopter services that land at more than 900 hospital helistops (Reich and Kania, 1985).

Patients who are transported to Children's by helicopter are in critical condition. Children's defines critically ill or injured patients as those patients who might die or become seriously damaged unless appropriate treatment is received immediately (Neff, 1986). Critically ill patients who are brought to Children's include but are not limited to near-drownings, premature children, severe injuries, overwhelming

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Table 2

KEY CHARACTERISTICS OF CRITICALLY ILL PATIENTS
TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S
(August 1, 1985 - June 10, 1986)

Admission Date	Time[1]	Referring Hospital/Scene	Age/Weight	Presenting Condition	Admitted To	Discharge/Current Status
8/3/85	1600-1800	Naval Hospital Bremerton, WA	Newborn	Perforated bowel; two surgeries	IICU	Expired 8/4/85
8/20/85	1100-1550	Forks Community Hospital, Forks, WA	Premature infant; 2 lbs	Collapsed lung; extreme prematurity	IICU	Dischgd. Olympic Memorial 9/25/85; dischgd. home 10/85
8/27/85	1800-2022	St. Helen's Chehalis, WA	1 month	Fulminating meningitis (bacterial inflammation of the brain); coma; neurologically damaged	IICU	Dischgd. home 12/13/85
10/15/85	0630-0800	Wenatchee	Premature newborn; 27 wk. gestation	Multiple congenital abnormalities; spinal Trisome 18; CPR in route with twin	ER	Expired 10/15/85
11/19/85	0300-0400	Covington, WA (scene)	Premature newborn; 28 wk. gestation; 2-1/2 lbs.	Delivered at home; extreme prematurity; developed overwhelming infection; chronic lung disease	IICU	Discharged to Valley General 2/22/86
11/27/85	1150-1225	St. Joseph's Bellingham, WA	Newborn; 37 week gestation	Respiratory distress; severe pneumonia; overwhelming blood borne infection and shock	IICU	Discharged 12/5/86
11/28/85	1125-1255	St. Peter's Olympia, WA	2 months	Subdural hematomas; some vision and brain damage	IICU	Dischgd. to St. Peter's, Olympia, 12/16/85
12/4/85	0935-0945	Harrison Memorial Bremerton, WA	Premature newborn; 32 wk. gestation; 4 lbs.	Severe lung disease; overwhelming infection; respiratory failure	IICU	Expired 12/14/85
12/13/85	2215-2245	St. Helen's Chehalis	Newborn; 37 wk. gestation	Pneumomediastum (air dissecting around heart and lungs)	IICU	Dischgd. home 1/5/86
12/22/85	1329-1350	Skagit Valley Hospital Mt. Vernon	7 months	Overwhelming infection and shock; meningitis (bacterial inflammation of brain); no brain activity; possible loss of some fingers	PICU	Dischgd. to Skagit Valley Hospital 1/8/86
1/11/86	1510-1740 (Boeing) -1800 (COH)	Ketchikan, AL	Newborn; 35 week gestation; 4-1/2 lbs.	Overwhelming infection; Group B strep; intracranial bleeding; from Alaska to Boeing 2 seizures;	IICU	Expired 1/20/86

Table 2 (continued)

Admission Date	Time[1]	Referring Hospital/Scene	Age/Weight	Presenting Condition	Admitted To	Discharge/Current Status
1/20/86	0735-0805 (Boeing) -0815 (COH)	Yakima Valley Hospital, Yakima, WA	18 months	Massive bleeding from intestines and lungs; shock	PICU	Expired 1/20/86
2/12/86	2100-2200	Grays Harbor Community Hospital, Grays Harbor	3 year old	Lost child found in river. Extremely low temp. 37.5 degrees C. Decision made to begin extensive resuscitation efforts. Required continuous CPR.	ER	Expired 2/12/86
2/13/86	1040-1055	Whidbey General Whidbey Island	Newborn term infant	Massive generalized body edema, heart failure. Difficulty breathing at birth, collapsed lung cyanotic. Later determined congenital problems resulting in ruptured bladder.	IICU	Expired 2/14/86
3/21/86	2225-2245	Harrison Memorial Hospital, Bremerton, WA	Newborn; full term	Critical congenital anamoly collapsed lung; diaphragmatic hernia (surgery performed at COHMC)	IICU	Expired 3/22/86 following surgery
4/5/86	1005-1020	Federal Way (scene)	19 months	Child found partially submerged in lake by father; cold, pulseless and no spontaneous respiration. Pupils fixed and dilated. Father began CPR, Medics arrived and contacted ALNW. During hospitalization, child developed aspiration pneumonia. She was treated successfully and should be completely normal in every respect.	ER/PICU	Discharged to home 4/10/86
4/18/86	1510- -1600 (COH)	Sunnyside Hospital Sunnyside, WA	Newborn; full term 5 lbs.	Multiple congenital anamolies including a diaphragmatic hernia, no anus, possible heart disease and absence of a part of the lower spinal canal. At birth the child was severely acidotic , requiring intubation and mechanical ventilation with high pressures. Immediate surgery was the child's only hope for survival. The child was transported to Boeing by fixed wing and by helicopter to COH.	IICU	Expired 4/18/86
5/21/86	0850-0910	Bainbridge Island Middle School Winslow, WA	14 year old	Born with transposition of great vessels. Had cardiac surgery at COH 10/84. Had seizure in gym class with acute caridac arrest. Paramedics were called who in turn called ALNW. Child showed gradual improvement with a very rapid downhill course 12 hours before she died. She was found to have increased intracranial pressure and herniation of her brain stem.	PICU	Expired 5/26/86

Table 2 (continued)

Admission Date	Time[1]	Referring Hospital/Scene	Age/Weight	Presenting Condition	Admitted To	Discharge/Current Status
5/31/86	0015-0040	Whidbey Island	Newborn; full term	At delivery, child had marked progressive respiratory difficulty requiring increasing amounts of 02 by mouth. Chest x-ray showed child had aspirated newborn fecal material and had a right-sided partially collapsed lung. Possibility of complicating pneumonia.	IICU	Discharged to Whidbey Island 6/3/86
6/1/86	1218-1235	Medic 6[2] (Auburn Area) (scene)	21 months	Chemical ingestion (Pine-Sol). Child had respiratory distress, became cyanotic and comatose in a short time and had vomited. Child had a past history of asthma and showed evidence of penumonia.	PICU	Discharged home 6/11/86
6/17/86	0915-0940	Bremerton Naval Hospital	Newborn; 35 week gestation, 6 lbs.	Child born to diabetic mother. Increasingly severe respiratory distress. Child was acidotic with low blood oxygen. Child was intubated. Shows evidence that blood is being intermittently shunted away from the lungs, making it impossible for the baby to completely oxygenate his own blood, even with 100% oxygen.	IICU	Still at COH 6/20/86

[1]Time left referring hospital's Emergency Room or scene, to time of arrival at Children's
[2]EMS referred field pickup

IICU - Infant Intensive Care Unit; PICU - Pediatric Intensive Care Unit; ER - Emergency Room

infections, and ingestion of toxic substances. It is important to note that not all patients in these medical situations warrant helicopter transport to the Emergency Room entrance: that is a decision properly made by the referring physician in consultation with the advanced care unit or by the transport physician (Nicola, 1986). Although many outlying hospitals are equipped and staffed to appropriately deal with these medical conditions, there are situations when the severity of the condition warrants treatment at a tertiary care center. For example, pediatric surgeons and pediatric plastic surgeons are most capable of performing surgery on severed arteries, severe toxic shock may require dialysis, other conditions are best served by the recognized medical specialists that work in the infant and pediatric intensive care units. Table 2 presents data on the medical conditions of patients who were transported directly to Children's by helicopter.

The two main objectives of a helicopter transport system are to reduce the time before appropriate advance treatment can begin and to decrease patient manipulation.

Critical Time Saved

Surgical emergencies in the child, as well as infections, near drownings and trauma, are some of the conditions that need immediate intervention. Since time is critical, transport time has a direct bearing on the patient's prognosis. For critical patients, every moment lost increases mortality (Neff, 1986). Table 3 illustrates the time savings hypothetically involved in transporting and transferring an infant and equipment from Enumclaw to Children's Emergency Room.

Decreased Patient Manipulation

Whenever a patient is loaded or unloaded during an emergency transport, there are risks involved not only because of time loss but also because of patient handling. Two major risks are the possibility of losing critical life support tubes and lines, and the consequences of a lowered body temperature (hypothermia).

Isolettes are self-contained units that incorporate advanced life support systems. If an isolette that keeps a transported premature infant warm is opened to replace a tube that has been jostled, there is a risk that the child will become hypothermic if the outside temperature is below the ideal temperature of approximately 91°F (Neff, 1986). The hypothermic infants will try to breathe faster due to increased oxgen needs, which only results in more heat loss. In addition, a build-up of acid in the blood is also associated with hypothermia, which can contribute to the rupture of a premature infant's fragile blood vessels in the brain, which can cause brain damage or brain death.

The role of helicopter transport is generally described in a statement from the Puget Sound Health Systems Agency:

> "Helicopter transport is appropriate when it operates within a regional emergency medical service (EMS) system. It is most valuable in linking rural and other isolated populations and medical facilities to tertiary trauma centers in Seattle.

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Table 3

COMPARISON OF ELAPSED TIME
FOR TRANSPORT OF A PATIENT FROM ENUMCLAW TO CHILDREN'S

Mode	Transport Step	Time (in Minutes)
GROUND	Private ambulance to Children's for equipment pickup	10
	Travel from Children's to Enumclaw ER, including transfer of equipment from ambulance to Enumclaw ER	45
	Stabilization of patient	20
	Return trip from Enumclaw to Children's ER	45
	TOTAL TRANSPORT TIME:	120 (2 hours)
	TOTAL TRANSFERS: 2 patient/2 equipment	
HELICOPTER	Helicopter to Children's for equipment pickup	10
	Air travel from Children's to Enumclaw ER, including transfer of equipment from helicopter to Enumclaw ER	12
	Stabilization of patient	20
	Air travel from Enumclaw to Children's ER	12
	TOTAL TRANSPORT TIME:	54
	TOTAL TRANSFERS: 2 patient/2 equipment	
	Transporting an infant via helicopter from Enumclaw to Children's would save one hour and six minutes compared to ground transport.	

Source: Children's, 1985.

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Medical conditions which require helicopter transport are those in which more rapid transport and the availability of highly specialized care en route can affect outcomes when compared to alternative methods of transportation. Helicopter transport is not inherently better than ground transport in ensuring survival and recovery.

> Emergency services have developed as part of a regional system in Washington, and helicopter transport is integral to the provision of these services" (PSHSA, 1985).

The City of Seattle's Department of Construction and Land Use requested that Dr. Nicola, the Director of the Seattle-King County Department of Public Health, provide expertise in the assessment of medical need for the proposed Children's helistop. Dr. Nicola prepared recommendations based on a review of the literature, discussion with transport physicians, a review of helicopter flight logs, public hearing and discussions with knowledgeable individuals both in and out of the region (Nicola, 1986). Dr. Nicola's findings are appended to this report.

In Dr. Nicola's review of the literature examining the situations warranting helicopter transport, there are several cited studies that relate severity of illness to need for transport. One study revealed that over a six and one-half year period 81% of the patients transported by helicopter to a regional center were admitted to the ICU or were taken to surgery (overall mortality of 9%). A second study demonstrated that nearly one half of the patients arriving directly from the injury scene were delivered by helicopter (overall mortality of 6%). Another study cited in Nicola's report evaluated air transport of 569 patients in a rural EMS system and, using uniform guidelines, determined that helicopter transport was essential to 16.5%, helpful to 10.9%, and not a factor to the preservation of life in 54.7% of the cases. "In spite of rapid evaluation and maximal intervention, 102 (17.9%) of the patients died. The group for which air transport was judged "not a factor" (54.7%) consisted of patients whose injuries would not have proven fatal had their transportation to the tertiary care center been delayed. Retrospective analysis of the data available to the tertiary care center at the time of the decision to transfer the patients by air revealed that it was not possible to differentiate those patients who did not benefit from the service from those for whom the service was judged essential or helpful (Am. Surg. 1984 Apr.; 3-1348:183-8)" (Nicola, 1985).

A fourth study examined seven hospital-based helicopter transport medical emergency services that treated and transported 1273 blunt trauma patients. The study indicated that there was a 21% reduction in expected morbidity, however, there is some debate about methodologic soundness of the study (Nicola, 1985). The authors noted that the data must be viewed with caution and further suggested that predicted reduction in total trauma-related mortality may be more directly correlated to experienced medical teams reaching a patient than to the transport of a stabilized patient by helicopter rather than by ground transport (Baxt and Moody, 1983).

Dr. Nicola's review of literature prepared for DCLU concluded:

> "...that there are medical conditions (especially trauma) where time of transport is critical regardless of mode of transporta-

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tion, that specific clinical criteria may be helpful in selecting helicopter versus ground ambulance transport but do not help in predicting patient outcome, and that the experience of other tertiary centers, while helpful in describing the seriousness of injury seen in the usual patient populations transported, do not clearly shed any statistical light on (DCLU's) question (of the appropriate location for siting Children's helipad)." (Nicola, 1985)

Dr. Nicola also concluded that of the ten patients that he estimated would be transported to Children's by helicopter each month, an estimated three or four "may have a medical need for helicopter transport to the doors of the hospital" (Nicola, 1985). The outcome of these patients may be adversely affected by a 3-5 minute delay in receiving treatment in the hospital (Nicola, 1985).

Dr. Nicola further noted that "the literature review indicated that there are not definitive predictive clinical indicators of prognosis; that is, any number [of transferred patients] would have to include an additional number of patients whose condition at time of referral was appropriate for air transport..." (Nicola, 1985).

Helicopter transport in the central Puget Sound area is provided by two general services: Military Assistance to Safety and Traffic (MAST) and Airlift Northwest.

MAST

MAST is responsible for the emergency transport of all military personnel and their dependents within 100 nautical miles of Fort Lewis. Military personnel and their dependents have no choice but to use MAST, unless a private airlift service is arranged and paid for by them or the military. MAST will fly civilians in areas where there are no civilian transport programs or where civilian programs do not have the appropriate equipment to respond (e.g., a mountain rescue). MAST units accept missions according to the following criteria: 1) life and death emergencies; 2) loss of limb or eyesight; 3) undue suffering; 4) only accessible transport due to terrain, etc.

MAST helicopters transfer patients from accident sites within a 100 nautical mile radius of Fort Lewis to Harborview, Children's, and other hospitals in Seattle and to St. Joseph in Tacoma. The MAST program in Puget Sound is based at Fort Lewis where six "Huey" helicopters are located; a seventh "Huey" is located at the U.S. Army's Yakima facility. The "Hueys" are Vietnam-era helicopters that are noisy, slow and characterized by a lot of vibration. The military plans to phase in UH60 Blackhawks in 1989. Compared to the "Hueys," the dual-jet-engine Blackhawks are larger inside, faster and more quiet. A representative of MAST has indicated that it is possible the plans to phase-in the Blackhawks may be altered (Greenawalt, 1986).

MAST is a training program for military medics, and as such is designed to support military capabilities and operations. In times of peace, MAST personnel develop and maintain patient care skills and are trained by both

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civilian and military personnel, including physicians. New personnel entering the MAST unit are graduates of the military basic training program and also of advanced training programs in which they are taught military occupational skills. Serving in the MAST program and communicating and working with civilian hospitals allows recruits to continue Emergency Medical Technician (EMT) training.

MAST patient transport missions may be requested by anybody. MAST flys with EMTs and without advanced life support (ALS) and, therefore, no drugs unless the condition of the patient warrants that the helicopter pick up a physician/paramedic team from either Madigan Army Medical Center, a local hospital, or an emergency rescue program. MAST does not pick up the medical transport team at Children's. When a newborn is transferred by MAST to Children's, Madigan supplies the physician team (on an as available basis) to accompany the baby. Madigan had two pediatric staff and two neonatal fellows; however, as of July 1, 1986, Madigan no longer has neonatal fellows.

For those hospitals willing to supply their own physicians for MAST flights, understaffing during the physician's absence could exist for the referring hospital. Because MAST must return as quickly as possible to their base, they do not fly physicians, paramedics, or other civilian personnel back to the originating site unless that site is on the return flight path. Thus, the referring hospital will be without the services of the physicians involved in the transport until they are able to return. Other medical personnel may need to fill in for the medical team involved in the transport. On missions to Seattle hospitals, MAST will fly physicians back to Madigan, as long as they are ready to go quickly, because Madigan is on the MAST return flight path.

In 1985 Fort Lewis-based MAST flew approximately four hundred missions. Approximately 70% of these missions were field-site pickups and the remainder were hospital transfers. Transports were evenly divided between civilian and military personnel. From 1983 to date, MAST transported 29 patients to Children's; 12 of the patient missions to Children's were interhospital transfers (Kranz, 1986). These transfers occurred days or hours after the onset of the illness or injury.

MAST has a civilian advisory committee, chaired by Dr. Jay Kranz, a Seattle surgeon. The committee purchases equipment with State Department of Transportation monies and donations. Purchased equipment includes an incubator and three radios and installation kits; the latter was provided to enhance communications between the helicopter and emergency room staffs. Dr. Kranz independently reviews MAST transports for appropriateness.

Airlift Northwest

After nearly ten years of transporting critically ill children by commercial carrier and charter flights, Children's joined with three other regional medical centers (University of Washington Hospital, Harborview Medical Center, and Providence Medical Center) to form Airlift Northwest. The four-year-old Airlift Northwest is a Seattle-based airborne patient transport service designed to support the regional medical referral system and specifically to make specialized critical care accessible to patients throughout the Pacific Northwest and Alaska. Airlift Northwest provides

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medically outfitted, ventilator-equipped turboprop jet and rotary winged aircraft, with a medical team of ICU physicians and ICU nurses to resuscitate and provide proper medical care to patients who are being transported. Patients requiring tertiary care generally will be transported to appropriate care facilities of one of the four members of the Airlift Northwest consortium. Airlift also will transport patients to non-consortium hospitals.

Airlift Northwest is a cooperative venture among the four public and private member institutions, with Harborview serving as the primary administrative arm of the consortium. Each of the three associate institutions has a contract with Harborview. The contract characterizes the airlift program and organizational structure, the roles of support personnel, the sharing of equipment, the allocation of costs and distribution of revenues, indemnification, record-keeping, services extended to non-participating hospitals, and provisions for amendment and termination of the contract (Childs, 1986b).

The turboprop jet, a Cheyenne III, is used for the transport of patients who are located more than 120 miles from Airlift Northwest's King County Airport (Boeing Field) base. This fixed wing aircraft is always used to transport patients from Alaska and for the majority of missions flown east of the Cascade Mountains in Washington, and elsewhere (Idaho and Montana) in the four-state referral area. Airlift also will accept missions to other states. Two other Cheyennes and a Sabreliner provide back-up capabilities in the event the primary Cheyenne III is unavailable.

In order to more effectively transport patients from areas in the Puget Sound region that are not easily accessible by ground transportation and not served efficiently by fixed wing, Airlift Northwest added a helicopter service in May of 1985.

The helicopter that Airlift Northwest operates is a twin-engine Agusta A109 Mark II helicopter, one of the fastest and quietest helicopters manufactured. The helicopter's specifications are listed in Table 4.

Standard medical equipment on Airlift Northwest's helicopter includes the following:

- 2 patient stretcher rack
- Patient oxygen system with two 50 psi oxygen outlets
- Compressed air system with one 50 psi air outlet
- Patient suction system with continuous and intermittent regulator capabilities
- 115 volt electrical system with 2 wall-mounted outlets in cabin
- Overhead lighting with high intensity halogen lamp
- Overhead IV hooks
- Double lock narcotics safe
- Lifepak 5 cardiac monitor/defibrillator
- Holter infusion pumps
- Doppler

The helicopter also can carry a 160-pound isolette unit (with ventilator) for the transport of neonates and babies. This isolette unit is

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Table 4

AGUSTA A109 MARK II SPECIFICATIONS

Dimensions:	Overall length from Rotor Tip to Tail	42.8	feet
	Rotor Diameter	36	feet
	Ground Clearance of Rotor Blade	7	feet
Weight:	Maximum Gross Weight	5,730	lbs
	Average Empty Weight	3,892	lbs
Engines:	Twin Detroit Alison C20B Turbines		
Fuel:	Jet fuel capacity	147	gallons
Range:	2-1/2-hour fuel supply with 45-minute reserve. Normally, the Canadian border to the north, the crest of the Cascades to the east, the Oregon border to the south and the Pacific Ocean to the west.	150	miles
Speed:	Velocity not to exceed	195	mph
	Normal cruise (indicated air speed)	184	mph
Seating:	1 pilot, 2 attendents, 2 patients		

Source: Airlift Northwest, 1986.

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powered by the aircraft electric system while in the helicopter or by its self-contained battery pack. Additional medical equipment can be carried to provide the specific support necessary to individual patients.

The medical transport team of ICU physicians and nurses are based at Harborview, except for the pediatric team, which is based at Children's. When not flying, the pediatric medical transport team members work in the ICU at Children's. The transport team is medically trained and also receives a two-day orientation from Airlift pilots on helicopter operations and safety procedures. This safety orientation is maintained through biannual training.

Airlift Northwest annually transports hundreds of patients by aircraft. Table 5 indicates the frequency of use in previous fiscal years, in the current year and projections for the next ten years. From 1981 through mid-1985, Children's destined patients represented one-third of the total number of Airlift's fixed-wing transports.

With respect to Children's-destined patients, the Airlift Northwest helicopter transit service provides intensive care support to a number of critically ill or injured patients. Table 2 describes Airlift helicopter transports to Children's through mid-June 1986. This table identifies the date, time, origination of flight and the age, condition of patient, admitting unit, and discharge data or status. Approximately 63% of the children transported directly to Children's were newborns. Only one patient was older than three years old.

A Review of the Authority of Federal, State, Local and Private Agencies with Respect to Air Ambulance Service and Helistop Siting

This section highlights key jurisdictional issues with respect to emergency helicopter transport.

A review of the missions of various public and private agencies indicate that there is no single agency with jurisdiction regarding the siting of a helistop and the operation of an emergency airborne patient transport service. Rather, there are a number of agencies that have specific, defined authority. These agencies include the Federal Aviation Administration, the State of Washington's Department of Social and Health Services and the Seattle City Council, which is supported by the Department of Construction and Land Use and the Seattle-King County Department of Public Health.

In addition, there are a number of agencies that provide support of an informal and/or advisory nature. Among these agencies are the Washington Department of Transportation, Puget Sound Health Systems Agency, the Seattle Area Hospital Council, the Washington State Medical Association, American Society of Hospital-Based Emergency Air Medical Services, and the National Emergency Medical Services Pilots Association.

Federal Aviation Administration (FAA)

The FAA is a federal regulatory agency charged with the promotion of aviation safety. As such it provides programs certifying pilots and

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Table 5

TOTAL AND CHILDREN'S-DESTINED PATIENT TRANSPORTS
INVOLVING AIRLIFT NORTHWEST'S FIXED WING AND ROTARY AIRCRAFT

	Fixed-Wing Transports		Rotary Aircraft Transports	
Fiscal Year[1]	Total	Children's-Destined	Total	Children's-Destined
81-82[2]	45	13	0	0
82-83	286	80	0	0
83-84	411	112	0	0
84-85	532	212	44[3]	4[3]
85-86[4]	458	181	560	91
86-87[4]	518	206	684	116
87-88[4]	N/A	N/A	720	122
88-89[4]	N/A	N/A	732	124
89-90[4]	N/A	N/A	744	126
90-91[4]	N/A	N/A	756	129
91-92[4]	N/A	N/A	768	131
92-93[4]	N/A	N/A	780	133
93-94[4]	N/A	N/A	792	135
94-95[4]	N/A	N/A	804	137
95-96	N/A	N/A	816	139

[1] July 1-June 30 fiscal year.

[2] Fixed wing service began February 1982.

[3] Rotary service began in May 1985. The total number of patients transported to Children's including landings outside the emergency room, and landings with ground transports from Graves Field, Boeing Field, Harborview Medical Center.

[4] "... [these forecasted] numbers may well turn out to be significantly higher or lower than reality... These numbers are considered 'ballpark' figures from which actual volumes may deviate significantly" (Childs, 1986a).

Note: The number of transports reflects the total number of patients transported and does not reflect all flight segments for the pickup of medical transport team pickup and delivery of patient and return of the helicopter to base.

Source: Childs, 1986a, 1986b.

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ensuring that aircraft are operated in a manner consistent with established regulations. There are no specifications for the construction of helistops. Rather, there are guidelines for the construction contained in an Advisory Circular, "Heliport Design Standards."

Helicopter operations are subject to specific FAA regulations, including Parts 61, 91, and 135. Parts 61 and 91 of these regulations pertains to General Rules for Aviation and to the qualifications of pilots and airmen, and equipment specifications. Generally, helicopters are given more latitude in their operations than fixed wing aircraft.

The establishment of a helistop facility requires the proponent to file Form 7480, which identifies the proposed approach and departure paths. The FAA will review the form and either approve or deny the request for flight path approval. It is important to note that the FAA does give pilots discretion in deviating from the flight path; they will investigate complaints but would generally not take action on a complaint unless the pilot was operating in an inherently unsafe manner (Benedict, 1986). Children's submitted a form 7480 to FAA on February 14, 1985. Because the proposed flight path has been revised, an updated application will need to be submitted.

State of Washington Department of Social and Health Services (DSHS)

Health planning in the State of Washington is performed both on a statewide as well as on a subregional basis. The DSHS is the designated health planning agency for the state. Its duties include needs assessment, planning, evaluation, implementation of the state health plan, and administration of the Certificate of Need program.

Certificate of Need Program. The state Certificate of Need program is a process for reviewing the following: construction, development or establishment of new health care facilities; significant capital expenditures; changes in number or distribution of beds; acquisition of major medical equipment; and the provision of new institutional health services.

A recent amendment to the Washington Administrative Code (248-19-230(1)(b)), effective March 30, 1986, specifies that helistops are subject to review:

> (i) The specific services subject to review under this subsection are limited to:
>
> (A) Air ambulance services licensed under chapter 18.73 RCW including a change between fixed wing and rotor aircraft. This includes, but is not limited to, acquisition of aircraft or construction of landing facilities...
>
> (ii) The services listed in subsection (1)(b)(i) of this section are subject to review under any one of the following circumstances:
>
> ...(F) The establishment of a new or different landing site for an air ambulance service.

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With respect to the proposed construction of a helistop at Children's, DSHS has determined that a Certificate of Need review is not required because the regulations specifically requiring a Certificate of Need were issued after Children's received a ruling that it was not subject to Certificate of Need review (Chestnut, 1986b).

Emergency Medical Services. The State of Washington, through RCW 18.73, amended, provides statewide emergency medical services (EMS) program planning with funding and guidelines to continue EMS systems development and improvement. Key functions of the EMS Division of DSHS are to prescribe minimum requirements for equipment (including ambulances) and personnel engaged in prehospital EMS, to establish EMS system standards, and to evaluate program development, expansion and improvements. The Washington Administrative Code (248-17-135) provides specifics on air ambulances. The Washington Administrative Code (248-18-285) also provides specific regulations for the provision of emergency care services:

> "Emergency care services. The hospital shall have a well defined system for providing emergency care services. The nature and scope of the hospital's emergency care services should be in accord with the community's needs and the hospital's capabilities.
>
> (1) The hospital shall provide the following basic, outpatient emergency care services.
>
> (a) Assessment of a person's condition to determine the nature, acuity, and severity of the person's immediate medical need.
>
> The condition of each person, who comes or is brought to the hospital for emergency medical care, shall, upon arrival, be assessed by a registered nurse, physician, or physician's assistant for the purpose of determining the nature and urgency of the person's medical need and the timing and place of the person's care and treatment.
>
> (b) Immediate diagnosis and treatment of any life threatening cardiac arrythmia, respiratory insufficiency or shock.
>
> (c) Appropriate transfer or referral of a patient who needs medical care services not provided by the hospital. Prior to transfer of an emergency patient to another health care facility, the hospital shall:
>
> (i) Perform the emergency procedures needed to minimize aggravation of the patient's condition during transport to the other health care facility; and
>
> (ii) Ascertain that the means by which the patient is to be transported to the other health care facility are suitable for the patient."

Currently, the EMS Division has no direct authority with respect to the proposed Children's helistop, except for equipment and personnel being certified to meet State standards. The Systems Development Administrator of the EMS Division staffs the Washington State Medical Association's EMS Standards Committee's Subcommittee on Air Ambulances (see below).

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City of Seattle - Land Use

The City of Seattle guides land use through its comprehensive plan and land use policies and regulates land use through its Land Use Code. As a major medical center, Children's is designated a major institution and, as such, is subject to Seattle's Major Institutions Policy and specific regulations contained in the Major Institutions Chapter (23.48) of the Seattle Municipal Code (SMC).

The purpose of Seattle's Major Institutions Policy (SMC 23.16.10) "is to balance the need for institutional growth and change with the need to protect the livability of neighborhoods adjacent to institutions." A series of nine implementation guidelines (plus one guideline specific to the University of Washington) provides the basis for considering the institutions' needs in conjunction with those in the surrounding area. Relevant policies include the following:

Implementation Guideline 4 - Institutional Classifications

f. Mitigate adverse impacts associated with the use of the proposed facility so that the location of parking and the routing of traffic do not create serious noise, safety problems or blighting influences on the surrounding area.

g. Reduce adverse impacts of light and glare.

i. Promote safety for those living, working and visiting the area.

Helistops are conditional uses that are permitted in Major Institutions subject to the following provisions of the SMC:

23.48.05 Conditional Uses

A. Helistops

1. A helistop may be permitted as a Council conditional use if the Council finds that:

   a. The helistop is needed to save lives;

   b. The helistop is located so as to minimize impacts upon surrounding residential property;

   c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

2. The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas.

This EIS is designed to fulfill the SEPA requirements of the Conditional Use Permit. With respect to the specific findings of medical need necessary to secure a conditional use permit, DCLU requested that Dr.

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Nicola, the Director of Seattle King County Department of Public Health, assist DCLU in the medical need determination. The issue is independent of the SEPA process and the EIS. (For the convenience of the reader, Dr. Nicola's report is appended to this EIS.) The other conditional use issues, including restricted use, sensitive siting and alternative locations are addressed in subsequent chapters of this EIS.

Seattle-King County Department of Public Health

As a joint City/County agency, the Seattle-King County Department of Public Health serves all residents of King County. The Department operates health centers throughout the County, numerous satellite clinics in schools and community centers, a regional center for tuberculosis control, and a sexually transmitted disease control program and clinic located at Harborview Medical Center. The agency provides health services for the jail, vital statistics information, and operates the public health laboratory.

The Department includes the Divisions of Alcoholism and Substance Abuse, Emergency Medical Services, and the Medical Examiner. The Division of Emergency Medical Services plans, develops and administers paramedic services outside of Seattle, and assists fire departments to improve emergency medical services.

The Department has also provided expertise to the City of Seattle's Department of Construction and Land Use regarding the issues of medical need and noise and vibration associated with siting a helistop at Children's.

Washington State Department of Transportation

The Washington Department of Transportation has the responsibility of providing statewide planning services, enhancing safety and funding transportation improvements. The Division of Aeronautics deals specifically with air transportation, by participating in statewide transportation planning, assisting in the enforcement of FAA Regulations, investigating aircraft accidents, providing search and rescue support for missing General Aviation aircraft and providing funding for public aviation facilities. The Department does not have specific authority with respect to the siting of a helistop at Children's or the operation of the helicopter service (Hamilton, 1986).

Puget Sound Health Systems Agency

Puget Sound Health Systems Agency (PSHSA) is a non-profit, quasi-public corporation that was founded in 1976 for the purpose of assisting in implementing the (National) Health Planning and Resource Development Act. PSHSA is actively involved in health planning throughout its health service area: the ten counties of northwestern Washington. PSHSA also assists DSHS in review of Certificate of Need applications and offers services to companies, hospitals and other clients in research, data collection and analysis, education, health program development and policy analysis.

The responsibility of all Health Systems Agencies in the state, including PSHSA, is:

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"...the provision of effective health planning for its health service area and the promotion of health services, manpower, and facilities which meet identified needs, and reduce documented inefficiencies..." (RCW 70.38.085)

To that end, PSHSA assembles and analyzes data; establishes, annually reviews and, as necessary, amends a health system's plan and implementation plan; prepares recommendations to the Department of Social and Health Services with respect to new institutional health services proposed within its service area; and periodically reviews institutional and home health services offered in its service area.

PSHSA has recently submitted a (revised) proposal to the Seattle-King County Department of Public Health and another proposal to the State Emergency Services Office to investigate the key issues surrounding the development of helicopter transport in the region and in the state. The goal of the State project is to develop a state plan and implementation strategies that will integrate air ambulance services with the EMS system. The State of Washington has withdrawn its commitment to participate in the development of this proposal (Nicola, 1986b). Specific project objectives under the statewide proposal are:

- Assess the current status of air ambulance services in Washington State and describe the development trend of this service in other locations across the nation.
- Identify and assess current and projected problems and needs with respect to air ambulance services.
- Establish goals for development of this service and criteria for evaluation, including WSMA user guidelines.
- Identify and assess a series of alternative State policies to meet identified problems and needs.
- Evaluate and select from among various options available a set of policies and a plan for development of air ambulance services in the state of Washington that integrates and coordinates these services with the EMS System. (PSHSA, 1986)

The original purpose of the proposed Seattle-King County project was to supplement the overall State plan with an air ambulance services plan and implementation strategy for the King County area. The objectives of the supplement were as follows:

- Monitor development of the statewide air ambulance plan, and review and comment on various aspects of the plan during its evolution.
- Conduct an inventory and analysis of air ambulance services in King County and present as input into development of State plan.
- Conduct a King County needs assessment regarding air ambulance services, including the development of a need projection model, and make recommendations regarding its adoption to the statewide steering committee.

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. Analyze the state plan to determine if more specific policies and a more specific plan should be adopted in Seattle-King County.

. Develop strategies to implement the state plan and local alternatives in Seattle-King County and work with local agencies on implementation. (PSHSA, 1986)

At this time, the status of the PSHSA proposal is unclear (Nicola, 1986b).

American Society of Hospital Based Emergency Air Medical Services and National Emergency Medical Services Pilots Association

The American Society of Hospital Based Emergency Air Medical Services (ASHBEAMS) and the National Emergency Medical Services Pilots Association (NEMSPA) are voluntary organizations that were established within the EMS helicopter industry to provide organization and guidance to the industry. These organizations do not have legal authority to impose regulations except to the extent that a hospital or helicopter operator must meet their guidelines in order to be accepted as members. As a result of the relatively high number of EMS helicopter accidents in 1985, ASHBEAMS and NEMPSA leaders met in February of 1986 and agreed that uniform guidelines and standards were needed in the industry. A first draft of the guidelines is expected to be available in the summer of 1986. According to Nina Merrill of ASHBEAMS, the guidelines and standards will address three primary issues:

. Creating a training program for hospital administrators in the aviation-related aspects of EMS helicopter programs in order to educate non-aviation personnel on aviation safety issues.

. Providing additional aviation safety orientation to air and ground medical crews that are involved with the transfer of patients.

. Recommending the requirement that EMS helicopter pilots undergo (a yet undetermined) amount of continuing pilot education every year. This continuing education requirement would be in excess of existing FAA regulations, which require one test flight every year to determine that the pilot is still capable of flying the aircraft.

These guidelines are being developed primarily to bring some of the smaller operations into conformance with unofficial standards to which major vendors within the industry already conform (Merrill, 1986).

Washington State Medical Association

The Washington State Medical Association is a trade organization that represents medical doctors in the state. Physician members voluntarily serve on committees that include, among others, the EMS Standards Committee, which has a subcommittee that is specifically addressing issues involving air ambulance services. The subcommittee is focusing on several issues (Pinkers, 1986; Cvitanovic, 1986) that will enable the creation of "User Guidelines" for the use of helicopter services:

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. Medical indications, procedures, appropriate skills of personnel to administer procedures and guidelines for selection of the most suitable transport vehicles for prehospital (field) transports.

. Medical indications, procedures, appropriate skills of personnel to administer procedures and guidelines for selection of the most suitable transport vehicles for interhospital transports.

. Procedures and capabilities for flight crews.

. Coordination between air and land services considering:

- the need to have land units financially survive,
- the development of land-air transfer points to reduce total flight time,
- the effect of medical crew/patient origin on patient outcome.

Key principles of these user guidelines are that helicopters are a useful, but expensive, instrument of patient care and that care protocols must be designed to enable MAST to continue to operate in western Washington (Pinkers, 1986). It is anticipated that the Subcommittee on Air Ambulance Medical Standards will have a preliminary report submitted to the full committee during the summer of 1986.

Washington State Hospital Association

The Washington State Hospital Association is an independent trade organization that represents approximately 90% of the hospitals in the state. The Association activities include advocacy, education and lobbying of both the legislature as well as regulatory agencies. The Association is not directly involved in the issue of emergency airborne transport services (Mero, 1986).

Seattle Area Hospital Council

The Seattle Area Hospital Council is a trade organization that represents the major hospitals in King County and southern Snohomish County. The purpose of the Council is to provide a forum for issue identification, discussion, and collective action that is responsive to the needs expressed by member hospitals in their continued efforts to discharge their individual and collective responsibilities. The Council is not directly involved in the issue of emergency airborne transport services (Nell, 1986).

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III. DESCRIPTIONS OF THE PROPOSED ACTION AND ALTERNATIVES

This section states the sponsor's objectives, identifies how alternative helistop locations were developed and screened, characterizes the process used to project the estimated number of patients transported by helicopter to Children's and the associated number of flights, and provides a detailed description of the proposed action and alternatives, including descriptions of the helistop and flight paths.

Sponsor's Objectives for the Proposed Action

The proposed action is the construction of a helistop outside the Emergency Room of Children's Hospital and Medical Center (Children's). The helistop would be used as a landing area for a helicopter transporting critically ill patients to Children's. The objectives of the proposed action are:

- to make specialized medical expertise available to critically ill patients in the least amount of time
- to minimize transport time from place of patient pickup to the Emergency Room entrance of Children's
- to minimize the number of patient transfers that could result in patient destabilization
- to construct a helistop and operate the helicopter service so as to minimize potential environmental impacts in a manner that would not sacrifice proper patient medical treatment

Overview and Location

The 25-acre Children's Hospital and Medical Center campus is located at 4800 Sand Point Way N.E., Seattle, Washington, along a portion of the western edge of the Laurelhurst neighborhood. The campus is less than one mile east of the University of Washington campus (Figure 2, Vicinity Map.) The campus boundary on the northwest is Sand Point Way N.E. to and along N.E. 50th Street south along 44th Avenue N.E. to and along N.E. 47th Street to and south along 45th Avenue N.E. to N.E. 45th Street, to approximately 42nd Avenue N.E., if extended, and north to Sand Point Way N.E. (Figure 3, Campus Map).

Children's campus generally slopes downward to the west and south. It is landscaped and provides a sense of open space to the area. Principal access to the campus is via a signalized intersection with Sand Point Way N.E. The principal drive--Penny Lane--winds generally east to west and provides access to the various entrances to the medical center building and parking areas. The principal structural feature of the hillside campus is the medical center building, which contains the medical facilities and equipment. A parking garage contains four levels of parking: three for staff, and one for patients and visitors. There are two primary paved surface parking areas and several smaller parking areas that provide additional parking for visitors, service vehicles and medical staff. A

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FIGURE 2

VICINITY MAP

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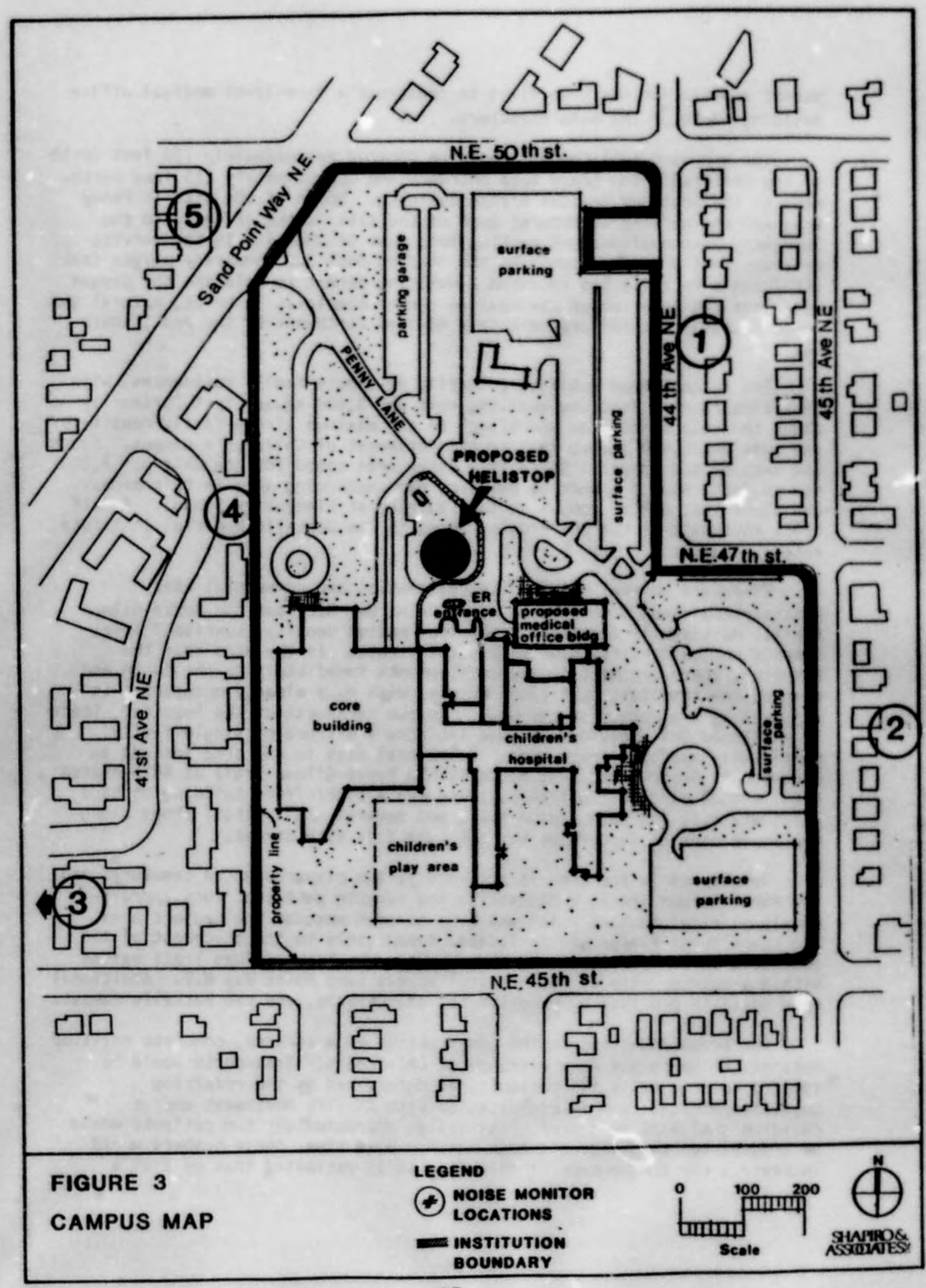

FIGURE 3

CAMPUS MAP

LEGEND

NOISE MONITOR LOCATIONS

INSTITUTION BOUNDARY

0 100 200

Scale

N

SHAPIRO & ASSOCIATES

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permit application has been filed to construct a five-level medical office building north of the main structure.

The proposed helistop pad would be located approximately 120 feet north of the Children's Emergency Room entrance and approximately 115 feet northwest of the proposed Medical Office Building. North of the site is Penny Lane and the parking structure; east of the site is the driveway to the Emergency Room entrance and parking lot; west of the site is the service driveway that provides access to the loading dock and temporary oxygen tank (Children's recently has received a building permit to relocate the oxygen tank into the interior of the medical center complex). A brick, natural gas meter house is located approximately 48 feet northwest of the pad (Figure 4).

The neighborhood consists primarily of single-family residences, with densities ranging from one dwelling unit per 9,600 square feet (primarily along the Lake Washington shoreline) to the maximum single-family density of one unit per 5,000 square feet to the northwest of Children's campus. South and east of the hospital there is a large area zoned for one unit per 7,200 square feet, with a number of smaller, non-conforming lots in this area. One block east of the campus is the Laurelhurst Elementary School. A half block southeast of the Children's campus is the Battelle Memorial Institute research campus.

There are several multifamily residential and commercial uses concentrated along both sides of Sand Point Way N.E. and the Burke-Gilman Trail. Multifamily densities range from medium density, Lowrise 3 developments to low density, Lowrise 2 developments. In the area near the hospital, there are multifamily developments immediately to the north and west of the hospital. Laurelon Terrace, with many elderly occupants, is adjacent to the campus on the west. To the northwest of the hospital, there is a Planned Unit Development that includes a mixture of single-family, multifamily and open space uses. Commercial uses in the area include an Albertson's Supermarket just north of the Burke-Gilman Trail at 40th Avenue N.E., a medical/dental office building and a bank/office building at Sand Point Way N.E. and 40th Avenue N.E., and several small retail shops along the south side of Sand Point Way N.E. and N.E. 45th Street.

Open space in the area is provided by two playgrounds, a cemetery, and the Burke-Gilman Trail, a pedestrian and bicycle path that runs approximately parallel to Sand Point Way N.E. through most of the project area. The Laurelhurst Playground is located immediately to the southeast of the southeast corner of the Children's campus. The Burke-Gilman Trail passes within a quarter mile of the hospital across Sand Point Way N.E. Additional open space is provided by schoolyards, churchyards, and the Battelle campus.

The proposed action is the construction of a secured, concrete helistop outside the Emergency Room entrance of Children's. Transports would be limited to critically ill patients, as determined by the referring physician/medical team in consultation with Airlift Northwest and/or Children's medical personnel. Initially, approximately ten patients would be transported to Children's each month. Over time, these numbers would increase. For the purpose of this EIS, it is estimated that by 1990 a

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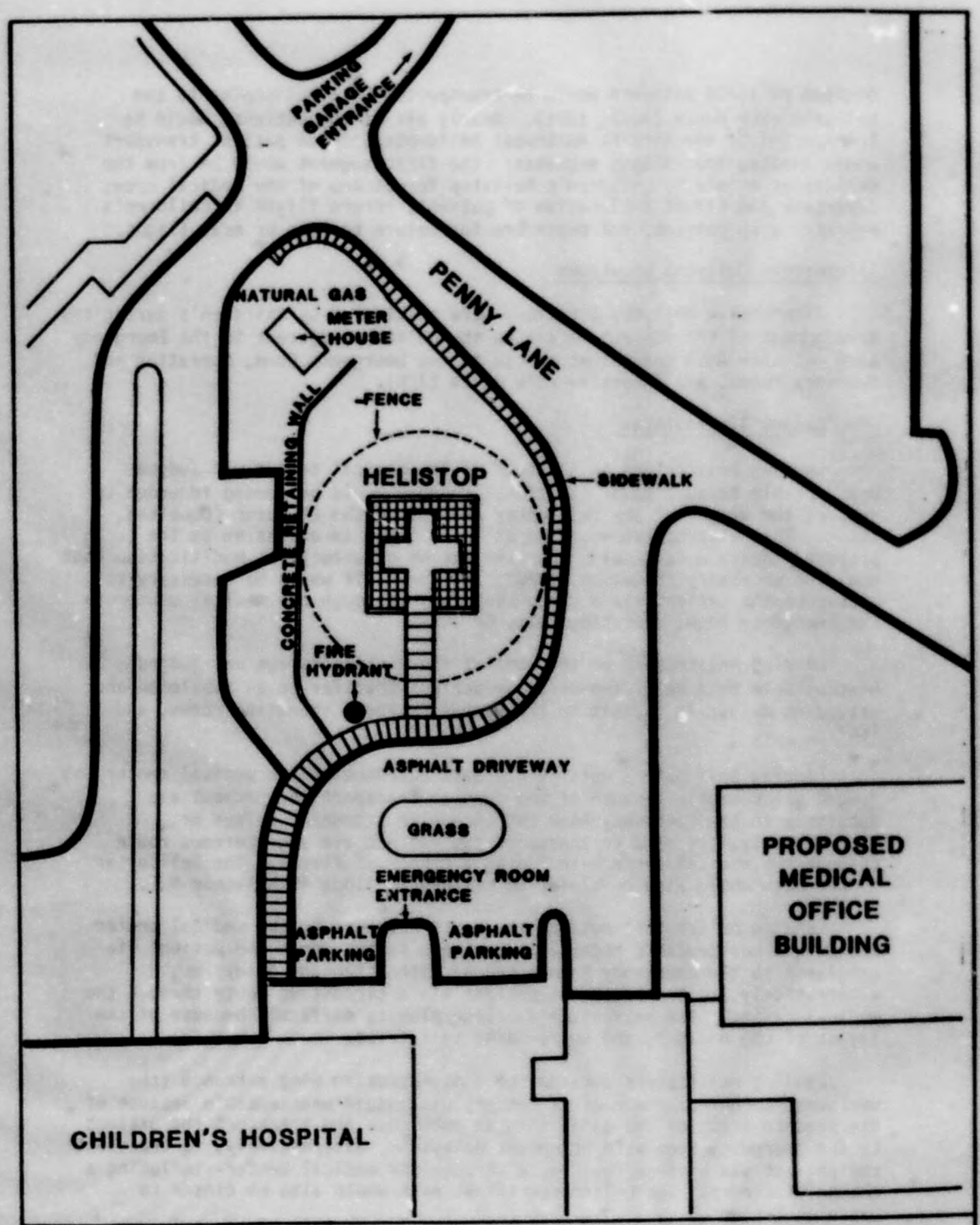

FIGURE 4

CHILDREN'S HELISTOP SITE

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maximum of 15-20 patients would be transported by a helicopter to the helistop each month (Neff, 1986). Nearly all of the patients would be transported by the Airlift Northwest helicopter. Each patient transport would involve four flight segments: the first segment would be from the helicopter origin to Children's helistop for pickup of the medical crew; departure and flight to location of patient; return flight to Children's helistop with patient; and departure for return to base or next flight.

Alternative Helistop Locations

Alternative helistop locations were considered by Children's during the development of the concept of siting the helistop adjacent to the Emergency Room entrance with convenient access to the Emergency Room, operating and recovery rooms, and intensive care units (ICU).

Campus Alternatives

Landing helicopters on the roof of the medical center was judged unacceptable because major structural changes would be needed in order to support the weight of the helicopter and extend the elevator (Donelson, 1986). This alternative would be at least twice as expensive as the proposed location, depending upon the extent of structural modification that would be necessary (Donelson, 1986). Moreover, it would be necessary to transport the patient via a circuitous route through the medical center to the Emergency Room, operating room, or ICUs.

Landing helicopters on the roof of the parking garage was judged unacceptable because of the need for patient transfer to an ambulance and attendant delays in transit to the Emergency Room, operating rooms, and ICUs.

Landing helicopters outside the east entrance to the medical center was judged unacceptable because of the need to transport the patient via ambulance to the Emergency Room entrance with attendant delays or, alternatively, the need to transport the patient via a circuitous route through the medical center--including a change of floors. The helicopter flight path would also be closer to residences along 45th Avenue N.E.

Landing helicopters outside the south entrance to the medical center was judged unacceptable because of the need to transport the patient via ambulance to the Emergency Room entrance with attendant delays or, alternatively, to transport the patient via a circuitous route through the medical center. The helicopter approach also is difficult because of the layout of the building and surrounding tall trees.

Landing helicopters outside the administrative wing entrance (the northwest corner of the medical center) was judged unacceptable because of the need to transfer the patient to an ambulance and transport the patient to the Emergency Room with attendant delays or, alternatively, to transport the patient via a circuitous route through the medical center--including a change of floors. The helicopter flight path would also be closer to Laurelon Terrace.

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Landing helicopters on one of the surface parking lots was judged unacceptable because of the need to transfer the patient to an ambulance for transport to the Emergency Room entrance with attendant delays. Moreover, the helistop and helicopter flight paths would be closer to residences to the east.

From a safety perspective, flat surfaces, such as rooftops, generally present the least accident risk during landing due to an absence of vertical obstructions. Rooftops, however, are less safe in the unlikely event of engine failure due to the structure's height and lack of a uniform surface on which to make an emergency landing. The other Campus Alternatives discussed above are all considered to be somewhat less safe than the proposed action due to their proximities to obstructions, their locations in topographically depressed areas, or their proximities to residential or educational land uses (Hill, 1986). The significance of the safety distinctions are believed by the pilots to be negligible (Hill, 1986).

Off-Campus Alternatives

The principal off-campus helistop locations that have been suggested include University of Washington's Intramural Field, sharing a helistop with University Hospital, Sand Point, sharing Harborview's helistop, sharing radio/television station helistops and bringing patients to Boeing Field. As part of the EIS scoping process, two off-campus alternatives were selected for detailed analysis: a helistop at the Intramural Field and a shared helistop with the University Hospital.

The Intramural Field helistop alternative involves the construction of a secured, concrete helistop or the designation of an unsecured landing area at Intramural Field. A maximum of 15-20 Children's-destined, patients would be brought to the helistop or landing location each month. Each patient would involve four flight segments--similar to the proposed action--plus ground transport of the patient to Children's.

The University of Washington is proposing the approval of a secured helistop already constructed on the roof of its expansion wing. A maximum of 15-20 Children's-destined, critically ill patients would be brought to the helistop each month; additional flights would involve University Hospital-destined patients. Each patient would involve four flight segments--similar to the proposed action--plus roof-to-ground and ground transport to Children's.

With the objectives of needing to minimize transfers and attendant transport time, the proposed project location was judged to be the most suitable for landing critically ill patients. Moreover, the helistop is located near the central portion of the campus; such a location meets the objective of minimizing off-site impacts without sacrificing patient care.

The Proposed Action

Demolition, Site Development and Improvements

The proposed helistop site is located at a landscaped site called "the Kitchen Garden." The garden would be relocated to a new site on campus.

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Three taller trees and shrubbery that exist in the helistop area would be removed--some of the smaller shrubs would be transplanted elsewhere on campus. Prior to tree removal, Children's would require the contractor to implement standard erosion control measures (such as installing hay bales, plastic sheets, etc.) to minimize construction-related erosion.

Following clearing, a new concrete retaining wall would be constructed along the western edge of the site. Approximately 410 cubic yards of earth would be imported to the helistop site, where it would be used to raise the western portion of the site to the (base) level of the eastern portion of the site. The fill would be removed from other (as yet unspecified) locations on Children's campus.

The helistop would be constructed of concrete shaped into a "plus" sign. The two arms of the "plus" would be approximately 30 feet long and ten feet wide (see Figure 4). This concrete helipad would be within a 40 foot square grasscrete area (alternating one foot square areas of grass and concrete) that, in turn, would be within a 45 foot radius circular area. The concrete pad and grasscrete surface would delineate the pad and provide stable support for the helicopter. The concrete center of the pad would be marked with a 4x7.5 foot, red "H" that would designate the helistop from the air. A 2.5 to 3.5 foot tall fence with locked gate would surround the circular area. An approximately 40 foot long concrete walk would link the helipad to the existing sidewalk.

The helistop would require the construction of 1,610 square feet of concrete (impervious) surface. Forty eight hundred square feet would be sodded and 6,540 square feet, according to the Landscape Plan, would be landscaped in juniper, azalea, and other low shrubbery. Blue star juniper would be planted along the outside of the fence and, in time, would partially obscure the fence.

The helistop would be equipped with ground lights that would be turned on for emergency nighttime landings. These lights would meet minimum FAA standards and would not have any off-site spillage because of the absence of horizontal throw. In effect these pilot-preferred lights "glow," rather than emanate direct ray lights (Hill, 1986). The shrubbery and positions of the medical center building and parking garage would prevent any helistop safety lighting creating glare off-site.

Signs warning motorists of the possibility of helicopter operations would be posted on Penny Lane and, if necessary, on Sand Point Way N.E. No aviation fuel would be stored on campus.

Number of Transports and Flights

Children's projects that initially ten patients per month would be transported by helicopter directly to Children's. Children's also estimates that in the future up to 15-20 critically ill patients could be transported directly to the medical center by helicopter each month. Each patient transport involves four separate flight segments: one for the pickup of the specialty pediatric transport crew, the second for departure with transport crew, the third segment delivering the patient, and the fourth for return to

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base or next operation. Thus, there could be a maximum of 60-80 overflights (flight segments) per month. Based on data from existing flights (Table 2), it is estimated that 20% of the flights would occur in nighttime hours (10 p.m.-7 a.m.). The worst-case estimate of 15-20 patients is for the year 1990 and exceeds Airlift Northwest's projections (see Table 5). The worst-case estimate is derived by Children's medical and planning staff by assuming that the Airlift helicopter patient transports will increase at the rate of 10% per year from 1987 through 1990. This figure is greater than the projected patient population increase of 5.6% from 1985-1990 in the primary and secondary service area (Hunter, 1986) and reflects an anticipated continuing trend in referring physicians using Airlift. Thus, by 1990, there would be an average of 13 transports per month based on existing capabilities and use. This figure is consistent with Airlift's projections. In addition, Children's anticipates that there could be one to two MAST patient transports that would be made by either MAST "Hueys" or by Airlift or other air ambulance carrying patients that would previously have been carried by MAST aircraft. The remaining five to six patient transports reflect several factors that are difficult to predict with any reliability but that, nevertheless, could influence the number of patient transports: breakthroughs in medical technologies; growth in population of adolescents; inability to predict disasters--such as toxic spills, nuclear facility accidents, earthquakes; increased poverty that results in increase in premature births (Neff, 1986); or changes in the hospital referral patterns or the capabilities of Children's or of other community hospitals (Nicola, 1986b). Initially, an average of ten critically ill patients would land at the proposed helistop each month; however, as physicians in outlying areas become more familiar with Airlift Northwest services Children's projects that they will become more likely to use Airlift for the interhospital transport of critically ill patients.

The Seattle-King County Department of Public Health (Nicola, 1985) estimates a maximum of ten critically ill patients a month should currently be transported by helicopter to Children's. This estimate is based on a review of Airlift Northwest flight/medical logs, interviews of transport and other physicians. Nicola estimates that three or four would have a clear medical need for direct transport to Children's Emergency Room entrance--such that delays or transfers could affect patient outcome (Nicola, 1986); however, this estimate is not definitive (Nicola, 1986b). The difference between the maximum (10) and the clear medical need cases (3-4) are the (6-7) patients whose condition at time of referral was appropriate for helicopter transport (as determined by the attending physician and/or medical team) but who in retrospect were determined not to have need for helicopter transport directly to the Emergency Room doors (Nicola, 1985).

Airlift Northwest confirms that with their existing service they can fly a maximum of 80-90 helicopter transports a month, and, assuming that Children's share of 17% of all helicopter flights remains constant (see Table 5), that a maximum of 15-20 transports for Children's-destined patients is a reasonable estimate (Childs, 1986).

Children's is obligated by state requirements (WAC 248.18.285) to treat all patients brought to the hospital: the hospital construes this statute to mean that no helicopter transporting an emergency patient can be refused permission to land at the proposed helistop, if constructed, or elsewhere on the campus grounds.

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In order to ensure that the patients brought by helicopter to Children's are critically ill, consistent with the provisions of Section 23.48.05 of the Seattle Municipal Code, representatives of Children's are meeting with MAST personnel in order to develop landing and communications guidelines. As a policy, Children's will encourage only critically ill MAST transports patients that are destabilizing or at risk of destabilizing, as determined by on-board medical personnel, to land at the helistop. Any MAST flights to Children's, however, would not involve four flight segments, as there would be no pickup of the pediatric medical crew at Children's.

Helicopter Operations

The process of transporting a patient to Children's may be considered by separating the operation into a series of discrete steps. The following description is designed to provide the reader with an overview of the process and does not constitute the full array of operational or medical procedures that would be involved in a patient transport by helicopter. There is a difference in the process depending on whether the patient is in the field, or is the subject of either a pre-arranged or unscheduled interhospital transfer. There are also distinctions between private air ambulance services and the military (MAST) service. For illustrative purposes, an unscheduled Airlift Northwest interhospital transfer to Children's is profiled.

- The system is activated by an attending physician contacting Airlift Northwest's physician and/or Medical Director.
- The patient's medical profile is described and the attending physician, referral hospital and landing area are identified.
- The Airlift Northwest Medical Director and/or physician assesses whether helicopter transport is warranted and, if so, provides the referring physician with an estimated time of arrival (ETA).
- The helicopter pilot is alerted, as is the pediatric medical crew, which is based at Children's. (Because of distinct treatment requirements, there are separate medical crews for adult and child patients). The helicopter takes off.
- Children's secures the area surrounding the helistop and stops traffic on adjacent Penny Lane--only ambulances and medical staff on emergency call are allowed to pass into the secured area.
- Approximately six minutes after the helicopter leaves Boeing Field it lands at the proposed Children's helistop. Following two minutes to shut down the rotor, it takes approximately two minutes to load medical crew (physician and flight nurse), and equipment. Following loading, the aircraft takes off. In some situations, loading of medical crew and equipment would occur without the rotor being shut down.
- The helicopter arrives at the referring hospital's designated landing area or helistop. The patient may be at the landing area and prepared for flight or the medical crew may have to go to and prepare

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the patient. Elapsed time could be as little as three minutes for the former or two hours for the latter. Transfer by ground ambulance from the referring hospital to the helicopter may or may not be involved.

. The medical crew monitors the patient en route and administers medication and/or other care as needed. En route the helicopter contacts Children's and relays medical condition and needs, and flight information (e.g., ETA).

. Again, the helistop area is secured prior to ETA.

. The helicopter arrives and shuts down the engines at the proposed Children's helistop, where a ground team assists in disconnecting monitoring systems, unloading the patient and wheeling the transport gurney to the Emergency Room door, approximately 40 yards away. After retrieval of equipment, the pilot restarts the engines and after an estimated total ground time of three to six minutes returns to Boeing Field.

Thus, each patient transported by Airlift typically involves four segments: first, to pick up the pediatric medical crew at Children's; second, to fly the medical crew to the patient; third, to fly the patient and medical crew to Children's; finally to return to base or the next operation. Those flights in which a patient is first transported to Boeing by fixed wing already have a pediatric medical crew in attendance. Consequently, there usually would be no need to pick up a crew at Children's, and, therefore, no need for two of the four flight segments.

Flight Path - General

For all construction alternatives, with the helistop at Children's, Intramural Field and UW Hospital, the flight path would be comparable for flying into the vicinity. Only the individual approach and departure routes would be different. Flight path information in this section is based on the approaches and departures that have been recently designed by Airlift Northwest pilots. Final approach and departure routes will require FAA approval pursuant to Airspace Review; however, the FAA allows the pilot to deviate from flight paths (Benedict, 1986). In selecting flight paths, the Airlift Northwest helicopter pilots are sensitive to safety, reducing patient transport time, and noise considerations. In general, when and where possible, the pilots avoid flying over hills, over or near densely populated areas, or at altitudes less than 1000 feet (Hill, 1986). Typical altitudes are in excess of 2,000 feet (Hill, 1986).

In general north-south flights would follow the I-5 corridor. When headed from the south, flights would turn toward Children's once past Capitol Hill. When headed from the north, flights would turn toward Children's when approximately even with the southern end of Green Lake. Flights from the east would generally pass south of Webster Point and north of Madison Park, before turning north over Union Bay and entering the final approach. Flights from the west would generally pass between Magnolia/Queen Anne and Ballard/Fremont and turn toward Children's once past I-5 (see Figure 5, Generalized Flight Paths).

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FIGURE 5
GENERALIZED FLIGHT PATHS

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The land uses in the areas over which Airlift Northwest helicopters would primarily fly vary considerably, ranging from urban freeway to commercial to residential.

Actual flight paths could be different depending on meteorological and patient conditions, and specific origin of the flight. The helicopter would not be used during adverse weather conditions. For daytime flights, the FAA minimum standards must be met: the helicopter is not used if there is less than a 300-foot ceiling or less than one-half mile visibility. Airlift pilots also have the option to use the company's guidelines of a 500-foot ceiling or less than one-mile visibility. The helicopter, as a company policy, does not fly in winds in excess of 40 knots (Hill, 1985, 1986).

Flight Path - Approach and Departure to Children's Helistop

Two final approach-departure paths into the Children's helistop would be used by Airlift Northwest. A primary approach-departure path would be used under most wind conditions, a secondary approach-departure path would be used during northwesterly winds that are in excess of approximately 17 knots. Based on surface wind data for Sand Point this latter situation is expected approximately 0.2% of the time, and would be most likely to occur during the winter months (U.S. National Climatic Center, 1982). For either the primary or secondary approach-departure a "noise abatement" profile would be followed.

The primary approach to the Children's helistop (see Figure 6) would originate approximately at the intersection of N.E. 45th Street and Union Bay Place at an altitude of 1,000 feet. At that approximate point, the pilot would decelerate from approximately 160 to 120 knots but not reduce altitude. The pilot would maintain the 1,000-foot altitude and airspeed for approximately the next 1,500 feet, while staying within the general N.E. 45th Street/Sand Point Way N.E. corridor. Approximately southwest of the intersection of Sand Point Way N.E. and 40th Avenue N.E., the landing gear would be extended and the pilot would begin to descend at a rate estimated at 1,500 feet per minute. The helicopter would continue northeast along Sand Point Way N.E., decelerating to a speed of approximately 74-80 knots prior to the turn onto the Children's campus and final approach. As illustrated in the profile of the noise abatement approach-departure path in Figure 7, the rate of descent decreases considerably in the final stages of the approach. The helicopter would enter the Children's campus north of the main entrance and while approximately over the parking garage at an altitude of 100 feet turn south toward the helistop. Under most wind conditions, the helicopter would then make its final descent to the helistop directly from the north. In the case of infrequent strong easterly winds (less than one-tenth of one percent of all winds) the helicopter would turn more tightly over the main entrance and approach the pad more from the west. In the case of strong westerly winds (also less than one-tenth of one percent of all winds) the helicopter would make a wider turn over the parking garage and approach the pad more from the east.

The helicopter generally would land on the helistop facing south. For medical crew pickup and patient discharge, the helicopter typically would shut down its engines on the helistop. In departing, the helicopter would rise to approximately 35 feet, turn counter-clockwise toward the north and

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climb rapidly so as to be at approximately 500 feet when over the parking garage. The departure path would be over the same area but at a higher altitude than the approach paths, so that at the end of the climb (at the point of commencing deceleration on the inbound flight) the helicopter would be at 2000 feet (see Figures 6 and 7).

The secondary approach to the Children's helistop would be used only in conditions of strong winds (above 17 knots) from the northwest quadrant. This approach would be from the northeast and also would use the noise abatement profile (see Figures 6 and 7). This approach would originate just north of the intersection of 55th Avenue N.E. and Windermere Road and would proceed in a direct line to the Children's helistop. The profile of the final descent would be similar to that explained under the primary approach, above.

The departure characteristics of the secondary route would reflect the secondary approach path in terms of the area over which the helicopter would fly, and the primary departure path in terms of altitude (see Figures 6 and 7).

Ground Activities - Patient Transport to the Emergency Room Entrance

Once at the helistop, the medical crew on board the helicopter would be assisted by ground-based medical personnel after the engines are shut down. The critically ill patient would be removed from the helicopter. Electrical monitoring systems that were connected to the patient while in the helicopter would be disconnected, the patient would then be transferred to a gurney and wheeled to the Emergency Room entrance. Neonates or babies in isolettes, which have self-contained ALS systems, could be transported directly to the ICU from the helicopter. Total elapsed time from helicopter touchdown to the patient entering the hospital building is estimated at three minutes. After the patient enters the Emergency Room entrance, the pilot would restart engines and depart. (If the patient is transported in an isolette, the pilot will usually wait for the isolette to be returned.)

The delivery of critically ill patients to the Children's Emergency Room entrance minimizes both the transport time for patients and the need to transfer patients from one mode of transport to another. This is the objective of the Proposed Action. The reduced transport time to the advanced services offered at Children's, and the avoidance of additional transfers minimizes the risk of the patient destabilizing during transit and allows advanced treatment to commence at the earliest possible time. This time savings can reduce suffering, decrease hospital stay time and, in the most severe cases, can mean the difference between life and death.

It should be noted that although transport guidelines for referring physicians may provide guidance in determining the appropriate mode of transit, it is ultimately the attending physician or medical team members who makes the decision to transport by helicopter and where to fly. The risk of exposing a patient to destabilizing circumstances must be evaluated by the attending medical team (Nicola, 1986), and the appropriate medical response (to land at Children's or not) made.

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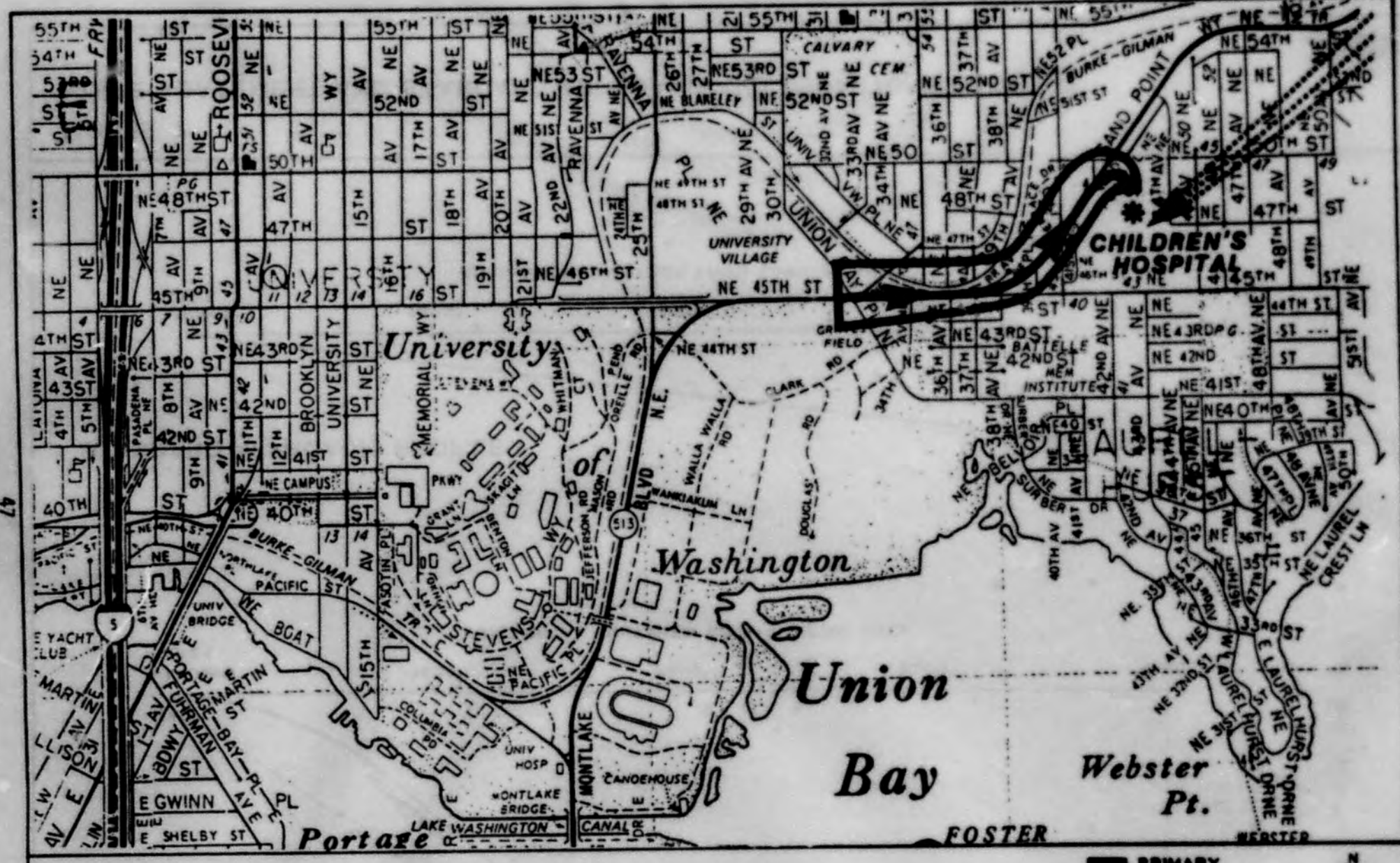

FIGURE 6

PRIMARY AND SECONDARY APPROACH AND DEPARTURE PATHS TO CHILDREN'S HELISTOP

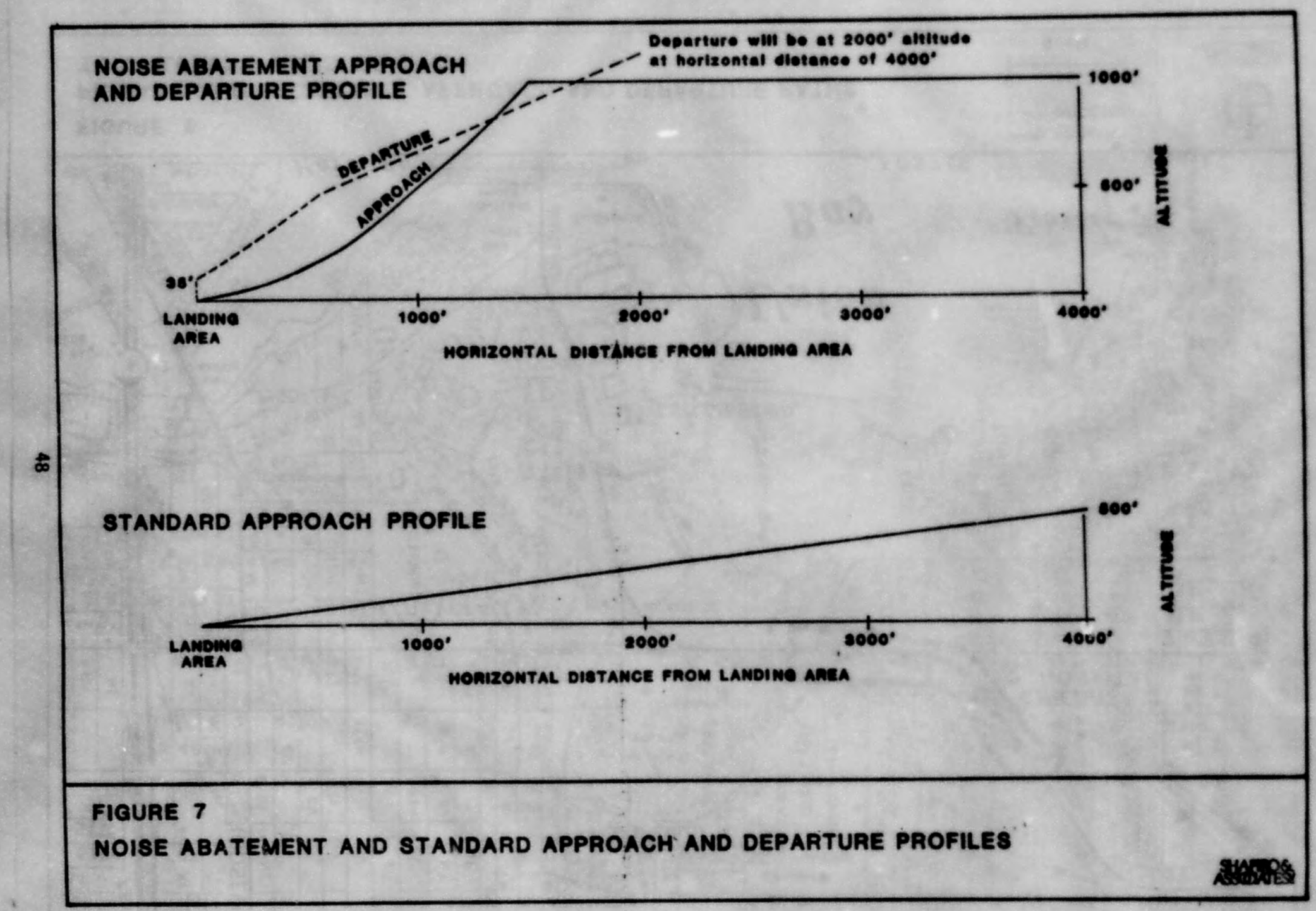

FIGURE 7
NOISE ABATEMENT AND STANDARD APPROACH AND DEPARTURE PROFILES

Mitigation Measures that are a Part of the Proposed Action or Alternatives

As part of the Proposed Action, the proponent has agreed to implement measures that will reduce the adverse impacts associated with the project. During construction the contractor will be required to implement erosion control measures. Children's is moving the location of its oxygen tank, thereby minimizing that potential hazard. The helistop will incorporate a fire-prevention system. No aviation fuel will be stored on campus. The helistop is fenced for security, and procedures for controlling vehicular and pedestrian traffic have been developed with responsible personnel trained. Warning signs will be posted on Penny Lane. The helistop will be landscaped. "Glow" rather than direct beam landing lights will be used--these lights will only be turned on during nighttime use. Engines normally will be shut down during medical crew pickup and patient delivery.

Flights will be limited to those associated with critically ill patients. Children's and Airlift have actively participated in the development of communications guidelines to ensure communication from air-to-ground is facilitated. As a policy, Children's will only encourage destabilizing patients on MAST transports to land at the helistop.

Airlift's flight path has been designed to reduce, as far as practicable, flight over sensitive properties--with general flight paths following I-5, water bodies and arterials. The primary approach and departure path has been redesigned so as to minimize impacts on adjacent properties. A noise abatement flight path--involving flying higher for a longer period during approach and departure--will be used.

Airlift Northwest guidelines on acceptable weather conditions are more restrictive than those of the FAA. In addition, Airlift has personnel levels (pilots per aircraft) that exceed NEMSPA/ASHBEAMS levels, a minimum experience requirement and ongoing certification for pilot hiring that exceeds ASHBEAMS requirements, and ongoing training for pilots and medical team personnel that addresses the guidelines and standards that are being developed by ASHBEAMS and NEMSPA.

Children's has agreed in principle to the development and participation on a review panel composed of physicians and others involved in helicopter transport in order to examine the appropriateness of individual flights, to enhance air-land communications, and to improve operations.

Descriptions of Alternatives to the Proposed Action

Intramural Field Helistop Alternative

The Intramural Field Helistop Alternative is distinguished by the construction of a fenced, lighted, helistop similar to that design proposed for Children's but without perimeter landscaping. The helistop would be located near the University of Washington's Intramural Field, off Union Bay Place N.E., approximately one road mile from Children's Emergency Room entrance (see Figure 8). Purchase, lease or permission to use the property would need to be acquired from the University of Washington. The University has indicated its opposition to a fenced, concrete helistop constructed on

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any of its Intramural Fields (Trask, 1986). Electricity for landing lights also would need to be extended to the site.

The Intramural Field Helistop Alternative also differs from the proposed action in terms of the helicopter's final approach and departure routes, in the pick-up of the medical crew at the Intramural Field (or Harborview) and in the need to transfer the patient to ground ambulance for transport to the Children's Emergency Room entrance.

The Intramural Field site is located in the midst of the University of Washington Athletic Field complex just east of the University Campus, south of N.E. 45th Street, and west of the Laurelhurst neighborhood. The primary land use surrounding the site is athletic fields and parking lots. The University Village shopping mall is located north of the site, across N.E. 45th Street, with residential uses to the north, east, and west of University Village. The University of Washington Campus is located to the west of the site, the Laurelhurst neighborhood to the east.

Flight Path. The flight path to the general vicinity of the Intramural Field Helistop, whether for pick up of the medical crew or for unloading the critically ill patient, would follow that path described under Flight Path - General, above. Two primary and one secondary final approach and departure paths have been proposed by the pilots of Airlift Northwest. Final paths would need to be approved by the FAA.

The two primary approaches to the Intramural Field Helistop site are a linear approach from the southeast and a curved approach from the southwest (see Figure 8). These alternatives would involve 1-2 minutes less flight time per segment, depending upon point of origin, than that required under the proposed action. The southwesterly approach would be used when flying from the south or west; the southeasterly approach would be used when flying from points to the east. The southwesterly approach would originate just northwest of the Montlake Bridge and fly over Husky Stadium and the athletic fields. The southeasterly approach would originate just north of Foster Island, north of the University of Washington Arboretum and fly over the University of Washington athletic fields.

The secondary approach would be employed only in times of winds in excess of 17 knots from the northwest quadrant. This approach would fly over the University of Washington campus before making a final approach from the northwest. All three of these approach patterns could also serve as departure routes depending upon the destination of the flight.

In that Airlift Northwest would use a standard approach (as opposed to a noise abatement approach) for any of these approach patterns, the helicopter would begin its final approach at an altitude of 500 feet. Approximately 4,000 feet from the landing zone the pilot would begin his/her descent and decelerate from 160 to approximately 120 knots (see Standard Approach Profile in Figure 7). The descent would continue uniformly at a rate of 175 feet per 1,000 feet of horizontal distance until touchdown at the helistop. The average speed during the final approach would be approximately 40 knots.

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FIGURE 8

PRIMARY AND SECONDARY APPROACH AND DEPARTURE PATHS TO INTRAMURAL FIELD HELISTOP

The departure would involve vertical lift to an altitude of 35 feet, turning and ascending along one of the routes designated as an approach path depending on flight destination. The ascent rate would be approximately half that proposed for the proposed action: an altitude of 1000 feet would be achieved at a distance of 4000 feet from the helistop.

Ground Activities - Patient Transport to the Children's Emergency Room Entrance. Once the helicopter with medical crew and patient has landed, the pilot typically would shut off engines. A ground-based medical crew with ambulance and driver would meet the aircraft and assist the helicopter's pediatric medical crew in preparing the critically ill patient for transport. This process could involve some or all of the following steps:

- any of the helicopter monitoring systems that were connected directly to the patient while in the helicopter may have to be disconnected (Patients in isolettes would need to be disconnected from aircraft systems and the battery pack connected.);
- the patient must be transferred from the helicopter into the ambulance and may have to be reconnected to support systems in the ambulance; the patient would face the greatest risk of advanced life support systems disconnecting during this transfer;
- the patient may require stabilization before the ambulance can leave the soccer field;
- the patient and medical team would be driven from the helistop to the Children's Emergency Room entrance; and,
- the patient's support systems would have to be disconnected at the hospital for final transfer from the ambulance to the emergency room.

The transfer process, depending on life support system and stabilization needs, and the ground travel time, depending on traffic, could result in a minimum of ten minutes or as long as 20-30 minutes elapsing before the patient is in the hospital (Andrews, 1986). The 15-minute transfer process (for an isolette) is comprised of two minutes helicopter cool down, eight to nine minutes transfer out of the helicopter across the field to the waiting ambulance and stabilization in the ambulance, three minutes transit time from the parking area to the Emergency Room entrance and one minute unloading at Children's; transfer of a child not in an isolette is easier and requires an estimated ten minutes (Andrews, 1986). This transfer process exposes the patient to the risk of destabilizing. For transport of patients on a gurney or in the isolette, the transfer is more difficult because if any IVs are inadvertently disconnected, then reconnection must be made and stabilization must occur prior to the ambulance leaving for Children's. Exposure to adverse weather and/or field conditions increase the potential for destabilization (Andrews, 1986).

The Seattle-King County Department of Health concluded that "there will be a small number of cases at (both Children's and University Hospitals) where the ability to land at the hospital may be life-saving" (Nicola, 1985). Delays in treatment of other patients, while perhaps not a life or death situation, could result in suffering, the need for prolonged

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treatment, permanent disability or other unfavorable outcome. Examples of these other situations include patients with impaired breathing, diaphragmatic hernia, aspiration of a foreign body, cardiac irregularities, near drownings and vascular collapse from general infections. (Neff, 1986)

Because this alternative involves a minimum of ten minutes of additional transit time for ground transport, the transfer of the patient from the helicopter to the ambulance, and then out of the ambulance at Children's, as well as the possibility of disconnection/reconnection/ disconnection of advanced life support systems, this alternative does not meet the proponent's objective to minimize transport time and the number of transfers.

University Hospital Helistop Alternative

The University of Washington has proposed using the helistop located on the roof of the new wing to the University Hospital. The purpose of the helistop is to allow critically ill patients (high risk obstetrical patients, premature infants with respiratory distress, cardiac patients, etc.) destined for University Hospital to be transported directly from the helicopter to the University Hospital, thereby saving time and the need for potentially destabilizing patient transfers involved with patient transports from other landing locations. This alternative proposes that the University Hospital, also a member of the Airlift Northwest consortium, share the use of the University Hospital Helistop with Children's. For patient care and liability reasons, it is unlikely that the University Hospital would allow Children's-destined patients to be landed on the helistop on the roof of the hospital (Goertzen, 1986; Shawcroft, 1986).

The University Hospital Helistop has been designed as a 3,300-square-foot area on the roof of the Hospital's new east wing. The structure has been built to accommodate helicopter landings. The flight path and requirements for patient transfer are different than those proposed for either the Children's or Graves Field helistop Alternatives.

The University of Washington Hospital Annex is located on the southern boundary of the University of Washington Campus, immediately northwest of the Montlake Bridge. The hospital is surrounded primarily by the University of Washington Campus, which is located to the north, northeast, and east of the site. There are other University oriented uses to the west of the site, with some commercial activity along N.E. Boat Street, west of the site. To the southeast of the site immediately south of the Montlake Cut of the Lake Washington Ship Canal is an area of single-family residences and the Seattle Yacht Club. Portage Bay lies to the southwest of the site.

Flight Path. The flight path is more compact and the flight would generally be of slightly shorter duration (except for the southeasterly approach to the Intramural Field) than the approaches to either the proposed Children's or Intramural Field Helistop Alternatives. Moreover, the rooftop location decreases the total helicopter descent distance.

The two approach and departure routes for the University Hospital Helistop would be from the northeast and slightly south of due east (see Figure 9). The northeasterly approach would originate above the University

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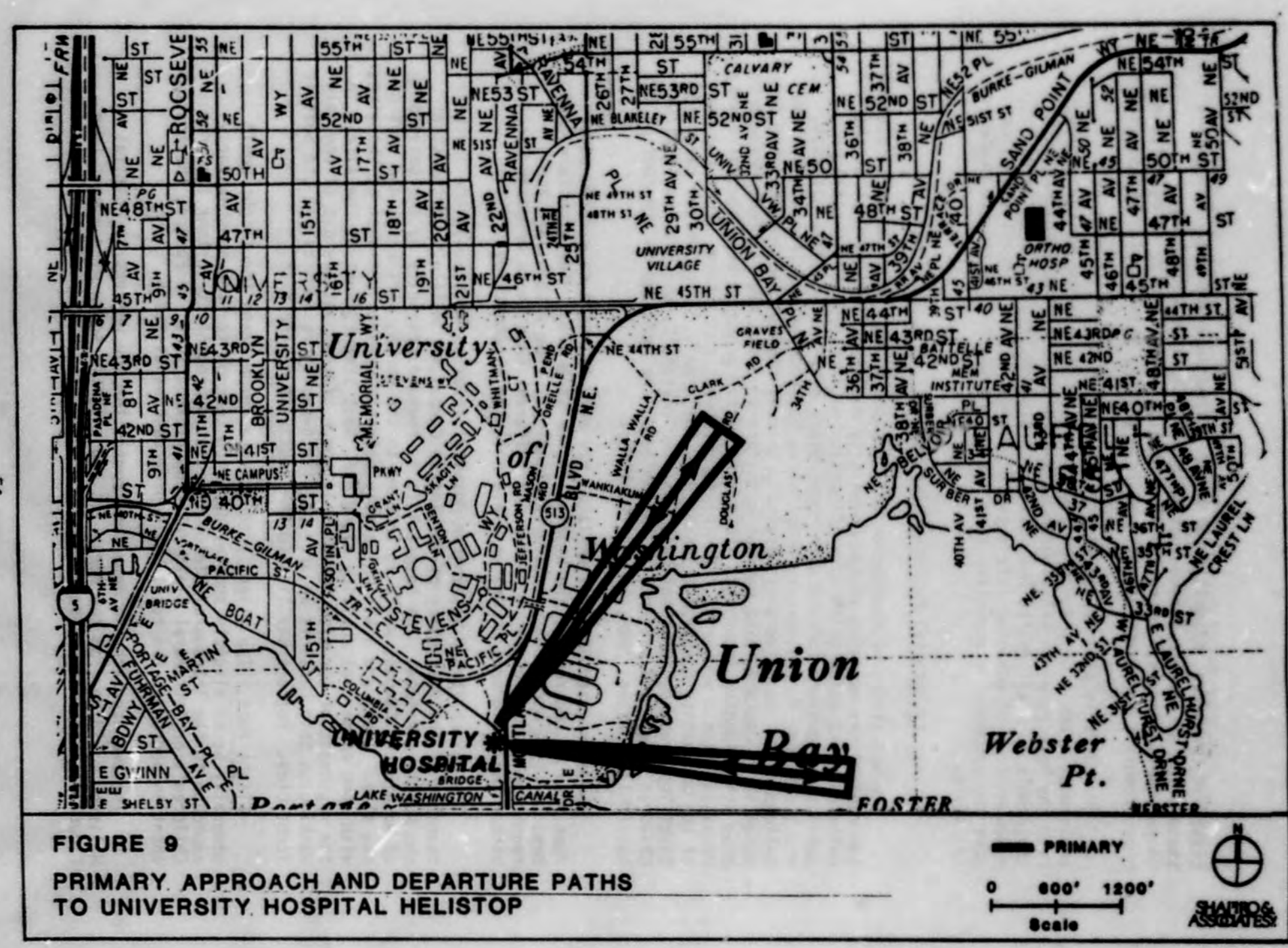

FIGURE 9

PRIMARY APPROACH AND DEPARTURE PATHS TO UNIVERSITY HOSPITAL HELISTOP

of Washington athletic fields, near Intramural Field, and fly over Husky Stadium and Hec Edmundson Pavillion. The easterly approach would begin over Union Bay at a point slightly north of Foster Island. Due to the limited size of the landing area and the proximity of the hospital building to the pad, the helicopter would be unable to turn around over the pad, rendering it unable to depart in the same direction from which it approached (Hill, 1986). Thus, the helicopter would have to approach from one of the indicated directions, and depart from the other on every flight. Following liftoff, any flight path could be followed after the helicopter clears the building.

As with the approaches to the Intramural Field site, Airlift Northwest would approach the University Hospital helistop at a standard approach angle, as described above.

Ground Activities - Patient Transfer to the Children's Emergency Room Entrance. Once the helicopter, with medical crew and patient has landed, the pilot would shut off engines. A ground-based crew would meet the aircraft and, with the helicopter's pediatric medical crew, prepare the patient for transport. The patient would be transported via elevator down five floors through University Hospital to the Hospital's Emergency Room. The patient's medical crew would be met by ambulance and transported to Children's. The patient could need the disconnection of monitoring systems and reconnection in the ambulance and then disconnection of the system at the Children's Emergency Room entrance. The patient would face the risk of ALS systems disconnecting and destabilizing during these transfers.

The approximately two mile trip from the University Hospital to Children's would include travel along N.E. Pacific Street, N.E. Pacific Place, Montlake Boulevard N.E. and then onto N.E. 45th Street and Sand Point Way N.E. Traffic at the intersection of N.E. Pacific Place and Montlake Boulevard N.E. is likely to be congested during commuter hours and on event days at Husky Stadium, Hec Edmundson Pavillion or on campus. Compared to the Intramural Field Helistop Alternative, the elevator travel time and the additional road travel time is estimated to add seven minutes to the total patient transport time to the Children's Emergency Room entrance, but could be slightly shorter, or decidedly longer under extreme traffic conditions. Thus, it is estimated that from the time of landing on the roof of University Hospital, it would take a minimum of 17 minutes for a patient to arrive at Children's. If the patient is in an isolette, it would take a minimum of 22 minutes. Any manipulation of life support systems or need for restabilization would add to this travel time total. The risk to the patient would be greater than that for the Intramural Field Alternative. The need for transfer of the critically ill patient from the University Hospital rooftop, through the hospital to an ambulance and transport to the Children's Emergency Room entrance conflicts with the proponent's objectives for minimizing transfers and transport time.

Limited Landing - No Construction of the Proposed Action or Alternatives

The Limited Landing Alternative is characterized by no construction of a helistop at Children's or Intramural Field or use of the University Hospital's helistop, if its use is approved by the Seattle City Council. Critically ill patients who otherwise would be transported to Children's by

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an Airlift Northwest helicopter would be off-loaded at Harborview or Boeing Field, transferred to a ground ambulance and driven (Code Red) to Children's. MAST helicopters would probably continue to land at the Intramural Field. There would, however, be continued limited landings in the driveway area outside the Children's Emergency Room entrance.

Prior to the ambulance departing from either Harborview or Boeing Field, critically ill patients would need to be disconnected from the support and monitoring systems in the helicopter, transferred to an ambulance, reconnected and, possibly restabilized. Ambulance travel time from Harborview Helistop to Children's averages 15 minutes; from Boeing Field to Children's, 25 minutes (Andrews, 1986). Actual transit time may be shorter or longer, depending on traffic conditions, and is likely to be lengthened or complicated during commute hours, during delays due to traffic backing up with Montlake Bridge openings, during events at the University, Seattle Center or other locations in Seattle, or during construction that affects traffic on I-5, SR-520, Montlake Boulevard or Sand Point Way N.E. Thus, total minimum elapsed time for transit from landing at Harborview or Boeing Field to a patient entering Children's Emergency Room entrance would be 20 minutes or 30 minutes, respectively, with an additional five minutes if the patient is in an isolette.

The helicopter's pediatric medical crew could judge, in consultation with Children's medical staff and/or Airlift's Medical Director, that patient and/or traffic conditions warrant the critically ill patient being landed at Children's in the driveway area outside the Emergency Room entrance. It is estimated that three to four patients a month could need to be landed for medical reasons at the Children's Emergency Room entrance (Nicola, 1986). These patients typically would be destablizing while in flight and/or those patients whose transport time could adversely influence the patient outcome. An additional, unknown number of patients would need to be transported to the Children's Emergency Room entrance area landing zone in order to avoid exposing the patient to a severe risk of destabilizing or of a potential adverse outcome due to a delay in receiving treatmert at Children's.

In instances in which landings occur outside the Children's Emergency Room entrance, it would be necessary to secure the landing zone area. This would be accomplished by security and/or other personnel from Children's. The flight approach to this landing zone area is similar to that for the proposed helistop, however, it is different in the final approach off Sand Point Way N.E. where the flight path is altered to avoid the tall trees to the north of the landing area. Rather than turning directly onto the hospital grounds just north of the main entrance, the helicopter would turn to the northwest near the intersection of Sand Point Way N.E. and N.E. 47th Street. The pilot would make a wide 180 degree turn toward the hospital grounds while over an open field to the northwest of the Sand Point Way N.E./N.E. 47th Street intersection at an altitude of approximately 500 feet. It would then approach the hospital from the northwest and turn to the southwest over the west edge of the parking garage. It would then fly to a point directly west of the landing area before making a final descent from the west. Because of the tall trees in the area of the proposed helistop, the actual landing would be from the west.

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In instances in which MAST helicopters land at the Intramural Field, it would be necessary to secure the landing zone area, which would be approximately the same location as the helistop site under the Intramural Field Helistop Alternative. This procedure involves security and/or medical personnel from Children's and/or the University controlling athletes, passersby and onlookers. The flight path in and out of the Intramural Field would be identical to that described under the Intramural Field Helistop Alternative. Muddy conditions on the field could also expose the patient to risk of complication in the event that attendant(s) slip during transport and jostle connecting lines to the ALS systems. An ambulance also has become stuck in the mud at this site.

Because of the additional transport time and need for potentially destabilizing transfers, the Limited Landing Alternative does not meet the proponent's objectives.

No Action - No Construction of the Proposed Action or Alternatives

Under a No Action Alternative, no helistop would be constructed at either Children's campus or the University of Washington's Intramural Field. Additionally, Children's-destined patients being transported by helicopter would not be permitted to land at the University Hospital Helistop, if approved, or in the driveway area outside the Children's Emergency Room entrance.

Children's-destined patients flown by helicopter would need to land either at Boeing Field or Harborview Hospital and transported by ambulance to Children's. As described in the Limited Landings Alternative, the total minimum elapsed time for transit from landing at Harborview or Boeing Field to a patient entering Children's Emergency Room entrance would be 20 or 30 minutes, respectively, with an additional five minutes if the patient is in an isolette.

It is Children's position that the Hospital is obligated by State Administrative Code (WAC 248-18-285) to provide basic emergency care services. The Hospital construes the administrative regulations to mean that it cannot prohibit a helicopter from landing on the campus even if by doing so the Hospital would be in violation of applicable land use laws and regulations. Moreover, the Hospital believes that the standard of care created by helicopters now landing at Children's cannot be diminished without violating the provision of Section 7.70.040 of the Revised Code of Washington, which establishes thresholds for assessing whether the health care provider has exercised expected care, skill and learning.

Because of the additional transport time and need for potentially destabilizing transfers, the No Action Alternative does not meet the proponent's objectives.

Comparison of Environmental Impacts of Alternatives

Implementation of the Proposed Action or Build Alternatives would cause environmental impacts of varying degree. The important potential impact areas have been identified through the scoping process and are addressed in this document. These elements include noise and vibration; aircraft safety;

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and the potential for the project to establish a precedent (cumulative impact).

Implementation of the proposed action would involve the creation of noise and vibration to which area residents would be exposed. Noise impacts would not be as great at the Intramural Field Helistop Alternative because residential areas are further from the proposed helistop location. Similarly, noise impacts on Montlake residents would not be as great for helicopter transports under the University Hospital Helistop Alternative. The Limited Landings Alternative involves some noise at Children's from landings and takeoffs, which would be particularly annoying to residents to the west and also involve noise at off-campus landing locations. The No Action Alternative is characterized by noise at Harborview or Boeing Field. Any alternative except the Proposed Action could involve ambulance siren noise.

The risk of aircraft accident is statistically possible under any alternative, including no action. The construction of a structurally sound, secured, lighted landing area increases the safety of takeoffs and landings but does not negate the risk. The potential for non-aircraft property damage or personal injury is probably the least under the secured Intramural Field Helistop Alternative followed by either Children's or the hospital helistop locations.

Approval of the Proposed Action or Alternatives is not expected to have an impact on the number of Emergency Helistops constructed in the region.

Benefits and Disadvantages of Reserving Implementation of the Proposed Action for the Future

The benefits of reserving implementation of the Proposed Action includes the near-term avoidance of environmental effects associated with project implementation: the preservation of the tall trees on the site; minimizing the number of helicopter flights landing at Children's and thereby reducing the exposure of area residents to noise and vibration, and reducing the risk of a helicopter accident.

Disadvantages of delaying project implementation include delay of up to 35 minutes in some critically ill patients receiving treatment offered only at Children's. This delay could cause unfavorable outcomes for the critically ill patients.

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IV. AFFECTED ENVIRONMENT, SIGNIFICANT IMPACTS AND MITIGATING MEASURES

In this chapter, analyses of environmental impacts that were deemed important through the scoping process are presented. These elements are: helicopter safety, and noise and vibration. For each of these elements, the proposed action is analyzed through a review of existing conditions, a description of probable impacts and impacts of the alternatives where such impacts differ substantially from those of the proposed action, and an identification of possible mitigating measures that are beyond those measures included as part of the proposed action or alternatives. An assessment of cumulative impacts also is included in this chapter, as is a summary of impacts that apparently cannot reasonably be mitigated.

HELICOPTER SAFETY

Introduction

This section presents information on helicopter safety. The characterization examines both general aviation (non-military) helicopter service for the years from 1976 to 1981, and Emergency Medical Service related helicopter service from 1972 through 1985. Trends in helicopter safety are also explored qualitatively.

Primary sources for this study are reports by the National Transportation Safety Board, which is the federal agency with the responsibility of maintaining accident statistics on air and ground transportation, and articles in periodicals dealing with helicopter safety and helicopter ambulance safety. In addition, personal interviews were conducted with recognized authorities in the field of hospital aviation safety, a rotorcraft safety specialist from the Federal Aviation Administration (FAA) and a helicopter pilot from Airlift Northwest, the EMS helicopter service consortium of which Children's is a member.

The National Transportation Safety Board (NTSB) maintains comprehensive statistics on accidents involving U.S. General Aviation, and publishes them annually in the Annual Review of Aircraft Accident Data. NTSB statistics for general aviation have not yet been published for the years 1982-1985, so this review is limited to 1975-1981. Data from other sources for the years since 1981 are also presented.

Helicopter Accident Frequency Trends

Between 1975 and 1981, there was a decrease of almost 60% in the rate of helicopter accidents as measured in number of accidents per 100,000 flight hours. As shown in Table 6, the number of accidents per year remained relatively stable, yet the number of total flight hours increased almost 150%. Therefore, over the seven year period, the number of accidents per 100,000 flight hours decreased steadily from 27.31 to 11.16.

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Table 6

Accident Frequency For All Helicopters
(1975-1981)

Year	Number of Accidents	Elapsed Time	Accidents/ 100,000 hours
1975	266	947,000	27.31
1976	249	1,103,000	22.57
1977	247	1,170,000	21.11
1978	285	1,397,000	20.40
1979	267	1,522,000	17.54
1980	263	1,891,000	13.91
1981	257	2,303,000	11.16

Note: Includes turbine-powered helicopters

Source: National Transportation Safety Board, 1981.

One of the primary reasons for this increase in helicopter safety has been the increased use of turbine-powered engines and the corresponding decreased use of less dependable piston engines (Collett, Benedict, and Hill, 1986). Of the roughly 170 helicopters currently in use in nationwide air ambulance services, only one piston-powered helicopter is still in use (Collett, 1986); therefore, statistics on turbine powered helicopters generally are more representative of EMS helicopters. Unless otherwise noted, all NTSB statistics cited in the remainder of this report refer to turbine-powered helicopters.

As shown in Table 7, turbine-powered helicopters have shown a similar decrease of approximately 60% in the number of accidents per 100,000 flight hours over the same seven year period with a 1981 figure of 5.48 accidents per 100,000 flight hours. The annual number of accidents in turbine-powered helicopters nearly [illegible]ubled between 1975 and 1981, but the number of flight hours more tha[illegible]drupled. In comparing Table 6 and Table 7 it is evident that with the [illegible]tion of 1979, turbine-powered helicopters have consistently [illegible]een more than twice as safe as all helicopters.

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Table 7

Accident Frequency For All Turbine-Powered Helicopters
(1975-1981)

Year	Number of Accidents	Hours Flown	Accidents/ 100,000 hours
1975	47	351,000	13.39
1976	39	423,000	9.22
1977	56	599,000	9.35
1978	60	631,000	9.51
1979	80	663,000	12.07
1980	80	1,172,000	6.83
1981	78	1,424,000	5.48
Totals	440	5,263,000	8.36

Source: National Transportation Safety Board, 1981.

NTSB does not compile statistics specifically regarding EMS helicopter flights, but some data have been gathered by those in the helicopter and EMS fields. Howard Collett, publisher of Hospital Aviation magazine, and Nina Merrill, Executive Director of the American Society of Hospital-Based Emergency Air Medical Services (ASHBEAMS) have assembled data on all EMS-related accidents since the first helicopter ambulance service was started at St. Anthony's Hospital in Denver in 1972.

Since the Denver program was started, there have been a total of 57 accidents involving EMS helicopter flights. Although actual figures on the total number of air ambulance flight hours have not been kept, Collett used estimated average trip time per patient figures to determine that, from 1972 through 1985, EMS helicopter accidents have occurred at an approximate rate of 18 times per 100,000 flight hours. Some specific data have been compiled for the years 1980-1985 by the National EMS Pilots Association. These data indicate an accident rate of 22.9 accidents per 100,000 flight hours (see Table 8). The data also note that during the period from 1980-1985, the EMS helicopter accident rates peaked in 1982 at a rate of 29.3 accidents per 100,000 flight hours, decreased to 18.5 accidents per 100,000 flight hours over the next two years,and then rose to 20.7 during 1985.

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Table 8

ACCIDENT FREQUENCY FOR EMS HELICOPTERS

Year	Number of Accidents	Number of Patients Transported	Accidents* per 100,000 Flight Hours	Average Number of Patients Between Accidents
1980	3	16,500	18.2	5,500
1981	6	23,000	26.1	3,833
1982	9	30,700	29.3	3,411
1983	7	37,900	18.5	5,414
1984	9	48,600	18.5	5,400
1985	15	62,000	20.7	4,133
Totals	49	218,700	22.9	4,463

*Based on a worst-case industry multiplier of 60 in-flight minutes per patient (Collett, 1986).

Source: Collett, 1986.

During the 1970s, many early EMS pilots were commercial pilots who branched out into EMS service: Many were "private rural pilots who wanted to relive the adrenalin rush of military helicopter service and expand the usage of their civilian aircraft businesses. Often their advertisements in the telephone yellow pages would list their aerial services as emergency medical, tourist, charter, cargo, and even crop dusting" (Reich and Kania, 1985). As the early industry organized (ASHBEAMS formed in 1980) and established safety standards, the number of these part-time operators declined, with a resultant improvement in safety.

Although industry experts acknowledge that 1985 was a particularly unsafe year, the data in Table 8 suggest fluctuations in EMS helicopter safety since the industry began to experience rapid growth in 1981. An article discussing the recent (1985) rash of accidents suggests that one reason for the accidents is the pilots' willingness to fly in adverse weather when other commercial helicopter pilots would not fly. As stated by Paul Procter, a business flying editor for Aviation Week and Space Technology, "Those guys absolutely hate the thought of losing a patient because they can't fly" (Ver Berkmoes, 1986).

EMS helicopters are frequently called in for particularly hazardous field pickups in locations that ground ambulances would have a difficult time reaching. Even on relatively routine EMS flights, the pilots often land in unfamiliar surroundings in makeshift landing areas in the field. Thus, EMS helicopters may never reach the same safety levels associated with general aviation. It should be noted, however, that the added risk associated with these types of flights is generally limited to the field and not designated landing pads (see Accident Potential with Respect to Phase of Flight, below).

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Nonetheless, there is an awareness in the industry that EMS helicopter safety can continue to improve. In an attempt to increase safety, ASHBEAMS and the National Emergency Medical Services Pilots Association (NEMSPA) are in the process of developing standards on pilot training, staffing, and operations protocols. (Aviation Week and Space Technology, 1986).

Fatal Accidents Involving Helicopters

General Aviation. As illustrated in Table 9, total fatal accidents declined from 1.71 fatal accidents per 100,000 flight hours in 1975 to 0.63 per 100,000 flight hours in 1981. The 73 fatal accidents identified in Table 9 account for a total of 139 fatalities during the seven year period. Of these, eight were ground fatalities (persons not in the helicopter at the time of the accident).

Table 9

FREQUENCY OF FATAL ACCIDENTS FOR ALL TURBINE-POWERED HELICOPTERS (1975-1981)

Year	Number of Fatal Accidents	Hours Flown	Fatal Accidents/ 100,000 hours
1975	6	351,000	1.71
1976	8	423,000	1.89
1977	8	599,000	1.34
1978	11	631,000	1.74
1979	13	663,000	1.96
1980	18	1,172,000	1.54
1981	9	1,424,000	.63
Total	73	5,263,000	1.39

Source: National Transportation Safety Board, 1981.

EMS. In 14 years, there have been 17 fatal accidents (causing 46 deaths) involving EMS helicopters, resulting in an accident rate of approximately 6.5 fatal accidents per 100,000 flight hours, which is considerably higher than that of general aviation. Only two of these fatal accidents, however, have involved "major vendors" (defined as vendors serving three or more hospitals) [Collett, 1986], which represents an accident frequency of approximately 0.66 fatal accidents per 100,000 flight hours for major carriers--a 14-year total that is comparable with the safest year for general aviation, according to the NTSB figures. There has never been a ground fatality in an EMS helicopter accident. (Collett, 1986)

Accident Potential with Respect to Phase of Flight

General Aviation. The NTSB study identifies the location of helicopter accidents relative to the heliport or airport for 1981 only. These figures are available only for all helicopters (piston and turbine-powered). As shown in Table 10, more than half of the two hundred fifty seven accidents

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in 1981 (54%) occurred further than one mile from the airport or heliport. The second most frequent occurrence (22%) was at the site of an airport. 2.3% of the accidents occurred on heliports. Four percent of all accidents occurred within one mile of the heliports or airport.

Table 10

NUMBER AND FREQUENCY OF ALL HELICOPTER ACCIDENTS
IN RELATION TO AIRPORT OR HELIPORT
IN 1981

Location	Accidents	Percentage
On Airport	56	21.8
On Heliport	6	2.3
On Barge/Ship/Platform	1	.4
In Traffic Pattern (only applies to airports, heliports, etc. with established traffic pattern)	4	1.6
Miles From Port:		
Within 1/4	4	1.6
1/4 - 1/2	3	1.2
1/2 - 1	3	1.2
Beyond 1	139	54.1
Unknown/Not Reported	41	16.0
TOTAL	257	100.0

Note: Totals do not add to 100% due to rounding

Source: National Transportation Safety Board, 1981.

EMS. Of the 57 EMS helicopter accidents that occurred through 1985, two ocurred on the host hospital's landing area. (Both of these occurred when engines failed during takeoff from the landing area and takeoff had to be aborted. There were no injuries or deaths on either occasion.) There is no specific data available on the exact distance from the hospital of the other 55 accidents. Nina Merrill of ASHBEAMS was aware of only one other accident that occurred within one mile of the hospital; Tom Einhorn of NEMSPA thought that there may have been two or three. In either case, it appears that the great majority of EMS helicopter accidents have occurred in the field or en route at a distance of greater than one mile from the host hospital.

Reasons stated for the locations of these accidents include the pilot's lack of familiarity with the landing area, poor visibility at field landing areas, the panicky behavior of those on the ground attempting to guide the pilot, and the frequent need to land on marginally safe landing areas. The fact that the largest single cause of EMS helicopter accidents is flying into wires or obstacles (see "Causes of Accidents" section below) supports this assertion. In familiar landing areas, pilots and support teams know the locations of wires and obstacles and are careful to avoid them. At an

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unfamiliar pickup point in the field, unknown wires present a more serious danger (Collett, Merrill, Poulton, Hill, Benedict).

Causes of Accidents

General Aviation. The NTSB uses 14 different designations for types and causes of helicopter accidents, including "hard landing, collision with wires or poles, engine failure or malfunction," etc. (see Table 11) In 1981 the largest number of accidents (42%) were caused by engine failure or malfunction. Seventy-two percent of these accidents caused either minor or no injury. The other most frequent causes of accidents were "controlled" collisions with the ground and collisions with wires or poles (each causing 10.3% of all accidents). Both of these categories caused higher percentages of fatal and serious injury accidents. Nonetheless, even among turbine-powered craft, which have relatively dependable engines, engine failure or malfunction was the single leading cause of serious injury or fatal accidents. No data are available on twin engine helicopters.

Table 11

GENERAL AVIATION, TURBINE-POWERED HELICOPTER
ACCIDENTS IN 1981 BY TYPE AND CAUSE

Type of Accident	Number	Percentage
Hard Landing	6	7.7
Roll Over	5	6.4
Collision between Aircraft--both in flight	1	1.3
Collision w/Ground/Water--Controlled	8	10.3
Collision w/Ground/Water--Uncontrolled	4	5.1
Collision w/Wires/Poles	8	10.3
Collision w/Buildings	1	1.3
Collision w/Dirt Banks	1	1.3
Collision w/Other	1	1.3
Engine Failure or Malfunction	33	42.3
Propeller/Rotor Failure	1	1.3
Tail Rotor Failure	7	9.0
Prop/Rotor Accident to Person	1	1.3
Miscellaneous/Other	1	1.3
TOTAL	78	100.0

Note: Total does not add to 100% due to rounding.

Source: National Transportation Safety Board, 1981,

EMS. Similar, although more general data have been assembled on causes of EMS helicopter accidents (see Table 12). The single greatest cause (32%) of EMS helicopter accidents has been striking wires or obstacles. (58% of this type of accident resulted only in damage to the craft, but no injuries.) The second leading cause of EMS helicopter accidents has been power loss or other mechanical failure, which has accounted for 26% of these

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accidents. (The majority of this group of accidents (64%) caused no death or injury.)

Table 12

AIR AMBULANCE HELICOPTER ACCIDENTS BY CAUSE
(1972-1985)

Type of Accident	Number	Percentage	Associated Fatal Accidents
Struck Wires/Obstacles	17	31.5	4
Loss of Control	9	16.7	1
System Management*	1	1.9	1
Power Loss/Other Mechanical Failures	14	25.9	1
Flew into Ground	12	22.2	9
Unknown	1	1.9	1
TOTAL	54		17

* Pilot failure to switch to full fuel tank.

Note: Total does not add to 100% due to rounding.

Source: Helicopter Association International (HAI) Convention News, January 28, 1986.

The third leading cause of EMS helicopter accidents and by far the leading cause of fatal accidents is the loosely defined category "flew into ground," which accounts for 22% of all EMS aircraft accidents and more than half (53%) of the fatal accidents involving EMS aircraft. This designation was applied to accidents that occurred in poor visibility, when the helicopter hit the ground, and where there was no evidence of any mechanical failure. It is assumed that the causes of these accidents were pilots becoming disoriented by low visibility.

Time of Day (Light) and Weather Conditions

General Aviation. The NTSB report provides data on daylight and weather conditions for 1981 accidents, but does not provide that information specifically for turbine-powered helicopters. Therefore, the information in this section is based on all helicopters. The designations used by NTSB regarding weather conditions are limited to the "Visual Flight Rating" (VFR) and Instrument Flight Rating" (IFR) designations common to aviation regulation. These designations refer primarily to visibility, are not standardized, and do not necessarily account for other factors, such as wind. For example, in some areas of relatively flat topography, the ceiling and visibility limits that would trigger an IFR designation might be more permissive than in an area with greater topographic relief. Therefore, if ten different accidents occurred under VFR conditions, it is possible that the weather could have been different for each of the ten.

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The statistics show that the majority (see Table 13) of helicopter accidents in 1981 occurred under VFR conditions. Although VFR conditions generally refer to better weather conditions than IFR conditions, this can be misleading. Most accidents occur under VFR conditions because far more pilots are qualified to fly under VFR conditions than those qualified for IFR flight (generally the more experienced pilots). One common situation is that a VFR rated pilot takes a helicopter out when the weather is good and when it turns bad, he/she is unprepared to deal with it. Many of the accidents that occur under conditions that are technically VFR, actually occur in poor weather (Stripling, 1986). The majority of accidents (88%) occur in daylight.

Table 13

LIGHT AND WEATHER CONDITIONS
ALL GENERAL AVIATION HELICOPTER ACCIDENTS IN 1981

Light Conditions	Type of Weather		Accidents	
	VFR	IFR	Number	Percent
Dawn	6	0	6	2.3
Daylight	216	9	225	87.5
Dusk	12	1	13	5.1
Night (dark)	9	2	11	4.3
Night (moonlight bright)	2	0	2	.8
TOTAL	245	12	257	100.0
Percentage	95.3	4.7		

Source: National Transportation Safety Board, 1981.

EMS. NEMSPA data indicate that approximately half of all fatal EMS helicopter accidents occurred at night, half during the day. Tom Ellnhorn of NEMSPA estimated that non-fatal accident records would be similar. Howard Collett, however, believed that a statistical analysis would show a greater percentage of non-fatal accidents occurring during daylight hours than at night.

Gene Hill, a pilot with Airlift Northwest, noted that under bad weather conditions, such as the fog that enveloped Seattle in December of 1985, the company does not fly at all. In fact, during that fog, Airlift Northwest refused to answer twenty calls over a two week period because they did not believe it was safe to fly. Additionally, it is company policy not to fly in winds in excess of 40 knots. Under marginal flying conditions, the company flies at the option of the pilot. In determining whether to fly or not, the pilot has the option of using FAA visibility criteria or more stringent Airlift Northwest guidelines. The FAA standards call for a minimum ceiling of 300 feet and minimum visibility of one-half mile; the Airlift Northwest guidelines are a 500-foot ceiling and one mile of visibility. The Airlift Northwest criteria were established specifically to give pilots the option of not flying if they were not comfortable flying in conditions that the FAA determined to be acceptable. In those cases of

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marginal weather conditions that the pilot decided to fly, they wouldn't land at Children's, but would land at Boeing Field or Sea-Tac, where the pilot could make an instrument controlled landing. Airlift Northwest would only land at Children's in conditions of good visibility.

Accidents by Make and Model of Helicopter

There are no assembled statistics available from NTSB on the makes and models of helicopters involved in accidents. However, Sue Godar, a marketing representative with Agusta, indicated that only one Agusta 109 had ever been involved in a fatal accident since the model was introduced in 1975. That accident involved two Agusta test pilots who were unable to maneuver out of a narrow dead-end canyon in the Italian Alps. According to Howard Collett, the Augusta 109 has been involved in two minor EMS related accidents. One occurred in Phoenix in 1983 and involved a blade slap against another helicopter while taxing at an airport. The other occurred in New Orleans in 1984 and involved an Augusta striking a parked, night camoflauged military helicopter, while performing a night landing at an airport. Neither of these accidents caused any fatalities or injuries.

Observations on Helicopter Safety

In addition to the empirical evidence presented in Tables 6 and 7, indicating a trend in greater safety in helicopter use over the seven years from 1975-1981, there is a general perception among sources in the industry, both EMS and general aviation related, that overall safety has improved and is continuing to improve. These sources offered several observations regarding this increased safety.

Gene Hill, the senior Airlift Northwest pilot, attributes improved helicopter safety, in part, to changes in the technology. He believes that the combined emergence of turbine-powered and twin-engine helicopters has eliminated most of the common equipment-related causes of accidents. Turbine engines are far more dependable than piston powered engines and, as a result, are used almost exclusively in professional flying today. Additionally, in a twin-engine craft, the likelihood of both engines failing at the same time is statistically remote. Illustrative of this point is the fact that the FAA no longer tests pilots of twin-engine helicopters for their ability to perform autorotation landings, which is the only way to land a single-engine craft with a failed engine.

Frank Benedict, a Seattle FAA inspector who certifies helicopter pilots, notes that another cause of improved helicopter safety is that the least safe type of flying, external load flying, has decreased. This type of flying involves carrying loads, such as logs or beams, suspended from the exterior of the craft.

Both Dr. Thomas Poulton, medical director of the St. Joseph Hospital Life Flight program in Omaha, Nebraska, a nationally recognized emergency medicine researcher, and Howard Collett have noted improvements in EMS flight safety. Dr. Poulton believes that most EMS programs are "extremely safe." He noted that a lot of early operators of air ambulance services were pilots who would use their helicopters to pick up patients as a sideline and frequently took unwarranted risks. He believes that most

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programs operated by medium to large hospitals are professional and are safe. He speculated that some of the smaller programs operate on more restrictive budgets that might affect their judgments regarding which flights to take and which flights not to take.

Dr. Poulton's views are supported by Howard Collett's statistic that only two of the 17 fatal accidents that have occurred to date have involved "major vendors," which he defined as vendors serving three or more hospitals. He is of the opinion that the safety of these major vendors compares favorably with any sector of the helicopter industry. Although Collett believes that improvements in EMS safety have leveled off somewhat since 1982, he notes that the industry is committed to safety and that further improvements are likely in the future. This in part is reflected in the joint ASHBEAMS and NEMSPA convention that resulted in the agreement to establish more rigorous pilot guidelines and an aggressive training program (see ASHBEAMS and NEMSPA discussion in Chapter II).

The FAA considers air ambulance services as "Air Taxi" services in their permitting and licensing process. This type of use has to meet the requirements of more stringent regulations for the pilots, the companies, and the aircraft than other types of uses. First, the air taxi helicopters are examined and flight tested by the FAA at least annually, often more frequently. General aviation craft are rarely inspected more than every five years. Second, air taxi pilots undergo more stringent flight testing than general aviation pilots. FAA Inspector Benedict characterized the distinction by stating, "With general aviation pilots, we have to be convinced that there is no serious doubt as to their control over the aircraft. With air taxi pilots, there can be absolutely no doubt at all as to their full control over the aircraft at all times." Air taxi pilots are also required to have more flight hours than general aviation pilots, but Benedict noted that this is more stringently enforced in insurance company standards than in the FAA regulations. Gene Hill noted that Airlift Northwest has more stringent standards for pilots than either the FAA or the insurance companies.

Affected Environment

The Seattle metropolitan area is served by two major airports (Sea-Tac International Airport and Boeing Field), several smaller airports and airfields (including seaplane ports on Lake Union and Lake Washington, some of which are private docks along the shorefront), and several heliports.

Sea-Tac and Boeing Field receive all of the jet traffic in the area; the nearest other jet ports are Paine Field in Everett and McChord Air Force Base, southeast of Tacoma. General aviation fixed wing traffic is also handled at Sea-Tac and Boeing, as well as at smaller airfields in the area. Several commercial helicopter organizations are headquartered at Boeing Field. In addition to the helicopters based at Boeing Field, several local radio and television stations maintain their own helicopters for news gathering and traffic reporting purposes, and have heliports at their buildings, located in the Denny Regrade area.

Airlift Northwest, the organization that would be transporting nearly all patients to and from Children's, is headquartered at Boeing Field.

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There have been no accidents in the four and one half year history of Airlift Northwest. Since May of 1985, when Airlift Northwest began operation of the Augusta 109 helicopter, there have been 604 transports (through June 1986); no helicopter accidents have occurred.

Significant Impacts

General Impacts - All Alternatives

In assessing the potential for accidents associated with air ambulance service to Children's, several assumptions must be made regarding the number of flights and the average duration of these flights. Children's estimates that a maximum of 15-20 patients per month will be transported to Children's by helicopter. (See description of the derivation of the number of flights in the description of the Proposed Project).

Gene Hill of Airlift Northwest estimates, based on flight logs, the average total flight (engine) time to serve Children's is 48 minutes. The 48 minute average flight time per patient transport to Children's reflects a combination of interhospital and field transports as well as cases in which the helicopter is used for the final leg of a transport involving a fixed wing transport. A representative 48-minute flight can be into four segments (ground time not included):

1.	Boeing Field to Children's: medical crew pickup	6 minutes
2.	Children's to Patient	18 minutes
3.	Patient to Children's	18 minutes
4.	Children's to Boeing	6 minutes
		48 minutes

The 18-minute segment can be further broken down into one minute of approach/landing, one minute of departure and 16 minutes of flight time, which, assuming a speed of 160 knots, would be equivalent to covering a distance of approximately 49 miles. (It is important to note that the 48 minute average is lowered by flights where the patient is transported to Boeing by fixed wing and then on to Children's.)

Several different accident frequency figures are used to derive projections for different statistical accident frequencies for Children's air ambulance service (see Table 14). The results are presented as the statistical probability of an accident occurring on any given Children's flight; in other words, out of "x" number of 48-minute flights, one would be expected to result in an acident. The frequency of such accidents occurring on a Children's-destined flight would depend on the actual number of patients brought to Children's by helicopter. As a worst case scenario, the statistically probable number of years between acccidents on Children's-destined flights is presented, assuming a worst case forecast of 20 flights per month starting immediately and perpetuating indefinitely.

General accident calculations are based on accident rates for U.S. General Aviation (turbine-powered helicopters) for 1981 and for 1976-1981. Considering that the number of accidents per 100,000 flight hours decreased by more than half between 1976 and 1981 and there is reason to believe that

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TABLE 14

EXPECTED FREQUENCY OF ACCIDENTS
FOR HELICOPTERS TRANSPORTING PATIENTS TO CHILDREN'S

		ASSUMPTIONS				
		Accidents/ 100,000 Flight Hours	Flights/ Month	Minutes/ Flight	Probability of Accident	Statistical Frequency of Accidents (Expected (Number of Years Between Accidents)
1.	U.S. General Aviation, Turbine-Powered Craft, 1981	5.5	20	48	1 in 28,810	95
2.	U.S. General Aviation, Turbine-Powered Craft, 1975-1981	8.4	20	48	1 in 14,828	62
3.	Fatal Flights U.S. General Aviation, Turbine-Powered Craft, 1975-1981	1.4	20	48	1 in 89,928	338
4.	Ground Fatalities 1976-1981	.1	20	48	1 in 833,333	3,472
5.	EMS Related Accidents 1980-1985 (approximate)	22.9	20	48	1 in 5,459	22.7
6.	EMS Related Fatal Accidents 1972-1986 (approximate)	6.5	20	48	1 in 19,231	80
7.	"Major Vendor" EMS Related Fatal Accidents 1972-1986 (approximate)	.7	20	48	1 in 189,394	790

1, 2) See Table 7
3) See Table 9
4, 6, 7) See "Fatal Accidents" section
5) See "Accident Trends" section

*On Children's-Destined flight, anywhere in flight either picking up medical transport team, departing with transport delivering patient to Children's, or departing for return to base or next mission.

Source: Shapiro and Associates, Inc., text and tables from body of report.

this trend has continued (if one assumes piston-powered helicopters have been taken out of service and replaced by turbine-powered craft), the results based on the 1981 figures are probably more accurate, yet may still be too high. Since total figures from 1976-1981 represent a larger volume of data, however, assessments using this information were calculated.

Since there was no trend in fatality statistics from 1976-1981, average rates for the seven year period were used to estimate expected frequency of fatal accidents for flights transporting Children's patients. Ground fatality projections are based on the same seven year totals. Projections based on past EMS helicopter safety records using approximate figures generated by Howard Collett and Nina Merrill were also prepared. These calculations are based on total EMS related accidents from 1972-1985, EMS related fatal accidents over the same time period, and EMS fatal accidents involving "major vendors" for the same 14 years. No "major vendor" projections were made for overall accidents because the necessary base data have not been compiled. No "ground fatality" projections for EMS related accidents are presented since no ground fatalities have ever resulted from an EMS related accident.

To summarize the results (see Table 14) a worst case scenario was generated using the overall accident rate for EMS helicopters. Under this scenario, a flight involving a Children's-destined patient would have a statistical probability of an accident one in 5,459 transports. The accident could occur at any point on the four segments of each flight. If one assumes 20 flights per month, then the first accident would be statistically expected to occur every 23 years or before the year 2010. If one assumes that the accidents would occur in the flight in a manner comparable to EMS helicopters history, then 10% of the accidents would occur within one mile of the Children's helistop.

At any of the sites, helicopter operations could distract motorists and pedestrians along neighboring streets, and thereby be the indirect cause of an accident.

Children's Helistop Alternative

Regarding the proposed location of the Children's heliport, FAA Inspector Benedict believes that it is an extremely safe site (Benedict, 1986). He compared it to landing areas near the Seattle Center and downtown Seattle that are over busier streets and more congested conditions. He believes that the Children's site is far safer than such landing areas, which are already safe themselves.

A natural gas meter house is located approximately 48 feet northeast of the Children's helistop site. No other buildings are located within one hundred feet. Communication with representatives of Washington Natural Gas discloses that the current protection of the meter with a fence and a concrete structure is considered reasonable and adequate to prevent a fire in the event of a helicopter accident (Jainga, 1985). In the event of a major accident that results in the breach of the gas supply line, the natural gas would flare until shut off at the main valve across from Children's on Sand Point Way N.E.

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Other Alternatives

It is not anticipated that any of the alternative helistop locations would be more safe from a helicopter accident frequency perspective than the others. The Airlift pilots have indicated that a secured, lighted helistop--whether on a roof or on the ground--is preferred to unsecured, unlighted open field landing. Because the area immediately surrounding the Intramural Field and the primary and secondary approach/departure paths are located in an undeveloped area, potential physical damage from a helicopter accident would be relatively less for that alternative. Any distinction in potential accident risk among the alternatives would reflect any (minor) differences in flight time, with a no action alternative involving the least flight time, followed by University Hospital Helistop and Intramural Field Helistop.

All of the alternatives to constructing a helistop at Children's involve transport of patients and attending medical crew to Children's by ambulance. Although there is a risk of accident from transport by this mode, no statistics were available based on contacts with ambulance services, EMS agencies, the NTSB, insurance companies or other potential sources.

Mitigation Measures

Children's could contact Washington Natural Gas to discuss the possibility of receiving the necessary equipment and training to enable Children's personnel to shut off the main gas supply valve. This would allow any natural gas flare to be extinguished more quickly in an emergency situation.

Signs could be posted warning of helicopters operating in the vicinity of the helistop so as to inform them of potential distractions.

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NOISE AND VIBRATION

Introduction

This chapter discusses noise and vibration impacts of the proposed helistop. The chapter was prepared by Towne, Richards & Chaudiere, Inc.

The report Helipad Noise Evaluation Children's Orthopedic Hospital (Seton, Johnson & Odell [SJO], 1985), prepared as part of the environmental checklist for this proposal, is a partial basis for the noise and vibration analysis. Data from Federal Aviation Administration (FAA) documents, from Airlift Northwest, and from other sources were also used to evaluate and supplement the SJO analysis.

Sound Level Descriptors and Criteria

Descriptors

Sound levels are measured in decibels, abbreviated dB. Environmental noise is measured as A-weighted sound level in decibels, often abbreviated dBA or dB(A) to denote the A-weighting. The A-weighting is a frequency-dependent level adjustment that is based on the sensitivity of human hearing at various sound frequencies and takes into account the human ear's lack of sensitivity to low frequencies.

Table 15 shows A-weighted sound levels associated with various noise sources and conditions.

The dBA measurements scale is a logarithmic rather than a linear scale, and is therefore not directly proportional to the energy or loudness of the noise. The smallest noticeable increase in noise is usually considered to be about 3 dBA, which is a doubling of sound energy. A doubling of judged loudness occurs for each 10 dBA increase in level. For example, 80 dBA is judged to be twice as loud as 70 dBA and four times as loud as 60 dBA. The increase in loudness of various sound level increases is judged as follows:

Sound level increase, dBA	Judged loudness increase
0 to 2	Barely perceptible
3 to 5	Noticeable
10	Doubling of loudness
20	Quadrupling of loudness

For evaluating the effect of noise on people, one must consider both the level, time of day, and duration of the noise. Noise descriptors that are based on the average sound energy have in the past ten years been found to be the best indicators of noise impact and community response, regardless of whether the noise is steady (such as a freeway) or fluctuating (such as local traffic and aircraft). Community noise, therefore, is often measured as an equivalent or average sound level, Leq, which is the level of a steady sound tnat contains the same acoustical energy as the fluctuating noise over a given time period.

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TABLE 15

SOUND LEVELS OF VARIOUS NOISE SOURCES AND CONDITIONS

Sound Level, dBA	Source or Condition
140	Hearing damage risk for short exposure
130	Threshold of pain
120	Race car at 50 feet
115	Occupational noise limit for 15 minutes/day exposure
110	Orchestra fortissimo; rock concert
100	Occupational noise limit for 2 hours/day exposure; ambulance siren at 50 feet
95	Occupational noise limit for 4 hours/day exposure
* 90	Occupational noise limit for 8 hours/day exposure
* 85	Accelerating truck or bus at 50 feet; power lawn mower
* 80	Average downtown traffic noise; ambulance siren at 500 feet
* 75	Inside auto, accelerating
* 70	Inside auto, steady speed
* 65	Urban residential average noise; typical auto measured at residential setback
60	Normal conversation
55	Suburban residential average noise
50	General office
45	Residential indoor
40	Quiet indoor
20	Whisper
0	Threshold of excellent hearing

* Approximate sound levels of intermittent aircraft flyovers in Seattle area.

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Noise over 24 hours is measured as day-night average sound level, Ldn, which is the Leq over 24 hours with a 10 dBA penalty included when averaging the Leq for nighttime hours of 10 p.m. to 7 a.m., because of the greater noise sensitivity during nighttime. For locations exposed to intermittent aircraft noise, it is common for governmental agencies to use the yearly Ldn based on an average number of daily aircraft operations during the year to determine the average or long-term impacts of the aircraft noise. The Ldn based on a particular day or condition can also be used to evaluate short-term impact. Ldn is the most widely accepted noise descriptor in the U.S. The descriptor is used by the U.S. Environmental Protection Agency (USEPA), the U.S. Department of Housing and Urban Development (USHUD), and the FAA to evaluate noise impact and land use compatibility. Ldn noise criteria are based on studies of activity interference (speech and sleep), annoyance, and community reaction.

The highest instantaneous sound level occurring during a given time period is called maximum sound level, Lmax. The Lmax descriptor can provide information about intermittent sound levels from particular noise sources, and the amount of noise fluctuation.

Individual aircraft events are also measured as sound exposure level, SEL, which is the level of a steady one-second sound that would contain the same amount of sound energy as the entire event. The SELs of individual aircraft events are used to compute the overall Leq and Ldn.

Although the A-weighted sound level and the Leq and Ldn noise descriptors are currently considered the best overall measures of noise, there are other factors that may affect sensitivity to noise. Impulse noise associated with helicopter blade slap tends to distinguish the helicopter noise from other noise sources. (This blade slap noise is primarily a characteristic of helicopters with two-bladed rotors, whereas 90% of the flights to Children's would be by helicopters having four-bladed rotors and modifications to control blade slap noise.) Research to determine whether an adjustment should be made to the sound level based on the impulsivity of the helicopter sound has led to conflicting results. The current position of the FAA and the International Civil Aviation Organization (ICAO) is that an impulsivity adjustment is unnecessary to properly certificate aircraft and adequately assess human response.

Criteria

There are no local, State or Federal noise regulations specifically for helistops. The following is a discussion of existing noise standards and guidelines, and of noise effects.

Seattle Noise Ordinance. The Seattle Noise Ordinance (City of Seattle, 1977) exempts "sounds originating from aircraft in flight, and sounds which originate at airports and are directly related to flight operations." The ordinance also exempts "sounds created by emergency equipment and emergency work necessary in the interests of law enforcement or of the health, safety or welfare of the community." Exempt sound sources can also not be considered a public nuisance noise or public disturbance noise. Based on these exemptions, noise from aeromedical helicopters and from ambulance sirens would not be considered subject to the Seattle Noise Ordinance.

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United States Environmental Protection Agency (USEPA) Noise Guidelines. Day-night average sound levels, Ldn, affecting residential, hospital and educational activity can be evaluated using USEPA noise guidelines (USEPA Region 10, 1975). Significant impacts on these activities are considered to exist if exterior Ldn is 65 dBA or above. The guidelines consider overall noise increases due to a project of 0 to 5 dBA to cause slight impact, 5 to 10 dBA significant impact, and over 10 dBA very serious impact.

United States Housing and Urban Development (USHUD) Noise Standards. USHUD has established Ldn noise standards for USHUD-assisted projects and actions (USHUD, 1979). The USHUD standards are cited only as an additional reference, since this project is not USHUD-assisted. Ldn 65 dBA or less is "acceptable." Ldn exceeding 65 dBA but not exceeding 75 dBA is "normally unacceptable," and special approvals, environmental review and sound attenuation are required. Ldn exceeding 75 dBA is "unacceptable," and special approvals, environmental review and sound attenuation are required.

FAA Land Use Compatibility Criteria. The FAA (FAA, 1984) has developed land use compatibility criteria based on Ldn as shown in Table 16. The criteria basically consider residential or hospital land use to be not compatible where the yearly Ldn is 65 dBA or above, unless outdoor to indoor sound level reductions are 5, 10 or 15 dBA over standard construction sound level reductions of 20 dBA. All land uses are considered to be compatible where the yearly Ldn is below 65 dBA.

Sleep Interference. The probability of sleep disturbance from noise varies depending on the level and duration of the noise, stage of sleep, individual exposed, and adaptation. Intermittent indoor sound levels (up to a few minutes duration) above 70 dBA have a significant probability of causing sleep interference. Intermittent levels of 40 to 70 dBA are generally considered to have some potential for causing sleep interference. Continuous sound (for example, from air conditioners or fans) causes sleep interference above 35 to 45 dBA. Sleep interference can also occur at lower sound levels, although the probability of sleep disturbance diminishes significantly at the lower levels. Adaptation to a particular sound level or noise source is a factor in determining sleep interference. This factor can generally not be simulated in laboratory studies. Age is also a factor, with the elderly and children in certain age groups being more susceptible to awakening. Intermittent indoor sound levels up to about 55 dBA are generally not considered to cause impact, based on collated data such as shown in Figure 10. More conservative data from studies conducted in schools and hospitals, as shown in Figure 11, indicate a sleep interference threshold of 40 dBA, with probabilities of awakening from maximum sound levels of 50 dBA as 10%, 60 dBA as 20%, and 70 dBA as 30%.

Motor vehicle noise is the primary cause of sleep interference in residential areas. In typical residential areas, there is a relatively steady background sound level from distant traffic. Higher sound levels from local traffic events are superimposed on this background. Typical intermittent sound levels at the 30- to 50-foot setback of a residence would be similar to those that have been identified in national surveys (USDOT, 1978). At 31 miles per hour (50 kph) and 49 feet (15 m), the "national energy mean emission levels" of various vehicle categories are as follows:

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TABLE 16

LAND USE COMPATIBILITY* WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS

Land Use	*Yearly Day-Night Average Sound Level (L_{dn}) in Decibels*					
	Below 65	*65-70*	*70-75*	*75-80*	*80-85*	*Over 85*
Residential						
Residential, other than mobile homes and transient lodgings	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
Public Use						
Schools, hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
Commercial Use						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
Manufacturing And Production						
Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
Recreational						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

(Numbers in parentheses refer to notes.)

* The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses remains with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

KEY TO TABLE

SLUCM	Standard Land Use Coding Manual.
Y (Yes)	Land Use and related structures compatible without restrictions.
N (No)	Land Use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reductinn (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30, or 35	Land used and related structures generally compatible; measures to achieve NLR or 25, 30, or 35 must be incorporated into design and construction of structure.

NOTES FOR TABLE

(1) Where the community determines that residential uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.

(2) Measures to achieve NLR of 25 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(3) Measures to achieve NLR of 30 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(4) Measures to achieve NLR of 35 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(5) Land use compatible provided special sound reinforcement systems are installed.

(6) Residential buildings require an NLR of 25.

(7) Residential buildings require an NLR of 30.

(8) Residential buildings not permitted.

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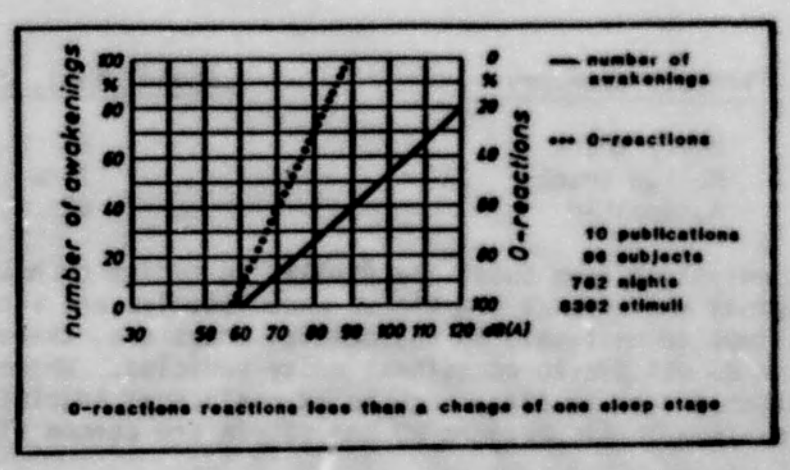

FIGURE 10 SLEEP DISTURBANCES BY NOISE - NUMBER OF REACTIONS AND NOISE LEVELS

Source: Griefahn, 1980

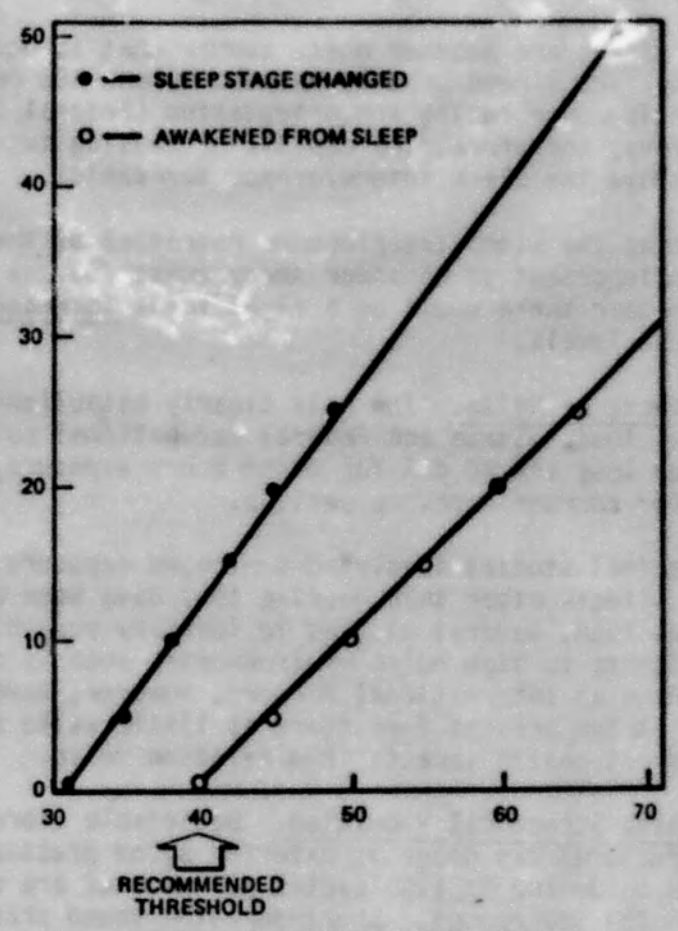

FIGURE 11 COMPOSITE OF LABORATORY DATA FOR SLEEP INTERFERENCE VERSUS MAXIMUM A-WEIGHTED NOISE LEVEL

Source: Wyle Laboratories, 1977

FIGURES 10 AND 11

SLEEP DISTURBANCE BY NOISE

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Vehicle Category	Sound Level, dBA
Heavy truck	80
Medium truck	74
Automobile	62

Noise emissions from buses are similar to medium or heavy trucks. Noise emissions are several dBA higher when vehicles are accelerating. Typical maximum sound levels in residential areas are, therefore, between about 75 and 85 dBA due to occasional noisy vehicles. Where there is a significant amount of traffic, such as at residences adjoining Sand Point Way N.E., maximum levels between 80 and 90 dBA are common (TRC, 1982).

Outside to inside sound level reductions are about 25 dBA in the Northwest. Residential interior maximum sound levels due to occasional motor vehicles are typically 50 to 60 dBA, which can cause occasional sleep interference. With windows partly open, interior sound levels are typically 10 dBA higher, or about 60 to 70 dBA, and there is greater probability of sleep interference.

Ambulance sirens are another noise source that is occasionally present near Children's. The sirens produce between 90 and 106 dBA at 50 feet, depending on their power rating and orientation (Federal Signal Corp., 1986). The sirens, therefore, are capable of causing interior sound levels significantly above the sleep intereference thresholds.

In evaluating the sleep interference potential of the Children's helistop, it is important to consider those noise sources that are already present, and whether there would be a significant increase in intermittent and average sound levels.

Health Effects of Noise. The only clearly established health hazard of noise is hearing loss. State and Federal occupational noise exposure limits based on hearing loss are 90 dBA for eight hours exposure, or higher levels up to 115 dBA for shorter exposure periods.

Based on animal studies involving prolonged exposure to high sound levels, health effects other than hearing loss have been postulated. Between 1977 and 1980, several studies to identify possible adverse health effects on residents in high noise environments, such as neighborhoods adjoining Los Angeles International Airport, however, have been inconclusive. At the present time there is little valid scientific basis for claiming direct health impacts from aviation noise.

Noise-Induced Structural Vibration. Detectable vibration of portions of building structures can occur if exterior sound pressure levels in the low frequencies below 100 Hz (100 cycles per second) are above 65 to 80 dB, as discussed in the SJO report. Short-duration sound pressure levels above approximately 120 dB are considered to cause annoying rattles and fright (U.S. Department of the Interior, 1980). Sound pressure levels from diesel truck drive-bys and general aviation aircraft flyovers are approximately in the 65 to 80 dB range, based on USEPA sound pressure level data (USEPA, 1971), but are well below 120 dB.

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The vibration response of a particular structure depends on the construction type and the window size and type. Residence vibration studies have generally been based on structures in southern California and other parts of the southern United States. It is likely that residences in the Northwest, which typically provide about 5 to 7 dB more outside to inside sound level reduction than residences in Southern California (based on airport acoustic insulation studies), are also less susceptible to structural vibration.

Detectable buzzing or rattling of windows due to structural vibration can result in increased annoyance, but is not damaging to the structure unless the outside sound pressure levels are above approximately 134 dB (U.S. Department of the Interior, 1980). Studies of historic building structures near airports with high sound pressure levels from aircraft noise, including 104 dBA from the Concorde supersonic jet transport (Hershey, Kevala and Burns, 1975), have shown that exposure to normal weather (such as thunder or wind loads) produces a higher probability of breakage than vibration from the noisiest aircraft, the Concorde. The contribution of aircraft to structural damage was found to be insignificant. Since the helicopter sound levels received at residences near Children's would be significantly lower than those measured for the Concorde, there is not expected to be any likelihood of structural damage from the noise.

Short-duration sound pressure of these levels can cause rattling and movement of dishes and other lightweight objects.

Helicopter Noise Sources

The Children's helistop would primarily be used by Airlift Northwest. Airlift Northwest uses the Agusta A109 Mark II helicopter, which is turbine-powered. The A109 represents near-current low-noise helicopter design. The helicopter has four blades per rotor instead of two, which results in less of the impulsive blade slap noise that is commonly associated with two-bladed helicopters. The Mark II has additional aerodynamic noise reduction features such as a cap on the rotor head to reduce the air flow angle into the blades and thereby reduce blade noise, and a vortex generator to control blade slap noise. Sound level data for this helicopter were obtained from measurements made by SJO at Children's, from FAA test data, and from measurements made at Harborview Medical Center (King County, 1986).

The MAST helicopters are two-bladed turbine-powered Bell UH-1Vs and have a more impulsive noise than the Agusta because of blade slap. A-weighted sound levels of the two helicopters are not significantly different, although because of the blade slap, the MAST is perceived as being considerably noisier. Sound level data for the MAST helicopter were obtained from measurements at Harborview Medical Center.

The loading of the helicopters (gross vehicular weight) has a negligible effect on their noise emission, because power settings, flight paths and blade speed are negligibly or unaffected (Hill, 1986).

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Affected Environment

Helicopter flight paths are described in detail in Section III of the DEIS. The primary approach to Children's would follow the N.E. 45th Street/Sand Point Way N.E. corridor east of Union Bay Place N.E., enter the Children's campus north of the main entrance, turn south approximately over the parking garage, and land at the helistop. Departures would follow a similar flight path, but at higher altitude.

The existing noise-sensitive land uses are single-family and multiple-family residences near the N.E. 45th Street/Sand Point Way N.E. corridor, including Laurelon Terrace apartments and Laurelhurst West; and single-family residences east of Children's, primarily along 44th Avenue N.E. between N.E. 47th and N.E. 50th Streets. Laurelhurst School, located 1,000 feet east of the helistop site, is also noise-sensitive.

Existing sound levels were described in the SJO report for five locations that had been selected in coordination with the Seattle/King County Department of Public Health and the City of Seattle Department of Construction and Land Use. The measurement locations (see Figure 3, Campus Map) and existing day-night average sound levels, Ldn, were as follows:

Location	Ldn, dBA
1. 4720-4724 44th Avenue N.E. (NE of Children's)	52
2. 4530 45th Avenue N.E. (E of Children's)	53
3. Laurelhurst West (near Sand Point Way N.E.)	68
4. Laurelon Terrace (set back from Sand Point Way N.E., W of helistop)	55
5. 4757 41st Avenue N.E. (near Sand Point Way N.E., near main entrance to Children's)	63

Existing maximum sound levels were not measured in the SJO study, due to the relatively small number of sound level readings taken at each location. As discussed previously, however, typical maximum levels in residential areas are between about 75 and 85 dBA due to occasional noisy vehicles. Near Sand Point Way N.E., maximum levels between 80 and 90 dBA occur from motor vehicle traffic. Along ambulance routes, sirens produce maximum levels between 90 and 106 dBA.

A secondary flight path to Children's would be from the northeast over a single-family residential area. This flight path would only have to be used during wind conditions that exist about 0.2% of the time.

The primary helicopter approach and departure paths to the Intramural Field are from the south over water, or from the southwest from the Montlake Cut. Noise-sensitive land uses include residences near the Montlake Cut. The secondary approach path to the Intramural Field is over the University of Washington campus and northeast campus dormitories, considered noise-sensitive land uses.

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The two approaches to the proposed University Hospital helistop are from the east and northeast, over the University of Washington sports facilities. The proposed helistop would be located across the Montlake Cut from a noise-sensitive residential area.

Impacts

Proposed Action - Children's Helistop

Noise impacts of the Children's helistop were described in the SJO report. The report assumed 20 patient transports or 40 round-trip flights per month, 29 during daytime hours of 7 a.m. to 10 p.m., and 11 during nighttime hours of 10 p.m. to 7 a.m. Each flight would consist of an approach, landing, takeoff, and departure. Impacts could in fact be less than those described in the SJO report, because of fewer flights. Current estimates are that initially ten patients per month would land at the helistop, with the number eventually increasing to 15 to 20 per month. It has been assumed that there would be two flights to Children's for each patient, the first to pick up the medical crew and the second to deliver the patient. The assumed 20 patients/40 flights per month is therefore a "worst case" assumption.

The number of nighttime flights is expected to be less than assumed by SJO. Current data (Airlift Northwest, 1986) indicate that between 19% and 25% of flights occur during nighttime hours of 10 p.m. to 7 a.m., versus 28% assumed by SJO.

The SJO report's comparison of monthly day-night average sound levels, Ldn, with and without the proposed helistop, based on noise tests of the Agusta helicopter at Children's, is shown in Table 17.

Table 17

SETON, JOHNSON & ODELL EXISTING AND PREDICTED Ldn

		Monthly Ldn, dBA			
	Location	Existing	Helicopter (40 flights)	Combined	Increase
1.	4720-4724 44th Ave. N.E.	52	55	57	+5
2.	4530 45th Ave. N.E.	53	48	54	+1
3.	Laurelhurst West	68	50	68	0
4.	Laurelon Terrace	55	56	59	+4
5.	Across from main entrance	63	52	63	0

Source: Seton, Johnson & Odell, 1985.

The projected worst case noise increase of 5 dBA in Ldn is considered a slight impact according to USEPA noise guidelines (USEPA, 1975).

The highest maximum sound level of the helicopter was measured by SJO to be 84 dBA at the closest receptor location, 4720-4724 44th Avenue N.E. Typical interior maximum sound levels from helicopters were estimated to be about 55 dBA, assuming typical outdoor maximum levels of 80 dBA and an

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outdoor to indoor sound level reduction of 25 dBA. This level was estimated to awaken 15% of a normal population sample. As indicated previously, intermittent levels up to about 55 dBA are generally not considered to cause impact. At the closest receptors, the maximum sound levels would be about 84 dBA exterior and 59 dBA interior. This 59 dBA level would cause about a 20% probability of awakening, based on Figure 11. With windows partly open, interior maximum levels would be about 10 dBA higher, or up to 69 dBA, causing a 30% probability of awakening according to Figure 11. This probability of awakening is about 5-10% higher than for the estimated existing condition without helicopters, which is maximum levels of 60 to 65 dBA interior with windows partly open. Significant impacts (interior levels above about 70 dBA and also significantly exceeding existing maximum levels) are not expected to occur.

Based on discussions with Airlift Northwest concerning noise considerations, the primary flight path for Children's has been modified to allow a more gradual and direct turn into Children's than was used in the SJO noise tests, instead of the sharp turn that was previously made north of the intersection of Sand Point Way N.E. and N.E. 50th Street. The portion of the new flight path near the helistop would also be farther east of the Laurelon Terrace apartments, resulting in about 7-9 dBA lower maximum levels from helicopters than for the current flight path.

Maximum and day-night average sound levels were calculated for the new flight path using FAA noise test data for the Agusta A109 Mark II (FAA, 1985). The FAA data provides Lmax and SEL readings at the centerline and several side distances for various approach, takeoff, level flyover and hover operations. In addition to an average monthly Ldn, a "worst one-day" Ldn was also calculated, assuming two daytime and two nighttime flights. Results of the calculations are shown in Table 18.

The helicopter Ldns shown in Table 18 are considered to represent the "worst case" cumulative impact condition, as discussed previously.

The calculated monthly Ldn from helicopters are relatively close to those of SJO (see Table 17) at Locations 2, 4 and 5, but are lower at Locations 1 and 3, presumably because of differences in the flight path (affecting distance and exposure time) and possibly a difference in the helicopter altitude used to calculate levels at Location 3, Laurelhurst West. The helicopter Ldns shown in Table 18 are consistent with a current measured helicopter Ldn of 48 dBA 450 feet from the helistop at Harborview Medical Center (King County, 1986).

The calculated highest Lmax of 84 dBA at the closest residences is identical to the level measured by SJO.

The predicted sound levels are not expected to cause significant impact (interior Lmax above 65 dBA with windows closed, Ldn above 65 dBA due to helicopters, or more than 5 dBA increase in overall monthly and worst one-day noise). At all locations, the calculated monthly Ldn from helicopters would be less than the existing Ldn, resulting in a 3 dBA or less noise increase. There would, however, be increased sleep interference affecting Laurelon Terrace, residences west of the Children's main entrance that are not near Sand Point Way N.E., and the closest residences northeast

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Table 18

COMPARISON OF EXISTING AND PREDICTED EXTERIOR SOUND LEVELS
FOR THE PROPOSED FLIGHT PATH

	Receptor Locations*				
	1	2	3	4	5
Lmax:					
Existing estimated	75-80	75-80	90	80	85
Helicopters	84	75	75	84	82
Increase	4-9	0	0	4	0
Monthly Ldn:					
Existing	52	53	68	55	63
Helicopters	51	47	43	54	50
Combined	55	54	68	58	63
Increase	3	1	0	3	0
Worst one-day Ldn:					
Existing**	55	56	71	58	66
Helicopters	58	54	50	61	57
Combined	60	58	71	63	67
Increase	5	2	0	5	1

*Locations: 1 - 4720-24 44th N.E.
2 - 4530 45th N.E.
3 - Laurelhurst West
4 - Laurelon Terrace
5 - Across from main Hospital entrance

**The "existing worst one-day Ldn" in Table 18 was assumed to be the existing Ldn measured by SJO plus 3 dBA, since the existing Ldn varies from day to day depending on the traffic conditions and local activities.

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of the proposed helistop site. At these locations, interior Lmax from helicopters are likely to be several dBA above the currently existing Lmax from motor vehicles (up to 59 dBA predicted versus 50 to 55 dBA estimated existing). Assuming about 25% of the flights occur at night, there would initially be about two nighttime flights per month (one patient being transported), increasing to 10 per month under the "worst case" assumptions.

Because the rise in noise would be gradual, startle effects associated with rapid noise increases from sources such as blasting or sonic booms would not occur.

There would be slight noise impacts affecting Laurelhurst School. During landings and takeoffs, there would be brief exterior sound levels (FAA, 1985) of up to 72 dBA at the second story and 62 dBA at the first story and playgrounds, which are shielded by residential structures. The interior maximum sound levels would be about 47 dBA with windows closed and 57 dBA with windows open at the second story, and 37 dBA with windows closed and 47 dBA with windows open at the first story. These levels are approximately similar to sound levels currently caused by motor vehicle drivebys.

There would be sleep interference impacts several times per month affecting hospital patients whose rooms are exposed to helicopter noise. Maximum exterior sound levels at the portion of buildings closest to the helistop would be about 94 dBA. Interior maximum sound levels would be about 69 dBA with windows closed, which is considered to be the typical nighttime condition. These levels would cause about a 30% probability of awakening, based on Figure 11. Maximum sound levels would, however, be less than for the Limited Landings Alternative, since the helistop would be farther from the hospital building.

Low-frequency sound pressure levels from helicopters were estimated in the SJO report and found to be approximately similar to the levels at which perceptible structural vibrations are considered possible. The levels are also, however, similar to those that typically occur from diesel trucks and general aviation aircraft flyovers, as discussed previously. The estimated levels are significantly below levels that are considered to cause fright or structural damage.

The probability of structural vibration would be less than for the current flight path required by the Limited Landings Alternative. The helicopters must currently approach and depart west of the Children's emergency entrance in order to avoid existing trees, and must therefore fly close to Laurelon Terrace. Under the Proposed Action, maximum sound pressure levels at Laurelon Terrace due to helicopters would be reduced by about 7-9 dB.

Flights by the MAST helicopters would produce A-weighted sound levels almost identical to those of the Agusta, based on measurements at Harborview Medical Center (King County, 1986). The MAST helicopter noise would, however, be more noticeable than that of the Agusta because of more blade slap, as discussed previously.

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There are no known adverse health effects associated with the predicted helicopter sound levels for the neighborhood around Children's.

There would be temporary noise impacts from intermittent construction noise during the two-month construction period, primarily affecting hospital patients whose rooms face the construction site. The noise would occur from trucks delivering about 400 cubic yards of fill material, grading and compaction of the site, and pouring of the Grasscrete surface. These activities would be limited to daytime hours. The Seattle Noise Ordinance (City of Seattle, 1977) contains stringent limits on construction noise received in residential areas during nighttime hours of 10 p.m. to 7 a.m. on weekdays and 10 p.m. to 9 a.m. on weekends. The daytime construction noise is not expected to affect residential areas because of the distance to these areas.

The following is a summary of impacts. The summary is consistent with the findings of the SJO report:

- Although the helicopter noise would be noticeable, it is not expected to cause significant impact during daytime hours due to its infrequent short-term nature and the relatively moderate sound levels that would be received at residences.

- Helicopter flights during sleeping periods could cause awakening probability of about 15-20% at the closest, line-of-sight residences and 30% at the closest hospital patient rooms.

- The impact of the monthly helicopter noise exposures as measured by Ldn would not be significant compared to the currently existing Ldn, although Ldn would increase by 3 to 5 dBA at residences closest to the helistop.

- Structural vibrations due to helicopter flights are not expected to be significant.

Intramural Field Helistop Alternative

The Intramural Field Alternative is not expected to result in noise impacts from helicopters when the primary approach and departure paths are used. There would, however, be impacts on student dormitory residents and possibly noise interference with class lectures on the few occasions when the secondary approach path over the University of Washington campus would be used.

This alternative would result in ambulance sirens occasionally being used between the Intramural Field and Children's. The sirens are approximately as loud as the helicopters, producing about 90 to 106 dBA at 50 feet and 86 dBA at 500 feet. Residences along Sand Point Way N.E., including the Laurel Village University of Washington housing, Laurelhurst West, portions of Laurelon Terrace, and several other single- and multiple-family residences, would experience higher maximum sound levels from ambulances than from the helicopters associated with the Proposed Action. The closest single-family residences to the east of Children's along 44th Avenue N.E., and patient rooms near the northern part of

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Children's, would experience lower maximum levels than under the Proposed Action, assuming that the ambulance sirens are not used within the hospital property.

University Hospital Helistop Alternative

The University Hospital alternative would result in slight helicopter noise impacts affecting residents south of the Montlake Cut. These impacts would be several dBA less than those described previously for residents closest to the Children's helistop, because of greater distance from the flight path.

This alternative would also result in the occasional use of ambulance sirens during transport between University Hospital and Children's. As indicated above, the ambulance sirens would produce higher maximum sound levels at residences along Sand Point Way N.E. than would helicopters, but lower levels at single-family residences to the east of Children's and at the northern hospital rooms.

Limited Landings Alternative

Under the Limited Landings Alternative, helicopter flights to Children's are expected to continue as they currently do in response to critical care emergencies, resulting in occasional noise impacts. Although there would be fewer flights than under the Proposed Action, these current operations are potentially more disruptive per event than the Proposed Action for residents of the Laurelon Terrace apartments, since the helicopter must approach and depart west of the Children's emergency entrance in order to avoid existing trees. This flight path results in exterior maximum sound levels of about 91 to 93 dBA at the closest Laurelon Terrace apartments, based on FAA data (FAA, 1985) and measurements at Harborview Medical Center (King County, 1986) versus 14 dBA for the Proposed Action. Interior sound levels would be up to about 68 dBA with windows closed and 78 dBA with windows open, causing potentially significant sleep interference impacts.

This alternative would also result in the occasional use of ambulance sirens during transport from Boeing Field or Harborview Hospital.

No Action Alternative

Under the No Action Alternative, noise impacts associated with helicopter approaches and departures would be limited to the area around Harborview Hospital and Boeing Field. In addition, there would be occasional use of ambulance sirens during transport from Boeing Field or Harborview.

Mitigating Measures

The following are proposed mitigating measures that are incorporated into the Proposed Action:

- The helistop would primarily be used by a modern, multi-blade helicopter representing near-current low-noise technology.

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. The proposed flight paths would keep the helicopter at high altitude above Sand Point Way N.E.

. The helicopter would use a noise abatement approach and departure that minimizes disturbances to residences.

. The helistop location maximizes ground distances to residences, and is shielded on the south by the hospital structure.

The following additional mitigating measure is possible:

. The medical crew could be picked up at a location other than Children's, resulting in a 50% reduction in the number of flights to Children's. The monthly and worst-day Ldn from helicopters as shown in Table 17 would then be reduced by 3 dBA, resulting in slightly lower noise increases. This measure, however, could result in noise impacts from ambulance sirens as discussed previously, and from helicopters near the alternative pick-up location.

A concrete wall noise barrier around the helistop would not be effective, since it would not shield helicopters in flight, and could be a safety hazard. Such a barrier, therefore, is not recommended.

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CUMULATIVE IMPACTS

The potential for Children's helistop approval establishing a precedent for the siting of helistops at other Seattle-area hospitals was determined to be an issue through the scoping process.

There are several factors that discourage the improper use and proliferation of helicopter services in Seattle. First, the land use criteria used by the City of Seattle for the evaluation of applications for institutional helistops limit the use of helistops to those situations involving life-threatening emergencies. While local and community hospitals in the region are capable of treating most life-threatening emergencies, some patients with particularly complex or severe presenting conditions will need to be referred to the more sophisticated level of services and capabilities offered only at certain tertiary care hospitals and medial centers. As noted in Nicola's findings (1985), there are situations in which even seemingly minor delays in transporting a patient to Children's, one of these tertiary referral centers, could result in an adverse patient outcome. In Seattle, many hospitals are involved in treating critically ill patients who are facing life-threatening emergencies; however, only a few of these institutions serve as tertiary care centers that offer specialized services to the region and that are routinely and appropriately involved in treating specific life-threatening emergencies that generally cannot be treated by local hospitals. In Seattle, these referral centers and their areas of particular medical expertise are:

Children's - Neonatal/Pediatric Medical and Surgical Emergencies
Harborview - Trauma, Burn Emergencies
Providence - Adult Cardiac Emergencies
University - Neonatal and Adult Medical (including Cardiac) Emergencies

Harborview currently has a helistop; helicopters are landing at Children's and Harborview, with Children's having submitted an application for a helistop and University having received a Certificate of Need and being in the process of preparing an application for a helistop permit. No other Seattle hospitals are deemed likely candidates for helistops (Nicola, 1986). Based on a survey of Seattle-area medical institutions, Ballard Community Hospital, St. Cabrini Hospital, Group Health Cooperative, Northgate General Hospital, Northwest Hospital, Pacific Medical Center, Providence Medical Center (a member of the Airlift Consortium that shares the Harborview Helistop), Swedish Hospital and Medical Center, West Seattle Community Hospital, and Virginia Mason Clinic do not currently plan a helistop. These medical institutions represent all the major hospitals in the City of Seattle.

In order to receive a conditional use approval, any medical institution must demonstrate that the helicopter is needed to save lives. Although it is conceivable that the non-centrally located hospitals (Ballard, Northgate, West Seattle) could have occasion for patients to be transported from the hospital due to extraordinary circumstances (such as severe traffic congestion), it is unlikely that a dedicated helistop would be warranted.

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Approval of the Proposed Action is not expected to have an impact upon the number of helicopter services. Rather, the creation of Airlift Northwest by a consortium of specialty, regional referral medical institutions was designed to avoid the proliferation of air ambulance services and to provide critically ill patients with the appropriate level of medical service. Any new helicopter services used expressly for emergency medical transport would require Certificate of Need approval from the State Department of Health Services.

Under PSHSA's current policies, Children's would be included in a regional emergency helicopter transportation program (Thompson, 1986). The recognized need for coordinating helicopter ambulance service has prompted the Puget Sound Health Systems Agency (PSHSA) to propose the development of guidelines for the siting of helistops and to develop policy options for integrating helicopter services with statewide EMS planning efforts. The Airlift Northwest service is consistent with PSHSA's policy statement, and, in fact, probably served as the model for the "consortium" discussion in that position paper. The establishment and operation of helistops at Children's, Harborview and University Hospitals (the member institutions of the Airlift Northwest consortium) is a logical extension of the provision of this helicopter service to the tertiary care, referral centers located in Seattle.

The Washington State Medical Association's guidelines for patient transport are expected to be available by the end of the summer; these guidelines can assist decision-makers in assessing the need for a particular institution to be served by a helistop.

The State Department of Social and Health Services (DSHS) evaluates hospital proposals for substantial change in service, with helistops clearly defined in the regulations as a substantial change. The Certificate of Need process is the formal procedure used to evaluate the need of a proposed facility or helicopter service. Any Certificates of Need applied for by Seattle hospitals would be examined by PSHSA, consistent with its role as a (public) health systems agency with review authority. It is presumed that only those institutions with a demonstrated need for a helistop would be granted DSHS approval.

The City's land use review process, the Washington State Medical Association's guidelines for patient transport, the (probable) development of guidelines for integrating the helicopter service into the regional EMS system, and the State's Certificate of Need program are expected to prevent the inappropriate development of helistops and helicopter services.

Mitigating Measures

A conditional use permit could be granted for a defined period pending a defined relationship to the existing regional and state EMS system and final development of criteria by the Washington State Medical Association's EMS Committee. As proposed by Dr. Nicola, helistop use could be reviewed for appropriate medical use in six months (Nicola, 1985).

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SIGNIFICANT IMPACTS THAT CANNOT BE MITIGATED

The risk of helicopter accidents is a potentially significant impact that cannot be entirely mitigated. No matter what location a helicopter flies into or out of, there is an attendent risk of accident and potential for personal injury or physical damage. The probability of an accident at a helistop increases with the number of transports.

Noise and vibration is not a significant impact based on regulatory criteria; however, it is recognized that helicopter noise could and probably would be disruptive of some adjacent residents' lives.

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APPENDIX A

Dr. R.M. Nicola's Report
on Medical Need to the
Department of Construction
and Land Use

December 4, 1985

City of Seattle
Charles Royer, *Mayor*

King County
Randy Revelle, *Executive*

Seattle-King County Department of Public Health
R.M. Nicola, M.D., M.H.S.A., *Director*

RECEIVED
DEC 5 - 1985
DEPT OF CONSTRUCTION & LAND USE

December 4, 1985

Beatrice Ryan, Interim Director
Department of Construction and Land Use
400 Municipal Bldg.
Seattle, WA 98104

Dear Ms. Ryan:

This letter is in response to your request of August 30, 1985 for an opinion about the medical need for the Children's Orthopedic Hospital (COH) to establish a helipad on hospital grounds.

In order to review the complete facts of this issue, I have spoken with numerous physicians, administrators, community residents, and former patients. I have reviewed the medical literature on emergency medical services delivered by helicopter, viewed a simulated transport/helicopter landing at Graves Field and near the COH proposed helipad site, examined helicopter and transport equipment, held a public hearing October 24, 1985 in the City Council chambers from 6:00 to 9:00 p.m., (written testimony attached), toured the COH facility, reviewed Airlift Northwest logs and individual patient charts.

Existing Pediatric Emergency Medical Services System in Seattle

Pediatric and neonatal emergencies within Seattle which are hospitalized are generally admitted at one of the 19 neonatal intensive care (NICU) beds or 17 pediatric intensive care beds (PICU) at Children's Orthopedic Hospital or one of the 19 neonatal intensive care unit beds at the University of Washington Medical School Hospital. The only other NICU beds in the region are the 12 beds at Mary Bridge Children's Hospital in Tacoma; the only other pediatric or neonatal intensive care beds in the State are located in Spokane. All pediatric surgery in the region is currently done at Children's. Pediatricians and neonatologists from within the State and from surrounding states (Alaska, Montana, Idaho) generally use COH and the UW as referral centers for the most seriously ill children or neonates requiring tertiary specialty care.

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Personal health care can, in general, be subdivided into three functional levels: a primary level, where the health care system is entered and basic services received and where all health services are mobilized and coordinated; a secondary level, represented by ambulatory services of a specialist nature and inpatient services provided in a community hospital-type facility; and the tertiary level, which includes the highly complex and sophisticated services available only at a "medical center" (Alberta Parker, "The Dimensions of Primary Care" in Primary Care: Where Medicine Fails, 1974, New York, John Wiley and Sons).

The University of Washington has a program which admits high-risk mothers so that low birth weight babies do not have to be transported between hospitals. This method of delivering high-risk mothers has been found to substantially reduce the morbidity and mortality associated with the delivery of low birth weight babies (Hickok, D. et al., "Decreased Mortality of Very Low Birthweight Infants After Maternal Transport," Department of Obstetrics and Gynecology, University of Washington School of Medicine, unpublished paper.)

But even with an excellent maternal transport program, there will still be individual patients who deliver small birthweight babies at small community hospitals throughout the State, where the infant needs to be stabilized and transported to a tertiary care hospital. Even though the UW is the hospital generally designated for the care of premature low-birthweight infants, its beds are frequently full and patients are referred to COH. The same pediatric medical staff, including interns and residents, deliver services at both COH and UW. In addition to small birthweight babies who have undeveloped lungs and intestines and require intensive support for survival and growth, there are transfers from hospitals around the State to COH for pediatric surgery or acute infection. Trauma patients generally go first to the region's trauma center, Harborview Medical Center, but may be transferred to COH for follow-up after surgery and stabilization.

This referral pattern exists regardless of transportation mode.

Helicopter Transport

There are existing guidelines and standards for patient care while being transported (Guidelines for Perinatal Care, "Interhospital Care of the Perinatal Patient," American Academic of Pediatrics and American College of Obstetricians and Gynecologists, 1985) but there are no standard published guidelines for which mode of transportation to use on a given patient or, for example, which criteria a patient should have to be transported by helicopter versus ambulance. The State Medical Society's EMS Committee is working on the delineation of medical necessity or medical reasonableness for medical transport and under Dr. Lothar Pinker's direction are hoping to have guidelines published in six months (see attached letter). There are some generalities that all the experts agree on.

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Over 150 miles it is most timely, stable and economic to use fixed-wing aircraft, so most interstate transports occur in fixed wing. Between 100 and 150 miles, rotary-wing aircraft or helicopters appear most appropriate, so regional out-of-County transfers appear to be the general rule. Less than 70 miles, depending on geography, ground transport is the generally agreed preference.

The key to any transportation of sick people is the stabilization of the patient, making sure that vital signs are stable and that the general physical condition is not deteriorating. One of the most important aspects in the case of the critically ill neonate is the transport of a specially trained medical team, the neonatologist/pediatrician and neonatal nurse to the community hospital to stabiiize a deteriorating baby. Once stable, a baby can be transported much more safely; some pediatricians prefer ground transport to helicopter because it is possible to stop an ambulance by the side of the road and listen to a baby's heart and lungs, and check the stability of its condition. There appears to be a balance between amount of transport time required and possibility of deterioration.

There are several studies in the literature that assess the severity of illness and injury in pediatric air transport. In one study, Mayer and Wallie prospectively evaluated 636 patients transported over 79 months of service to a regional children's center. Of these patients, 57.5% were transported by helicopter. Eighty-one percent of patients were taken to surgery or admitted to the intensive care unit immediately on arrival at the regional children's hospital. Overall mortality was 9%; a trauma score was used to classify patients (Ann. Emerg. Med. 1984 Feb.; 13(2):108-11). At Johns Hopkins, Dr. Columbani et al reviewed 267 children over a one-year period; 46% of patients arriving directly from the injury scene were delivered by helicopter. Fourteen of seventeen deaths resulted from head injury; a more aggressive approach to the management of brain trauma was advocated (J. Pediatric Surg. 1985 Feb.; 20(1):8-13). Other areas reviewed include a Hawaiian MAST system (Hawaii Med. J. 1984 Jun.; 43(6):200,202,204); a Kansas perinatal system (Respir. Ther., Mar.-Apr. 1985, 15(2):47-50, ISSN 0048-7392.

Another study evaluating air transport in a rural EMS system looked at 569 patients with multisystemic injuries. The emergency helicopter service was rated, utilizing strict specific guidelines as either essential, helpful, or not a factor in the preservation of life. The helicopter was essential to 16.5% and helpful to 10.9% of patients. In spite of rapid evaluation and maximal intervention, 102 (17.9%) of the patients died. The group for which air transport was judged "not a factor" (54.7%) consisted of patients whose injuries would not have proven fatal had their transportation to the tertiary care center been delayed. Retrospective analysis of the data available to the tertiary care center at the time of the decision to transfer the patients by air revealed that it was not possible to differentiate those patients who did not benefit from the service from those for whom the service was judged essential or helpful (Am. Surg. 1984 Apr.; 3-1348:183-8).

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Baxt et al. looked at a group of 1,273 blunt trauma patients who were treated and transported from the site by seven different hospital-based rotorcraft aeromedical emergency care services and saw a 21% reduction in expected mortality ($p<.05$) in five of the seven services. There is some debate about methodologic errors in the study. An editorial in the same journal issue (Annals Em. Med. 1985 Sept.; 14:9; 859-61) states that

> The effectiveness of aeromedical evacuation of battlefield casualties is well established; the transfer of this technology to the civilian setting is a logical event. Its effectiveness for civilian trauma care should be based on the following three principles: 1) early field resuscitation; 2) rapid transport; and 3) delivery to the hospital best suited to admit and treat the patient definitely and without delay. As Baxt and colleagues point out, helicopter emergency medical service (HEMS) patients may benefit from a highly integrated team effort at the receiving trauma center that is the direct or indirect result of a program but for which the helicopter (unless distance is a factor) is the least important component. This is a strong argument for the concept of regional trauma care that concentrates multiply injured patients in trauma centers organized to best care for them. The potential role of HEMS in making regional trauma care a reality should be explored by EMS systems.

My conclusions from the literature review are that there are medical conditions (especially trauma) where time of transport is critical regardless of mode of transportation, that specific clinical criteria may be helpful in selecting helicopter versus ground ambulance transport but do not help in predicting patient outcome, and that the experience of other tertiary centers, while helpful in describing the seriousness of injury seen in the usual patient populations transported, do not clearly shed any statistical light on your question at issue, the current Graves field site versus the hospital site 3-5 minutes away.

Current Data

COH admits approximately 1,000 patients per month in 200 regular beds and 36 intensive care beds (previously described) In August of 1985 82 patient admissions were ambulance transports to the emergency room, 34 were prearranged newborn ground transports, 30 were prearranged fixed-wing transports, and 6 were prearranged rotary transports. On an annual basis, there are 400-450 ground neonatal transports through the neonatal team; 80-85% of these transports go to COH, the rest to UW. During fiscal 1985 (a one-year period ending June 31) 279 patients were transported by air: 148 into intensive care units (see Attachment 1). Thirty-nine percent of these patients were under one month of age; 16% were greater than five years of age (see Attachment 2). Seventy-one percent (197) had peripheral intravenous lines, 27% (76) were intubated, and 2% (6) were undergoing CPR (see Attachment 2).

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I also reviewed the detailed flight logs of Airlift Northwest for August, 1985. There were 52 fixed-wing flights with 859 average miles per flight; 18 (54%) flights were out of State; all flights were out of County; 30 flights were to (or from) COH. There were 34 rotary-wing flights from Airlift Northwest averaging 110 miles: no flights were out of state; all but one of the flights were out of County (a motor vehicle accident to Harborview from South King County); 6 flights to COH.

Recommendations

It is my professi nal opinion that there are hospital transfers to COH where 3 to 5 minutes are critical to a severely ill infant or youngster, but the actual number of such cases is small. The criteria for helicopter transport in these cases would include the previous comments on distance, stable clinical condition during transport, severe injury or illness requiring tertiary center treatment (rather than secondary or community hospital level), and a strong possibility of decompensation (severe clinical deterioration) during transport. The most important part of the transport, in most cases, will be in getting a specially trained team out to community hospitals around the State.

In most cases, one single site near Graves Field would be adequate for both the University of Washington and COH; however, there will be a small number of cases at each hospital where the ability to land at the hospital may be life-saving. From the transport physicians I have talked to, about 5-10% of all transported children might fall into that category.

The number of children transported by air into COH for any given month may be 30 to 40 and based on the above criteria and clinical estimates, 3 to 4 of these patients may have a medical need for helicopter transport to the doors of the hospital.

The literature review indicated that there are no definitive predictive clinical indicators of prognosis; that is, any number would have to include an additional number of patients whose condition at time of referral was appropriate for air transport but who over time were determined not to have need of helico transport as essential. There also needs to be some flexibility for seasonal variation in disease.

Taking into account these factors, I would estimate ten expected helicopter transports for critically ill pediatric patients per month as an upward bound for COH.

I would also recommend that the emergency transport of patients by helicopter be a planned part of a complete EMS transportation system, with specific criteria for use, rather than a hospital-by-hospital provided service. A consortium of hospitals providing helicopter services such as the one in Airlift Northwest is

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certainly a most sensible approach and will make it easier to establish a systematic approach to provision of these services. We are, however, just beginning to integrate helicopter transport into our EMS system. Once a technology is made available to the medical community, it quickly becomes a standard of care for medico-legal reasons.

Until there is a defined systematic integration of these services on a County-wide (or regional or State-wide) basis, I would recommend that the permit granted be a conditional use permit pending a defined relationship to our existing State EMS system and final development of criteria by the Washington State Medical Association's EMS Committee, and that helistop use be reviewed for appropriate medical need in six months. Appropriate use could be monitored by review of individual patient records by an outside panel which includes recognized EMS/pediatric experts as well, perhaps, as out-of-County reviewers. The Health Department would offer our consultation services for that purpose. and I believe it might also be useful to ask the Department of Social and Health Services, Division of Health's Emergency Medical Services Program, and the Washington State Medical Society's EMS Committee for consultation assistance. If a helistop were being used for purposes outside those expressly permitted, I believe it would be appropriate to revoke the permit at the end of the six months.

I hope that these observations and recommendations will assist you in your permit procedure deliberations; please let me know if any comments need further clarification. My thanks to your staff, to a wide variety of health professionals involved in delivery care, to the staff and administration at COH, to the community residents of Laurelhurst, and to a number of other interested individuals who helped me to reach a better understanding of the emergency medical services delivered to infants and children in our community and the many factors which affect those services.

Sincerely,

Bud Nicola MD

Bud Nicola, M.D.
Director

BN:nr
Attachments

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ATTACHMENT 1.

ADMITTING FLOOR - FISCAL 1985

Infant Intensive Care Unit	93	34%
Neonatal Intensive Care Unit	6	2%
Pediatric Intensive Care Unit	39	14%
Advanced Care Unit	37	13%
Infant Floor	16	6%
Surgical Floor	6	2%
Medical Floor	10	4%
Adolescent Floor	5	2%
HMC	9	3%
UH L&D	13	5%
Return Flights	38	14%

63% WERE ADMITTED TO INTENSIVE/ADVANCED CARE

14% WERE ADMITTED TO FLOORS

14% OF ALL FLIGHTS WERE RETURN FLIGHTS

2% OF FLIGHTS WERE PATIENT TRANSFERS

1% OF PATIENTS EXPIRED PRIOR TO ARRIVAL

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ATTACHMENT 2

AGE DISTRIBUTION - FISCAL 1985

Newborn to 1 Month	110	39%
1 to 6 Months	58	21%
6 Months to 5 Years	67	24%
Greater Than 5 Years	44	16%

PATIENT ACUITY - JANUARY TO SEPTEMBER 1985

Intubated	76	27%
Central Venous Lines	24	9%
Arterial Lines	25	9%
Peripheral IV	197	71%
Chest Tubes	9	3%
Vasopressor Drip	8	3%
Prostiglandins E-1	8	3%
CPR	6	2%

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Lothar H. Pinkers, M.D.
GENERAL SURGERY
TRAUMA
1201 - 116TH NORTHEAST
BELLEVUE, WA 98004
206 - 454-5331

RECEIVED
OCT 28 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

24 October 1985

Dr. Bud Nicola
Director, Public Health, King County
7th Floor
400 Yesler Way
Seattle, Wa 98104

Dear Bud,

I'm enclosing copies of some correspondence dating 1983 dealing with pediatric transport costs and times. The last figures on the second page are difficult to read, but the actual amount is $1463. These are 1983 dollars and represent air to ground transportation and ground to hospital. The figures for the helicopter are grossly different and while as I understand it from Dr. Copass, they do not charge the full cost to the patient, somebody has to pay the $2 - $3000 actual costs for those transports. I'm also enclosing the guidelines for perinatal care Chapter 8. Lastly, the reference that I had made was the pamphlet published by the neonatologist at the University entitled, Immediate Care and Transport of the Sick Newborn by Bethany Farris,RN and William E Truog, MD.

As we discussed, the actual deliniation of medical necessity or medical resonableness for helicopter is very scarce. We have made a start of it, at a State level, and may succeed in this in the next six months or so. The next meeting of the WSMA committee on EMS Standards will be in December and dealing with this subject.

If the preponderance of evidence suggests to you that a helipad should be permitted at COH, May I make the following suggestion. Since data is so sparce and since the Children's personna is so aggressive and resistant to review, I really think we need more data. I suggest that individual patient records should be reviewed for medical necessity by an outside panel which includes some people well established in emergency medical services fields as well perhaps out of County reviewers. I would also suggest a conditional use permit, for six to nine months, that would enforce this kind of record keeping and permit a retrospective judgment about the medical necessity for helicopter transport as well as gathering data on frequency

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of use, etc. If these items all seem appropriate, then an additional conditional use permit would be issued. If the preponderance of data suggested inappropriate use, then denial of an extension might be a reasonable course of action in the future.

I do not envy you your King Solomon role in "dividing up the baby" but the results of your efforts will be quite helpful on a full State basis.

Sincerely yours,

L.H. Pinkers, M.D. FACS

LHP:ys
Enclosure

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CHILDREN'S ORTHOPEDIC HOSPITAL
AND MEDICAL CENTER
4800 Sand Point Way N.E.
Seattle, Wash. 98105 / Phone: 634-5000

UNIVERSITY OF WASHINGTON
School of Medicine
Department of Pediatrics / RD-20
Seattle, Wash. 98195 / Phone 543-3180

Oct. 14, 1983

To: Newborn Care Hotline Physicians

From: Craig Jackson

Re: INFANT TRANSPORTS: AIR VS. GROUND

While on call for the Hotline, I have been asked to arrange the transport of high risk infants to Seattle from hospitals that are outside the usual driving range of the COHMC-UW infant transport service, such as Bellingham (89 miles). I have found that the quickest way to move the patient to Seattle is for the referring hospital to assemble their own transport team (usually a nurse and respiratory therapist). Occasionally this is not possible and a ground or air transport team from Seattle is required. In the attached analysis, I have compared three modes of infant transport by compiling data from Sue Engman, Lori Kitchin, and some phone calls of my own. The total elapsed time required is given first. The second column is relevant when the patient requires stabilization by the Seattle team prior to leaving the referring hospital. The third column is relevant if the time "in transit" (outside either hospital) must be kept as brief as possible. Costs are included in the last column.

It is my hope that these data will help others who often wonder, "how long does it take?" and "how much does it cost?"

cc: Sue Engman, R.N.
Lori Kitchin, R.N.
Mike Copass, M.D.

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Time and Cost Analysis of Ground vs. Air Transports of Short Distances, eg. Bellingham

	Elapsed Time	Time for COH Transport to Arrive There	Time Patient is in Transit	Cost to Patient	
Ground Transport (Bellingham Team)					
Transfer patient to transport isolette	} 40'	0'		Hubbard Amb:	
Arrange for staff to go on transport				base chg	$100
Arrange ambulance				$3.30/mi x 180 mi	$594
Drive from Bellingham to COH (89 mi)	90'		– 90'	O_2 use	$ 15
	2°10'			15% discnt	($106
				St. Joe's:	
				$30/hr x4 h	$120
					$723
Ground Transport (COHMC Team)				Shepard:	
Assemble team and equipment	(40')	130'		base chg	$112
Drive to Bellingham	90'			team pickup	$ 33
In-hospital care	60'			$3.50/mi x 180 mi	$630
Drive to COHMC	90'		– 90'	$45/hr wait x 1 hr	$ 45
	4°40'			COHMC:	
				base chg	$233
					$1053
Airlift Northwest					
Assemble team & equipment @ Boeing	45'	85'		Air NW:	
Fly to Bellingham	25'			$3.63/mi x 180 mi	$653
Airport to hospital	15'			$169.60/mi x 3 hr	$509
In-hospital care	60'			Hubbard Amb:	
Hospital to airport	15'			base chg	$100
Flight to Boeing	25'		65'	$3.30/mi x 10 mi	$ 33
Boeing to COHMC	25'			$30/hr wait x 1 hr	$ 30
	3°30'			15% discnt	($ 24
				Shepard:	
				base chg	$112
				$5/mi x 10 mi	$ 50
					$1463

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Guidelines for Perinatal Care, American Academy of Pediatrics and American College of Obstetricians and Gynecologists, 1983.

Chapter 8

Interhospital Care of the Perinatal Patient

The transport of pregnant women, mothers, and neonates between hospitals is a recognized and essential component of modern perinatal care. As noted in Chapter 1, transportation is one of the systems approaches to obstetric and newborn care. There are three types of patient transport: maternal-fetal, neonatal, and return.

Maternal-fetal transports involve pregnant women who are to be admitted for delivery, unlike obstetric consultations, which involve ambulatory evaluation without admission. Neonatal transports usually employ a team to evaluate and stabilize the neonate's condition, as well as to provide care when indicated. Return transports take patients back to their original or local hospital for further care when the problems that required transport have been resolved. Return transports should be recognized as an important benefit to the individual patient and system.

The Committee on the Fetus and Newborn of the American Academy of Pediatrics has established a policy on Level II neonatal units, stating that "Level II neonatal units must have ongoing liaison with a Level III neonatal intensive care unit." That firm support for a network can logically be extended to all perinatal services. The referral of high-risk mothers, as well as sick newborns, to regional centers for care has a positive impact on local perinatal care and makes it necessary to set guidelines for regional perinatal networks. The rising costs of care, the ascending expectations of consumers, and the constraints on spending are relevant considerations in a movement toward firmer guidelines for interhospital care of the perinatal patient.

Interhospital transport and care of high-risk perinatal patients make it reasonable to expect that every patient in a region will be cared for in an appropriate manner. A successful program of interhospital care should incorporate the following components:

1. Risk identification, which includes active anticipation of needs that will require the movement of patients in order to provide optimum care
2. Recognition that patient care is a continuous process
3. Local physicians who know the resources that are available and how to gain access to them
4. Physicians at all levels who have the knowledge and skills needed to identify the high-risk patient, to evaluate the patient's condition, and to stabilize and prepare the patient for transfer
5. An organized, appropriate, and available interhospital transport service
6. A political and economic environment that provides support for the interhospital transport system
7. Data collection and analysis for purposes of monitoring and evaluating the program

From the moment a perinatal problem is recognized, to the point of its resolution and follow-up, there should be a continuum of care. Because disease processes do not become static while a patient is being transferred, management is necessary during transport. The objective of interhospital care thus becomes the provision of the maximum degree of care possible within the constraints imposed by a moving ambulance, its restricted space, and its lack of support facilities (e.g., laboratory, blood bank, and radiology services).

INDICATIONS FOR TRANSPORT

The circumstances in which patients are transported vary according to the distribution of care facilities in each region. The decision should be made by the initial physician and a consultant, both of whom should be well-informed of the resources at each center. In general, transport should be considered when the resources immediately available to the maternal, fetal, or neonatal patient are not adequate to deal with the patient's actual or predicted medical or surgical complications.

The following patient conditions require more specialized care and may require patient transfer. The specific values are to be considered guidelines only. They will vary with individual patient needs or institutional capabilities.

I. Maternal Conditions
   A. Obstetric complications
      1. Premature rupture of membranes (at less than 34 weeks' gestation or less than 2000 g expected birth weight)
      2. Premature labor (at less than 34 weeks' gestation or less than 2000 g expected birth weight)
      3. Any condition creating the probability of birth at less than 34 weeks' gestation or less than 2000 g expected birth weight
         a. Severe preeclampsia or other hypertensive complication
         b. Multiple gestation
         c. Intrauterine growth retardation
         d. Third trimester bleeding
         e. Rh isoimmunization
         f. Premature dilation of the cervix
   B. Medical complications
      1. Infections in which the degree or nature of maternal illness may result in premature birth
         a. Hepatitis
         b. Pyelonephritis
         c. Influenza
         d. Pneumonia
         e. Other febrile or hypermetabolic conditions
      2. Severe organic heart disease, functional class III or IV
      3. Poorly controlled diabetes mellitus
      4. Thyrotoxicosis
      5. Renal disease with deteriorating function or increased hypertension
      6. Drug overdose
      7. Miscellaneous severe illnesses
   C. Surgical complications
      1. Trauma requiring intensive care or surgical correction beyond the capabilities of local facilities or where the procedure may result in the onset of premature labor
      2. Acute abdominal emergencies at less than 34 weeks' gestation or with a fetus weighing less than 2000 g
      3. Thoracic emergencies requiring intensive care or surgical correction

II. Neonatal Conditions
   A. Gestation less than 34 weeks or weight less than 2000 g
   B. Neonatal sepsis or infection

C. Respiratory distress and metabolic acidosis persisting after 2 hours of age
D. Neonatal blood loss
E. Hypoglycemia
F. Hemolytic disease of the newborn
G. Neonates of mothers taking hazardous drugs
H. Neonates of diabetic mothers
I. Neonatal seizures
J. Sepsis or meningitis
K. Congenital malformations requiring surgical care or observation
L. Shock or asphyxia persisting beyond 2 hours
M. Neonatal cardiac disorders with persisting cyanosis
N. Progressive, increasing respiratory distress syndrome
O. Any neonatal condition requiring ventilatory support for more than 1 hour
P. Neonates needing more than routine observation or care

THE ORGANIZED APPROACH TO TRANSPORT

The provision of adequate life support during the transport of critically ill mothers and neonates requires considerable knowledge, skill, experience, and specialized equipment not readily available in all hospitals. Many perinatal centers that provide Level III services have developed transport systems for their service regions because only experience with a large number of patients can maintain the skills required for care during transport. The referring staff can help the mother and neonate most by calling for assistance as soon as the need for transport becomes apparent and by using the time before transport to stabilize the patients and prepare for transport. This practice ameliorates the immediate problems and reduces the time that the transport team must be in the referring hospital.

In certain circumstances, it is reasonable for the referring physician to manage the transfer personally. Maternal-fetal transports are frequently conducted in this fashion. The procedure whereby transport originates at the referring hospital, frequently termed one-way transport, functions effectively in some locations; however, two-way transport systems, which operate from a base at the center, are more common. Any transport procedure is acceptable if the guidelines given here are utilized and its goals and objectives are attained.

Informal, poorly organized interhospital care is hazardous. In order to avoid compromising the patient, to ensure a predictable response for transportation requests, and to provide the highest quality of care, the approach to transport must be logical and organized. When the number of patients who require interhospital care is small, efforts to monitor and maintain the skill levels of the team become even more important. It is advisable in such instances to consider the consolidation of care programs.

An interhospital care system has five identifiable components: (1) organization, (2) communications, (3) personnel, (4) equipment, and (5) transport vehicles.

Organization

Interhospital care should be available 24 hours/day, in a program with defined response time and minimum capabilities of personnel. The director should be a specialist in maternal-fetal medicine or neonatal medicine, or a board-certified pediatrician or obstetrician with a special interest in these subspecialty areas. The director's responsibilities are:

1. Quality control of patient care through regular case review
2. Personnel training and supervision
3. Development and utilization of patient care protocols
4. Development and utilization of record-keeping systems and subsequent collation and evaluation of data for analysis
5. Review of operational aspects, e.g., response times, effectiveness of communications, and equipment maintenance

Communications

The transfer of a patient from one hospital to another and from one care team to another requires a reliable communications system. It is essential that the referring physician provide the receiving physician with specific clinical information on the patient being referred. For a maternal patient, the following information should be included:

Reason for admission
Age
Date of last menstrual period
Estimated date of confinement
Gravida, para, and abortion
Relevant health problems
Perinatal history

Blood type
Results of amniocentesis
Reasons for transfer
Therapy administered, including drugs
Intake and output

For a neonatal patient, the following information should be included:

Gestational age and weight
Perinatal history
Temperature
Color
Hematocrit
Oxygen requirement and blood gas levels
Respiratory activity (particularly presence of apnea or need for assisted ventilation)
Blood glucose or Dextrostix
Pertinent radiologic findings
Reasons for transfer
Therapy administered, including drugs

This information allows the receiving facility to prepare for the patient's stabilization, transfer, and admission. Appendixes F and G contain sample record formats for information that can be provided conveniently by telephone. For large service areas, toll-free lines should be established by the referral center for referring physicians and families. In metropolitan areas or over short distances, direct hotlines may link referring obstetric units and nurseries to the center. These lines should be open 24 hours/day and should be well publicized throughout the service region. The liaison between the referring and the receiving centers should include telephone or radio communication during stabilization and transfer.

Appropriate historical data should accompany the patient. This information should include appropriate laboratory data and x-rays. In most neonatal transports, 10 ml clotted maternal blood to be used for cross-matching purposes should be obtained and should accompany the transport team. Cord blood and the placenta may be helpful in certain clinical situations, such as multiple gestation or intrauterine growth retardation.

Dispatching services should provide rapid coordination of vehicles and personnel, as well as communication links between referring and receiving hospitals and the transfer team. Referring physicians should be given an estimated arrival time to allow them to arrange for laboratory studies on which to base therapy in transport and ensure their availability at the time of transport. The receiving hospital should also be given an estimated arrival time to allow the staff to prepare for the patient's arrival. When flights must connect with ground ambulances, it is desirable for a single dispatching center to coordinate the movements of all vehicles. The complexity and sophistication of the dispatching operation vary considerably with the nature of the service.

Personnel

The interhospital care team members should have the collective expertise sufficient to provide the necessary supportive care for a wide variety of emergency conditions in high-risk mothers and neonates. Team members may be drawn from appropriately trained physicians, registered nurses, respiratory therapists, and emergency medical technicians. One member should usually be a physician or registered nurse. Neonatal nurse-clinicians are often specifically identified with this role. In addition to being highly knowledgeable in care and procedures for perinatal patients, transport personnel should be thoroughly familiar with transport equipment; any malfunction en route must be managed without the assistance of hospital maintenance staff.

Equipment

Powered equipment should have "stand alone" capability, i.e., it should be battery-operated. Batteries should have sufficient power to operate the equipment for the duration of the transport if no alternative power source is available. Furthermore, critical equipment should be adaptable to 12- and 24-volt DC and 110-volt AC power for use in a hospital or ambulance.

In addition to equipment for monitoring, resuscitation, and support of both mother and neonate, a transport kit containing essential drugs and special supplies should be continuously available during stabilization and transfer of the patient. A list of equipment and drugs that should be included in a transport kit is found in Appendix H.

Transport Vehicles

The main concern during transport is to maintain optimum care. The choice of a ground or air ambulance is based on distance from one hospital to another and facilities available to support the patient during

the transfer. Ground ambulances are most useful for distances up to 80–100 miles of flat terrain in low traffic density areas. Beyond 100 miles, aircraft may be faster or less expensive, even though ground ambulances provide more direct transfer between regional centers. The pressurization of aircraft is an important consideration during management, since adequate oxygen levels of the mother and fetus or newborn must be ensured.

Helicopters are used in some areas to transport patients up to a few hundred miles or to reach patients in difficult terrain or high traffic density areas. Helicopters are not pressurized, are generally noisier and more confined, and have less range than fixed wing aircraft, however. These limitations should be considered whenever a helicopter is used.

TRANSPORT PROCEDURE

Evaluation

The patient's condition should be carefully evaluated at the referring hospital, both in regard to the primary diagnosis and the presence of complicating conditions. Steps should be taken to correct these conditions to the extent possible prior to transfer.

Stabilization

Transport of the maternal patient may require hemodynamic stabilization; the initiation of tocolytic agents, anticonvulsants, or antihypertension agents; or demonstrated arrest or diminution of active labor. Patients with active bleeding, rapidly progressive preeclampsia, and rapidly progressive labor should not be transported until appropriate medical management has been initiated and, in the opinion of the medical team, the possibility of acute crisis or delivery in transport is significantly diminished. In some situations, maternal transport may not be advisable; it may be preferable to coordinate neonate transport in such a fashion that the transport team arrives at the referring hospital immediately prior to or shortly after the birth. Transport teams may, by prior agreement between the referring physician and the dispatch center, participate in the initial stabilization at birth. In the fully stabilized neonate, temperature, blood gas levels, blood pressure, tissue perfusion, and blood glucose level are normal. Complete stabilization of a newborn is not always possible, but transport of an extremely unstable newborn is contraindicated.

Although there have been no controlled trials, experience indicates that stabilization prior to departure is probably the most critical aspect of interhospital care because it minimizes subsequent deterioration in an environment that may not permit detection or treatment of problems.

Medicolegal Concerns

There are many legal considerations in perinatal transport. Many details are not well defined, but all involved parties, including the referring hospital and personnel, the receiving hospital and personnel, and commercial ambulance and aircraft charter corporations, assume responsibilities. As spokesperson for the transport team, the physician should thoroughly explain to the patient or the parents of the newborn the patient's condition and reasons for transfer. Informed consent for transfer, admission, and care should be obtained. The newborn should be clearly identified.

Perinatal transport teams are involved in very special transport situations, and prior attention to potential legal problems is advised. In most situations, the institution that employs the team is responsible for its actions, and professional duties are performed under the direction and authority of a physician-director at the receiving hospital. Many hospitals consider neonates admitted to their institution while en route and under the care of the transport team. Physician-directors and hospital administrators should recognize the potential administrative or legal problems that may arise in certain situations, for example, when transport teams cross one or more state lines during a transport.

The referring physician preferably should remain at the hospital until the neonatal transport team arrives and should be there while the team is present in order to ensure complete communication. The patient must pass from the official care of the referring physician to that of the transport team at some point; the departure of the transport team from the physical premises of the referring hospital might be considered the official point of transfer of responsibility. Individual hospitals and regions should investigate the use of transfer agreements, which might include granting of emergency privileges to members of transport teams.

The referral center should receive a report on the patient's condition prior to departure. In the case of newborn transport, the mother and father should be offered the opportunity to see and touch the neonate before the transfer, even if the neonate is in a transport incubator or on a respirator. In addition, an instant picture of the

neonate may be taken for the family prior to transport. This has proved particularly helpful when parents and their neonates are to be separated for a long period or when the mother is recovering from a cesarean delivery and may not remember the time spent with the neonate prior to transport. The family of the patient should also receive written information about the receiving hospital, names of staff members, visiting hours, telephone numbers, and places to stay in the vicinity of the hospital. Brochures about the hospital can be helpful. A desire to breast-feed should be reinforced, and the mother should be taught how to express milk until nipple feeding becomes possible. Early attention to family needs and concerns at this critical time can reduce anxiety and ease the transition to a new medical center.

Records are essential for the continuing care of the patient and for the evaluation of the referral transport process. Records should include the following information:

- Patient's name
- Referring hospital
- Receiving hospital
- Referring physician
- Attendants' names and professional status
- Mode of transport
- Time data, including arrival at the referring hospital, departure, ground or air ambulance time, and arrival at the receiving hospital
- Patient's age, weight, gestational age, and sex
- Diagnosis and condition
- Procedures performed
- Medication administered
- Periodic vital signs
- Special comments

PATIENT CARE IN TRANSIT

A well-stabilized patient requires little or no intervention during transport. The patient should be under continuous observation, however. The key factors to be monitored in the maternal patient include blood pressure, uterine contractions, cervical dilation, fetal heart rate ultrasonography, deep tendon reflexes, infusion rate of intravenous fluids, and the administration of tocolytic agents or anticonvulsants. For the

newborn, temperature, respiration, heart rate, blood pressure, color, activity, and oxygen concentration should be monitored frequently by noninvasive means. A neutral thermal environment should be maintained. It may be necessary to monitor other parameters as well, such as the blood glucose level. Monitoring of blood gases during transport is feasible with the availability of portable transcutaneous monitoring.

The patient, attending personnel, and all equipment should be safely secured in the transport vehicle. Although it may be necessary to respond rapidly to an emergency, high-speed ground travel greatly increases the risk of accidents. In the majority of cases, there is little need for excessive speed if the patient is stabilized.

RECEIVING AND COMPLETING TRANSFER

The receiving staff should be prepared to deal with any unresolved problems or emergencies. The patient's history and clinical status, as well as all the plans for current management, should be communicated directly by the transport personnel. Therapies provided during transport should not be changed unless the transport team is consulted.

Family members are extremely anxious when a patient is transferred. If they have not been able to accompany or follow the patient, they should be called as soon as possible after the transfer and given a report on the patient's condition. The referring physician and the nursing staff at the referring hospital should also be informed about the patient's arrival at the receiving hospital and the patient's progress on a continuing basis thereafter.

The transfer is not complete until equipment on the transport vehicle has been restocked and prepared for the next call. Reusable equipment that has come into contact with the patient should be appropriately sterilized or decontaminated.

OUTREACH EDUCATION AND THE REGIONAL TRANSPORT SYSTEM

Since interhospital care of the high-risk perinatal patient requires the cooperation and coordination of many skilled persons, outreach education efforts should include discussions of the regional transport system. Outreach education can be used to reinforce that cooperation and coordination.

Outreach education related to transport should focus on the following objectives:

1. Informing perinatal care providers in the region of the specialized resources available to them through the perinatal network
2. Assisting primary physicians in developing their abilities to anticipate complications, to identify high-risk perinatal patients, and to stabilize these patients before transport
3. Facilitating effective quality assurance through the continuing education of perinatal care providers
4. Establishing 24-hour consultation and referral sources
5. Promoting a regionalized care system designed to ensure high-quality care to all patients in a cost-efficient fashion

PLANNING AND EVALUATION

The planning of the perinatal transport system requires the participation of both those who will use the service and those who will provide it. The creation of regional advisory councils with representatives from the various perinatal programs facilitates planning and evaluation, as such a group can identify and verify the particular region's needs for interhospital perinatal transport and the specific characteristics of the service that should be designed in response to those needs. The characteristics of the successful system, as described earlier, can be used as a guide for program development and subsequent evaluation. Other criteria should be considered in planning and evaluating the transport system:

1. Availability: Does the system provide all services that may be needed by the perinatal patient?
2. Accessibility: Is the capacity to "connect" the patient quickly and appropriately with the services needed ensured? Do those who will need the services know where to go to get them?
3. Responsiveness: Is there a mutual commitment from referring care providers and specialized care providers to honor and accommodate each other's special needs as they may arise?
4. Effectiveness: Are perinatal patients being given the appropriate care in the appropriate setting? Do care users, physicians and patients, and care providers regard the perinatal transport service as useful and effective?

As basic as these questions may appear, their answers are often assumed without testing. The purpose of the evaluation of the system is to collect the evidence that will confirm that the system provides high-quality care to high-risk mothers and neonates.

RESOURCES AND RECOMMENDED READING

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Segal S (ed): Manual for the Transport of High-Risk Newborn Infants: Principles, policies, equipment, techniques. Vancouver, Canadian Pediatric Society, 1972

Sinclair JC, Torrance GW, Boyle MH, et al: Evaluation of neonatal-intensive-care programs. N Engl J Med 305(9):489–494, 1981

FILE COPY

Children's Hospital & Medical Center Helistop

Final Environmental Impact Statement

Volume I

Department of Construction and Land Use

APPELLANT
DEPARTMENT ✓
APPLICANT
FILE # 3020
Final
3

April 1991

The intent and purpose of this final environmental impact statement is to satisfy the procedural requirements of the State Environmental Policy Act (RCW 43.21c) and City Ordinance 114057 as amended. This document is not an authorization for an action, nor does it constitute a decision or a recommendation for an action: in its final form it will accompany recommended actions and will be considered in making the final decision on the proposal.

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Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Norman B. Rice, Mayor

April 25, 1991

Final Environmental Impact Statement
Master Use Permit No. 8405870
4800 Sand Point Way N.E.
Children's Hospital and Medical Center Helistop

This document has been prepared in compliance with the State Environmental Policy Act (RCW 43.21C) and the Seattle SEPA Ordinance, Chapter 25.05, SMC. Copies of this document are available for public review at the Master Use Information and Notification Center, 408 Seattle Municipal Building and the following branches of the Seattle Public Library:

Downtown Branch - 1000 4th Avenue, Seattle 98104
Governmental Research Assistance Library - 3rd Floor, Seattle Municipal Building, Seattle 98104
North East Branch - 6801 35th Avenue N.E., Seattle 98115
University Branch - 5009 Roosevelt Way N.E., Seattle 98105

Copies of the document are also available at the University of Washington Suzzallo and Health Sciences Libraries.

A limited number of copies for public distribution are available at the Land Use Information Center, 684-8467.

This Final Environmental Impact Statement (EIS) includes a new alternative to the original proposal which was developed in response to comments. Under this alternative, the majority of the helicopter flights with patients destined for Children's Hospital would land at the University of Washington's Intramural Field or Harborview Medical Center. A minority of the flights, with the most critical patients destined for Children's Hospital, would land on the Children's Hospital Laurelhurst campus.

The EIS does not include a transcript of the public hearing on the Draft EIS. After review of the comments submitted on the Draft EIS, DCLU determined the issues were sufficiently covered by the responses to the written comments.

The Department of Construction and Land Use will issue a recommendation on whether to grant, condition, or deny the project described above no sooner than seven days after the date of this document. A public hearing for citizens to comment on the proposal and recommendation will be scheduled at that time.

An equal employment opportunity affirmative action employer
Seattle Department of Construction and Land Use 400 Municipal Building Seattle Washington 98104

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The final decision will be made by the Seattle City Council. Notice of the decision will be published either on a Monday or a Thursday in the Daily Journal of Commerce. Notice of the decision will also appear in the Department's twice weekly Land Use Information Service bulletin and will be mailed to those who request a copy of the decision.

Sincerely,

Rebecca R. Herzfeld

REBECCA HERZFELD
Director
Land Use Division

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FINAL
ENVIRONMENTAL IMPACT STATEMENT
FOR CONSTRUCTION
OF A HELISTOP
AT CHILDREN'S HOSPITAL AND MEDICAL CENTER

VOLUME I

City of Seattle
Department of Construction and Land Use

Prepared in Compliance with

The State Environmental Policy Act of 1984
Chapter 43.21C, Revised Code of Washington

SEPA Rules, Effective April 4, 1984
Chapter 197-11, Washington Administrative Code

Seattle SEPA Ordinance,
Ordinance 114057, effective August 14, 1988, as amended
by Ordinance 114090, effective August 16, 1988.
Chapter 25.05 Seattle Municipal Code

Date of Issue: April 25, 1991

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FACT SHEET

Title and Description	The Proposed Action is for approval of a Council Conditional Use Permit to allow development of a helistop at the Kitchen Garden site outside the Emergency Room entrance of Children's Hospital and Medical Center (Children's). Implementation of the Proposed Action would allow critically ill and injured children to be brought by helicopter to Children's. Alternatives to the Proposed Action include: the use of an existing helistop at University of Washington's Intramural Field, sharing the University of Washington Medical Center's rooftop helistop, both of which involve ground transport of patients to Children's; an alternative involving limited landings at Children's Hospital, which would not require construction of the Proposed Action or alternatives; and landing of helicopters at Boeing Field and/or Harborview with ground transport to Children's and only a few helicopter flights (with destabilizing patients) landing on the grassy area outside Children's Emergency Room entrance. A new alternative (designated the Preferred Alternative) is presented in this Final EIS. Under the Preferred Alternative the majority of Children's-destined patients would land at the Intramural Field (or Harborview) with the most critical patients landing at the Kitchen Garden helistop at Children's. A No Action Alternative is characterized by all flights landing at Boeing Field or Harborview, with ground transport of patients to Children's.
Action Sponsor	Children's Hospital and Medi[illegible]l Center 4800 Sand Point Way N.E. Seattle, Washington 98105
Approximate Date of Implementation	Construction would be completed within approximately two months of approval.
Lead Agency	City of Seattle Department of Construction and Land Use

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FACT SHEET (Continued)

Responsible Official and Contact Person for Questions, Comments and Information	John T. Doan City of Seattle Department of Construction and Land Use Room 408, Municipal Building Seattle, Washington 98104 Phone: (206) 684-8875
Licenses, Permits, and Approvals	City of Seattle Council Conditional Use Permit City of Seattle Building, Electrical Permits City of Seattle, Grading Permit Federal Aviation Administration Approval
Authors and Principal Contributors to EIS	This Environmental Impact Statement (EIS) was prepared under the direction of the City of Seattle, Department of Construction and Land Use. Research and analysis were provided by the following: Shapiro and Associates, Inc., Environmental Consultants Towne, Richards and Chaudiere, Noise Analysis. Airlift Northwest, Project Description; medical data and operations data. Children's Hospital and Medical Center, Project Description; medical data. Dr. Bud Nicola, Seattle-King County Department of Public Health, medical need issues.
Location of Background Data	Land Use Review Section Department of Construction and Land Use Room 408, Municipal Building Seattle, Washington 98104 Phone: (206) 684-8875 Refer to File No. 8405870 Shapiro and Associates, Inc. Suite 1400, The Smith Tower 506 Second Avenue Seattle, Washington 98104 Phone: (206) 624-9190

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FACT SHEET (Continued)

Issue Date of Final EIS	April 25, 1991
Public Agency Review and Response	Information on the availability of this Final EIS will appear in the Seattle Daily Journal of Commerce and will be included in the Department of Construction and Land Use (DCLU) Information Bulletin; notice also will be posted within the Department of Construction and Land Use. The Department invited suggestions on items to be covered in the scope of this document. These letters are on file in the Department and are available for review there.
Approximate Date of Final Action	Forty five days from date of issuance of the Final EIS.
Action by Lead Agency	Recommendation to the Hearing Examiner to grant, conditionally grant, or deny the project.
Type of Agency Decisions	Council Conditional Use to grant, conditionally grant, or deny permits for the proposed project; grading permit; FAA approval.
Cost to Public	Copies of this Final EIS have been printed and made available for reference at the Seattle Public Library, Downtown, Northeast and University Branches, University of Washington Library, and the Governmental Research Assistance Library. Until the supply runs out, some free copies of this Final EIS are available at the Department of Construction and Land Use. Additional copies are available from the Land Use Review Section, Department of Construction and Land Use, at the cost of production ($.25 first page, $.10 each additional page).

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- Washington Office of Archaeology and Historic Research
- Metro
- Seattle Department of Community Development
- Seattle Engineering Department
- Seattle Fire Department
- Seattle Police Department
- Seattle-King County Department of Public Health
- Snohomish County Fire District Number 4

Community and Professional Organizations

- Central Seattle Community Council Federation
- Laurelhurst Community Club (Peter Eglick)
- Laurelhurst Condominium Association (Joel Watkins)
- Laurelhurst School PTA Board
- Montlake Community Club
- Ravenna-Bryant Community Association
- Seattle Area Hospital Council
- Seattle Women's Clinic

Individuals

- Anderson, Liz
- Balick, Bruce
- Baxter, Bart
- Bell, M.D., M.P.H., Thomas A.
- Belvin, David S.
- Birchfield, M.D., R.O.
- Brotherton, Maureen
- Chrisman, Marv
- Dam, Ruth
- Engelberg, Ruth
- Feldmann, Albert A.
- Francis, Ph.D., Anita
- Gosney, Jeanne E.
- Graber, Marcia
- Hauberg, Ann Homer

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. Jensen, Liesa M.
. Johnson, Jane L. (September 30, 1986)
. Johnson, Jane L. (October 10, 1986)
. Klug, Robert
. Kranz, M.D., Jay M.
. Kresge, Marjorie D.
. Kurtz, Mildred
. Margon, Carolyn
. McCormick, Dorothy
. Mendenhall, John
. Merrell, Richard
. Newman, Helen
. Nichols, Danilos B.
. Pai, S. Kenneth
. Pinkers, M.D., Lothar H.
. Pinkney, Helen R.
. Plunkett, Mark D. and Janette K.
. Roberts, A. Wesley
. Schneider, Jerry
. Schwabacher, Emilie
. Scott, Joy
. Scott, Robert Haney
. Smith, Barbara H.
. Spangler, Maryann E.
. Stimson, M.D., John B.
. Strandjord, M.D., Thomas P.
. Talley, Lisa
. Trudgian, Mrs. William L.
. Vanecer, Mary L.
. Wilkinson, Carol
. Wright, Fred M., Mr. and Mrs.

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ELEMENTS OF THE ENVIRONMENT

Following is a list of Elements of the Environment as set forth in Chapter 25.05.444 of the Seattle Municipal Code. Items marked "Discussed" are discussed in this document, on pages specified in the preceding Table of Contents. Items marked "Not Discussed" have impacts deemed to be non-significant, for reasons briefly stated thereafter.

A. Natural Environment

1. Earth

a. Geology	Not discussed; no unusual conditions exist on this urban site.
b. Soils	Not discussed; no unusual conditions exist on this urban site.
c. Topography	Not discussed; no unusual conditions exist on this urban site.
d. Unique Physical Features	Not discussed; no unique physical features exist on this urban site.
e. Erosion/Enlargement of Land Area (Accretion)	Not discussed; construction-related erosion would not be significant.

2. Air

a. Air Quality	Not discussed; helicopter emissions would not be significant.
b. Odor	Not discussed; helicopter emissions not expected to generate significant odor.
c. Climate	Not discussed; construction of helistop and operation of helicopter would not result in significant impact. Weather influencing aircraft operations discussed.

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3.	WATER	
	a. Surface Water Movement/ Quantity/Quality	Not discussed; no surface water on site.
	b. Runoff/Absorption	Not discussed; amount of impervious surfaces would not be significant.
	c. Floods	Not discussed; not applicable to this urban site.
	d. Groundwater Movement/ Quantity/Quality	Not discussed; not applicable to this urban site.
	e. Public Water Supplies	Not discussed; water consumption of proposal expected to have no impact on overall City of Seattle supply.
4.	Plants and Animals	
	a. Habitat for and Numbers or Diversity of Species of Plants, Fish or other Wildlife	Not discussed; currently only usual urban birds or small mammals can reasonably be expected on site.
	b. Unique Species	Not discussed; none exist on site.
	c. Fish or Wildlife Migration Routes	Not discussed; not applicable to site.
5.	Energy and Natural Resources	
	a. Amount Required/Rate of Use/Efficiency	Not discussed; insignificant amounts of energy would be consumed.
	b. Source/Availability	Not discussed; energy requirements would have insignificant effect on overall supplies.
	c. Nonrenewable Resources	Not discussed; the only use of resources would be for normal building materials, and energy requirements.
	d. Conservation and Renewable Resources	Not discussed; no significant impacts on conservation and renewable resources.

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	e. Scenic Resources	Not discussed; no significant impacts on scenic resources.
B.	Built Environment	
	1. Environmental Health	
	a. Noise	Discussed
	b. Risk of Explosion	Discussed; under Traffic Hazards (Helicopter Safety).
	c. Releases or Potential Releases to the Environment Affecting Public Health, such as Toxic or Hazardous Materials	Not discussed; proposal involves no significant hazard in this area.
	2. Land and Shoreline Use	
	a. Relationship to Existing Land Use Plans and to Estimated Population	Discussed; Conditional Use Criteria and Relevant Major Institutions Master Plan policies are examined.
	b. Housing	Not formally discussed; noise impact and aircraft safety impacts on housing are discussed.
	c. Light and Glare	Not discussed; increase in light and glare determined to be non-significant. Project-related lighting is discussed under description of Proposed Action.
	d. Aesthetics	Not discussed; proposal involves no significant changes to aesthetic character.
	e. Recreation	Not discussed; no significant effect on recreation resources would be generated.
	f. Historic and Cultural Preservation	Not discussed; no affected historic or cultural resources have been identified.
	g. Agricultural Crops	Not discussed; small therapeutic garden on-site would be relocated.

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3. Transportation	
a. Transportation Systems	Not formally discussed; the Proposed Action by its nature would alter the transport of critically ill and injured patients destined for Children's; discussed under Introduction, Description and Traffic Hazards (Helicopter Safety).
b. Vehicular Traffic	Not discussed; proposal not expecte to have significant impact on vehicular traffic.
c. Waterborne, Rail and Air Traffic	Not discussed; proposal would generate relatively insignificant amount of air traffic, which is quantified in description of Proposed Action. Aircraft safety is discussed.
d. Parking	Not discussed; not applicable to site or Proposed Action.
e. Movement/Circulation of People or Goods	Not discussed; proposal would not have significant impact on movement/circulation of people or goods.
f. Traffic Hazards	Discussed
4. Public Services and Utilities	
a. Fire	Not discussed; existing and future services not significantly affected. Fire suppression equipment is described.
b. Police	Not discussed; existing and future services not significantly affected.
c. Schools	Not formally discussed; school enrollment not significantly affected. Noise impact and aircraft safety impacts on nearby schools are discussed.
d. Parks or Other Recreational Facilities	Not discussed; not applicable to site.

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e.	Maintenance	Not discussed; owner would contribute taxes to pay for maintenance of public systems.
f.	Communications	Not discussed; Proposed Action not expected to disrupt communications.
g.	Water/Stormwater	Not discussed; project would be served by existing system with minimal upgrade, if any.
h.	Sewer/Solid Waste	Not discussed; project would not require sanitary sewer or generate solid waste.
i.	Other Governmental Services or Utilities	Not discussed; provision of energy discussed in energy section; demand for government services would be small.

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U.S. Department of Housing and Urban Development
U.S. Department of Commerce
U.S. Department of Transportation, Federal Aviation Administration
U.S. Army, MAST

State of Washington

Office of the Governor
Washington State Department of Ecology
Washington State Department of Health
Washington State Office of Archaeology and Historic Preservation
Washington State Department of Transportation
Washington State Department of Community Development
Washington State Department of Trade and Economic Development

Regional Agencies

Puget Sound Council of Governments
Puget Sound Air Pollution Control Agency
Metro

City of Seattle/King County

Office of the Mayor
Seattle-King County Department of Public Health
Seattle City Council
Seattle Law Department
Seattle Engineering Department
Seattle Parks Department
Seattle Department of Community Development
City of Seattle Office of Long Range Planning
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Utilities/Services

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Libraries

King County Library System
SEPA Center
GRA Library
Branch Library

Newspapers

Daily Journal of Commerce
Seattle Times
Seattle Post-Intelligencer

General Interest Groups and Individuals

League of Women Voters
Allied Arts of Seattle
University of Washington, Public Archaeology
University of Washington, University of Washington Medical Center
King County Medical Society
King County Emergency Medical Society
King County Emergency Medical Services Coordinating Council
Harborview Medical Center
Washington State Medical Association
Washington State Hospital Association
Seattle Area Hospital Council
Dr. Lothar Pinkers
Airlift Northwest
Citizens Concerned About Helicopter Transport
Laurelhurst Community Club
View Ridge Community Club
Hawthorne Hills Community Club
Belvedere Terrace Community Council
Windermere Corporation
Montlake Community Club
City-University Citizens Advisory Committee (CUCAC)
University District Community Council
Ravenna-Bryant Community Association
Central Seattle Community Council Federation

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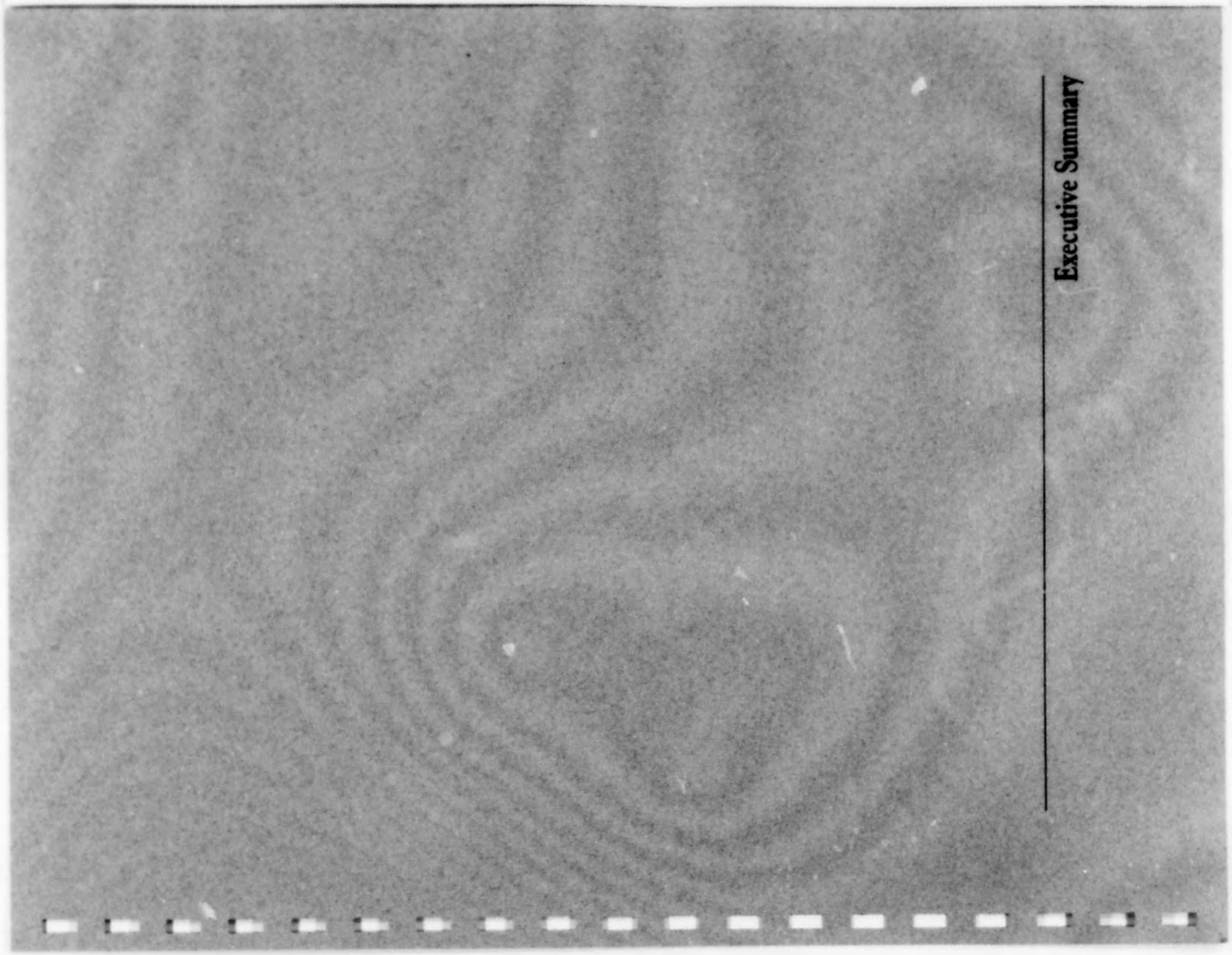

EXECUTIVE SUMMARY

INTRODUCTION

This Environmental Impact Statement (EIS) examines the University District and Laurelhurst neighborhoods of northeast Seattle and the potential impacts associated with construction and operation of the proposed Children's Hospital and Medical Center Helistop.

The Proposed Action is the approval of a Council Conditional Use Permit to allow development of the helistop located on the campus of the Children's Hospital and Medical Center (Children's) at the northeast corner of Sand Point Way N.E. and N.E. 47th Street. The Children's campus is located in the Laurelhurst neighborhood, less than one mile east of the University of Washington. The Children's campus is situated on a west-facing hillside and consists of one large hospital building and a detached parking garage along the north edge of the campus boundary. The sponsor of the project is the Children's Hospital and Medical Center.

The sponsor's objective in developing the proposal is to create a landing pad for helicopters transporting critically ill and injured children and adolescents to Children's. The specific objectives of the Proposed Action are to minimize patient transport time, and to minimize the number of potentially destabilizing patient transfers from the place of patient pickup to the Emergency Room entrance at Children's.

In conducting a review of the regulatory authority of federal, state and local agencies, it was determined that there is no single entity that has comprehensive authority over all elements of the proposal. The Federal Aviation Administration regulates pilots, aircraft, flight paths and provides guidelines for the construction of helistops. The Washington State Department of Health (DSHS) previously regulated air ambulance services. The DSHS' Certificate of Need Program does not apply to helistops. Through the Council Conditional Use Permit process, the City of Seattle regulates the siting of helistops on the campuses of major institutions, such as Children's.

Since the 1970s, critically ill and injured patients have been transported by helicopter to Children's. During the early 1980s Children's became a member of a tertiary care (advanced medical) consortium that established Airlift Northwest, an air ambulance service based in Seattle. Initially providing only fixed-wing transport, Airlift Northwest began to offer helicopter transport services in April 1985.

The number of Airlift Northwest helicopter transports of patients destined for Children's has grown to an average of approximately 17 per month. The patients who are transported by helicopter originate primarily from throughout western Washington. A small percentage of patients are flown from outside the area to Boeing Field via fixed wing and then are flown by helicopter to Children's.

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The most critical patients (an average of 3-4 patients per month) currently are being brought by the Airlift Northwest helicopter to a landing area immediately outside the Emergency Room entrance on Children's campus. The majority of the remaining patients land at the Intramural Field on the University of Washington campus and then are transported by ambulance to Children's. A few additional patients are landed at either Harborview's helistop or at Boeing Field and then are transported to Children's by ambulance.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

The Proposed Action would relocate portions of the existing "Kitchen Garden" to a new site(s) on campus and would remove assorted shrubbery prior to grading and construction of the helistop. The proposed helistop pad would be located approximately 142 feet north of the Emergency Room entrance, somewhat southwest of the parking garage and in the central portion of Children's campus. The 40-foot-square helistop would be marked by a large red "H" and would be surrounded by a fence 30 inches tall. The helistop would be identified from the air by the red "H" and at night by ground lights that would be turned on for emergency landings.

The future number and types of patient transport missions are subject to a degree of uncertainty. Transport mission data indicate that the initial growth has subsided, such that within some fluctuations there is currently an average of 17 transport missions to Children's per month. Projections for 1995 indicate that on the average 15-21 patients per month will warrant transport by helicopter, although advances in medical technology, catastrophic events or other factors could influence this use forecast. The numbers of patients warranting transport may be more or less than the numbers used in this document to characterize the proposal and alternatives, and to calculate the expected impacts.

The majority of patient transports would be performed by Airlift Northwest, (with one helicoptor based at Harborview and one based at Boeing Field), although flights could occur by other air ambulance services, U.S. Army MAST helicopters, or private helicopters. Most transport missions for Children's-destined patients would involve three flight segments: departure (of the helicopter and transport team) from the helicopter base to the location of the patient; transport of the patient to Children's helistop; and return to base for dispatch to the next mission. This description differs from that contained in the Draft EIS, which indicated a total of four flight segments would be involved. It is now assumed that most transport teams would be based either at Harborview or Boeing Field, which are the bases of Airlift Northwest's helicopters; thus, it ususally would not be necessary to pickup the medical crew at Children's or the Intramural Field and one flight segment would be eliminated. However, certain cases still could require pickup of a specialized medical crews at Children's or the Intramural Field prior to departure and flight to the location of the patient. In those cases the patient transport mission would involve a total of four flight segments. It also should be noted that under inclement weather conditions requiring pilots to fly under instrument flight rules,

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helicopters would land at Boeing Field rather than at Children's, the Intramural Field or Harborview, because these locations cannot support radar-controlled landings. Table S-1 identifies flight segments associated with the Proposed Action and alternatives.

Nearly all of the flights to Children's would approach from the southwest, along Sand Point Way N.E., before turning to the south over the parking garage and making final approach to the helistop from the northwest. In rare conditions of strong winds from the northwest quadrant, the helicopter would approach and land from the northeast (final flight paths would be approved by the FAA).

The time from helicopter landing to the patient entering the Emergency Room (ER) would be approximately four minutes. Once the patient is inside the Emergency Room, essential medical information is passed from the aircraft medical team to the ER staff, and medical equipment is retrieved, the pilot would restart the engines and depart. The helicopter would follow approximately the same flight path as the approach, but with greater altitude.

There are five alternatives to the Proposed Action discussed in the EIS. Flight segments associated with each transport mission under the Proposed Action and alternatives are identified in Table S-1. The University of Washington Intramural Field Helistop Alternative would consist of using the helistop or an improved helistop at the northwest corner of the University's Intramural Activities (IMA) Sportsfield #2. The helistop would receive an identical number of Children's-destined missions and flights as the Proposed Action. As with the Proposed Action, up to three flight segments could be associated with each typical patient transport mission (see Table S-1). Patients landing at the Intramural Field Helistop would be transferred to a ground ambulance for the trip to Children's Emergency Room. Total patient transfer and transport time for the one mile trip from the helicopter to the Children's Emergency Room would be a minimum of seven minutes, an average of ten minutes, and a maximum of 20 minutes.

The University of Washington Medical Center Helistop Alternative is not under consideration by the University at this time, although the alternative is carried forth in this EIS. This alternative would consist of using the existing helistop on the roof of the Medical Center's East Wing, as well as approval from the University of Washington to use the helistop for the landing of Children's-destined patients. As with the Intramural Field Helistop Alternative, this alternative would receive a similar number of Children's-bound patients as the Proposed Action, in addition to an undetermined number of University of Washington-destined transports. As with the Proposed Action, up to three flight segments could be associated with each patient transport mission (see Table S-1). As with the Intramural Field Helistop Alternative, this alternative would require the transfer of Children's-destined patients to a ground ambulance for the transport to Children's. Total transfer and transport time from the University of Washington Medical Center Helistop to Children's Emergency Room is estimated at a minimum of 11.5 minutes, an average of 16 minutes and a maximum of 40 minutes. The project sponsor currently is not pursuing this alternative.

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The third alternative examined in this Final EIS is the Limited Landings Alternative under which the majority of Children's-destined patients would be flown to Children's with the remainder flown to Boeing Field and/or Harborview Hospital, stabilized, and transferred to a ground ambulance for transport to Children's. As with the Proposed Action, up to three flight segments could be associated with each patient transport mission (see Table S-1). Minimum transport time for patients landing at Harborview is 15.5 minutes, witn an average transport time of 22 minutes and maximum time of 47 minutes. For Boeing Field, minimum, average and maximum transport times are 19.5, 26, and 57 minutes, respectively.

A fourth alternative examined in the Final EIS was not specifically analyzed in the Draft EIS. It was developed in response to comments received on the Draft EIS and is considered the Preferred Alternative. This alternative is characterized by the most critical patients (an average of approximately 3-5 per month in 1995) landing at a secured, paved helistop constructed at the Kitchen Garden Site on the Children's campus. The remaining patients would land primarily at the Intramural Field Helistop, if allowed, or at Harborview with the patients being transported from the landing site to Children's by ground ambulance. As with the Proposed Action, up to three flight segments could be associated with each patient transport mission (see Table S-1). This alternative, which was suggested by residents of the Laurelhurst neighborhood, provides a balance between noise impacts and helicopter accident risk, without inordinately sacrificing proper patient care. In the event that landings are not permitted at the Intramural Field, Children's Medical Director, Dr. Neff, has suggested that proper patient care would be sacrificed unless the majority of patients were allowed to land at Children's Kitchen Garden Helistop. This Preferred Alternative is supported by Children's Hospital and Medical Center.

The final alternative is the No Action Alternative under which all Children's-destined patients would be flown to Boeing Field and/or Harborview Hospital, stabilized there, and transferred to a ground ambulance for transport to Children's. As with the Proposed Action, up to three flight segments could be associated with each patient transport mission (see Table S-1). No landings would be allowed on the Children's campus.

The potential for positive patient outcomes is expected to be most favorable under the Proposed Action and Preferred Alternative, with the patients exposed to greater risk under the Intramural Field Helistop Alternative, the University of Washington Medical Center Helistop Alternative, the Limited Landings Alternative and the No Action Alternative.

ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

Through the mandatory scoping process, two elements of the environment were identified as warranting analysis in the EIS. These elements are Noise and Vibration, and Helicopter Safety. "Cumulative Impacts" was added as a scoped element because of the possibility that the Proposed Action could serve as a precedent for the development of other helistops and/or air ambulance services in Seattle.

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TABLE S-1
FLIGHT SEGMENTS ASSOCIATED WITH EACH TRANSPORT MISSION

ACTION OR ALTERNATIVE	FLIGHT SEGMENTS			
PROPOSED ACTION	Base to Patient (1) Patient to Children's (2) Children's to Base			
UNIVERSITY OF WASHINGTON INTRAMURAL FIELD HELISTOP ALTERNATIVE	Base to Patient (1) Patient to Intramural Field (2) (Ground transport of patient to Children's) Intramural Field to Base			
UNIVERSITY OF WASHINGTON MEDICAL CENTER HELISTOP ALTERNATIVE	Base to Patient (1) Patient to Medical Center (2) (Ground transport of patient to Children's) Medical Center to Base			
LIMITED LANDINGS ALTERNATIVE	Base to Patient (1) Patient to Base (2) (Ground tranport of patient to Children's)	and	Base to Patient (1) Patient to Children's (2) Children's to Base (Note: Only destabilizing patients would be transported using this flight sequence)	
PREFERRED ALTERNATIVE	Base to Patient (1) Patient to Intramural Field (2) (Ground transport of patient to Children's) Intramural Field to Base	and/ or	Base to Patient (1) Patient to Base (2) (Ground transport of patient to Children's)	and Base to Patient (1) Patient to Children's (2) Children's to Base (Note: Only the most critical patients would be transported using this flight sequence)
NO ACTION ALTERNATIVE	Base to Patient (1) Patient to Base (2) (Ground transport to patient to Children's)			

NOTES:
(1) Because most transport teams would be based at Harborview or Boeing Field, it usually would not be necessary to pick up a specialized medical crew at Children's or the Intramural Field. However, certain cases could require such pickup prior to departure to the location of the patient, in which case the patient transport mission would involve an additional flight segment. Base is either Harborview or Boeing Field, since Airlift Northwest has one helicopter at each location.
(2) During inclement weather conditions requiring pilots to fly under instrument flight rules, helicopters would land at Boeing Field rather than at Harborview, Children's or the Intramural Field, because these locations cannot support radar-controlled landings.

The worst case impact of monthly helicopter noise exposures would increase the existing, 24-hour ambient levels of 55-58 dBA by 3-5 dBA at residences closest to the helistop. An evaluation of noise and vibration impacts expected to be caused by the Proposed Action indicates that the helicopter noise would be noticeable, but it would not exceed the Environmental Protection Agency's recommended impact criteria. During sleeping periods, helicopter flights could cause varying degrees of disturbance to 15-30% of the people sleeping at the closest, line-of-sight residences. Structural vibrations due to helicopter flights are not expected to be significant, although some area residents have reported helicopter-induced vibrations. These vibrations could cause movement of small household objects, such as dishes, in the residences nearest the flight path. The Intramural Field Helistop Alternative would not be expected to create substantial noise impacts when the primary approach and departure paths are used, although some impact could occur to the occupants of the University of Washington dormitories and classrooms when a secondary path over the University of Washington is used. The University of Washington Medical Center Helistop Alternative would result in noise impacts for residents south of the Montlake Cut; however, due to a slightly greater distance of the receptors from the flight path, these impacts would be slightly less than those impacts expected for residents in the vicinity of the Children's Helistop. Under the Limited Landings and Preferred Alternatives, helicopter flights and resultant noise levels are expected to remain at current levels, resulting in occasional impacts. Under the No Action Alternative, there would be no noise impacts from helicopter operations at Children's nor its vicinity; however, there would be increased noise levels at Boeing Field and Harborview. Any alternatives to the Proposed Action could result in ambulance sirens being used between the landing area and Children's. These sirens are approximately as loud as the helicopter.

Helicopter safety impacts associated with the Proposed Action would be comparable to those associated with the Intramural Field Helistop Alternative and the University of Washington Medical Center Helistop Alternative. The differences among the three would be the probable location of potential helicopter accidents. Based on available data from the National Transportation Safety Board, the Association of Air Medical Services and the publisher of The Journal of Air Medical Transport (formerly Hospital Aviation magazine), the worst case expected statistical frequency of a helicopter accident for one of the proposed helistops would be one in every 14,184 transports, which, assuming an average of 20 patient transports a month, translates to a worst case of an accident occurring approximately once every 59.1 years. Such an accident could occur anywhere along the flight path. Since the number of helicopter flights in the area would be less under the No Action Alternatives than any of the other alternatives, the resulting helicopter safety impacts on the University/Laurelhurst area would be expected to be less as well, with the potential for impacts displaced to the other approach and departure locations, i.e., Boeing Field and Harborview Hospital. Under the Preferred Alternative safety impacts would occur with 3-5 landings per month at the Children's campus, with the greater risk to the areas around Harborview and the Intramural Field. The approach and departure to a paved, second helistop at the Kitchen Garden Site is safer

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than the grassy landing area outside the Children's Emergency Room entrance.

In addition to helicopter safety, there are safety issues associated with the natural gas meter house located near the site of the Proposed Action and ground ambulance transport. In the event of a helicopter accident on the Children's site that breached the natural gas supply line, the natural gas would flare until shut off at the main valve across from Children's on Sand Point Way N.E. Under the Intramural Field Helistop Alternative, the University of Washington Medical Center Helistop Alternative, and the Limited Landings and No Action Alternatives, patients destined for Children's would require ground transport from the Intramural Field, the University of Washington Medical Center, Boeing Field, and Harborview Hospital, respectively, creating the possibility of traffic accidents that would not exist under the Proposed Action.

The potential for cumulative impacts associated with the action alternatives centers around the likelihood of helistops proliferating at additional Seattle-area hospitals. The City of Seattle has regulations that may discourage the improper use and proliferation of helicopter services in Seattle. The land use criteria used by the City of Seattle to evaluate helistop applications can limit the use of helistops to those facilities that can demonstrate that the helistop is needed to save lives. Although most hospitals can and do save lives, there are only a few tertiary care centers with some critically ill or injured patients who are dependent upon air ambulance transport. (Only a few Seattle area hospitals that serve as tertiary care centers, offering specialized services to the region, are routinely involved in treating life-threatening emergencies that are referred from other hospitals and physicians in the region.) Therefore, the few hospitals in the Seattle area that can demonstrate the need or unique medical services and capabilities would be the only likely candidates for helistops. Of those tertiary care centers, Harborview already has a helistop; Providence Medical Center uses the helistop at Harborview; and the University of Washington Medical Center is continuing to use their helistop at the Intramural Field.

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Chapter 1
Introduction

I. INTRODUCTION

The purpose of tnis Final EIS is to provide decision-makers, regulatory agencies, and interested citizens with the following: a review of pertinent background information; a description of the construction and operation of a proposed helistop that would allow critically ill and injured patients to be brought by helicopter directly to Children's Hospital and Medical Center (Children's); a description of alternative means of transporting critically ill and injured patients by helicopter to Children's; and an analysis of the potential impacts and mitigation associated with the Proposed Action and alternatives.

This document is organized into four primary chapters: Background Information; Description of the Proposed Action and Alternatives; Affected Environment, Impacts, and Mitigating Measures; and responses to comments on the Draft EIS.

The chapter on background information is intended to provide the reader with a context for the consideration of the Proposed Action. The chapter profiles the provision of general health care and describes the medical services offered by Children's; describes the conditions of patients who have been and would be transported to Children's by helicopter; characterizes the transport of critically ill and injured patients--highlighting the role of helicopter transport; and reviews the authority of various public and private agencies with respect to the helistop construction approval and the provision of emergency helicopter transport services.

The chapter on the Proposed Action and Alternatives identifies the sponsor's objectives, describes the process used to identify potential helistop sites, explains the derivation of the number of anticipated flights, and for each alternative characterizes flight operations and flight paths, and describes the transfer of the patient from the helicopter to the Emergency Room entrance at Children's.

The chapter on the Affected Environment, Impacts, and Mitigating Measures provides a detailed analysis of the elements of the environment that were determined to be significant during the scoping process. These elements are noise and vibration, emergency transport safety, and cumulative impact.

Although the issue of medical need is not within the scope of this Final EIS, it is a requirement of the City Council's Conditional Use Permit and, therefore, is related to this proposal. At the request of the Seattle Department of Construction and Land Use, a report on medical need issues was prepared by Dr. Nicola, while Director of the Seattle-King County Health Department. Dr. Nicola's report is appended to this document (Appendix A) for reference purposes only.

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Chapter II

Background Information

II. BACKGROUND INFORMATION

HEALTH CARE SERVICES

Overview

The provision of medical services can be considered from the perspective of the age of the patient: neonatal (less than one month old), children, adults, and the elderly. Each of these stages in life development requires attention to specific physiological and psychological conditions. Neonatology is the specialized branch of medicine that deals with children less than one month old, and pediatrics is the specialized branch of medicine that deals with the development, care and diseases of children. Both neonatal and pediatric medical services are offered by Children's, whose mission is to provide treatment to patients from birth to 21 years old.

The provision of medical services also can be considered at the level of care required to adequately treat specific medical conditions. The three levels of care include: primary, which is offered by all hospitals; secondary, which provides more advanced care capabilities; and tertiary, which generally is provided by medical specialists. Tertiary care is the most advanced of the medical care services.

The evolution of medicine has been characterized by increasing both the sophistication of medical professionals and the capabilities of support equipment. The complexities of the medical system are reflected in the emergence of numerous specialty disciplines within the medical profession. In simple terms, patients with complex illnesses or injuries are now commonly referred to specialists who have the particular expertise and equipment for their effective treatment. Because of the relative infrequency of need of their expertise (on a per capita basis), medical specialists are generally affiliated with regional medical centers located in populated areas, with patients coming from the surrounding urban center, as well as from rural and remote areas (Nicola, 1986). This aspect of the provision of health care is referred to informally as the regional medical referral system.

Infant and Pediatric Care in the Northwest

Tertiary care is defined, by Children's and the University of Washington Medical Center, as those services necessary to deal with illnesses characterized by complex patho-physiologic processes. Tertiary care requires continuous management from the presentation of an illness to its resolution. Complex illnesses may present numerous conditions, such as severe congenital anomalies, multiple organ system trauma, prematurity in newborns, poisonings, and neuropsychiatric disorders (Neff, 1985). The most effective management of these illnesses requires integrated diagnostic and therapeutic services provided by multiple specialists.

In the Pacific Northwest, many clinics, hospitals, and medical centers offer pediatric services. However, the only pediatric tertiary care centers in the state are: Children's Hospital and Medical Center and Harborview

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Medical Center in Seattle; Mary Bridge Children's Hospital in Tacoma; and Sacred Heart Medical Center and Deaconess Medical Center in Spokane. In Idaho, the only pediatric tertiary care center is St. Lukes Regional Medical Center in Boise; in Oregon, Emmanuel Medical Center in Portland.

Of these pediatric tertiary care centers, Children's is the largest medical center and is equipped and staffed to offer full service, tertiary care for children. Children's is an integral component of the informal regional health care network. For example, Children's has five of the nine Board-certified pediatric surgeons in Washington, Alaska, Montana and Idaho. These surgeons offer a variety of capabilities, including bone marrow and kidney surgery. Much of the pediatric surgery in the four-state region is currently performed at Children's.

Illustrative of the regional service that Children's offers is the distribution of the geographic origin of its patients. In 1986, Children's admitted 7,945 inpatients and 68,002 outpatients. As Table 1 indicates, 52% of these patients were from King County; 23% from Snohomish, Pierce, and Kitsap Counties; 12% from other counties west of the crest of the Cascades; 9% from east of the Cascades; 2% from Alaska; 1% from Montana; and the remainder from other states and countries. The distribution of patient origins in Children's 1986 fiscal year is displayed graphically in Figure 1.

Children's is an example of pediatric concentration in the area of tertiary care services, and it is recognized as the regional, tertiary referral center for children in the Pacific Northwest. Based on data provided by Children's, a summary of 1984-1985 cases indicates that, of the 621 Children's patients affiliated with the Blue Cross system, 64% were categorized as unique cases (defined as patients diagnosed with illness or medical need common to no other or one other patient affiliated with the Blue Cross system). This information conveys the uniqueness of the types of cases treated by Children's.

Key sections of the Children's Hospital and Medical Center are their Infant Intensive Care Unit (IICU) and their Pediatric Intensive Care Unit (PICU). The types of patients admitted to Children's 19-bed IICU include: premature newborns with respiratory distress; asphyxiated newborns; newborns with major congenital anomalies; newborns requiring major surgeries (for correction of diaphragmatic hernias, gastroschisis, onphalocele, etc.); and infants with sepsis or meningitis.

Neonatal emergencies in the Puget Sound area are generally admitted to Children's or to the Neonatal Intensive Care Unit (NICU) at the University of Washington Medical Center, which has 32 beds, to the 25-bed NICU unit located at Tacoma General Hospital, or an NICU at Madigan Army Medical Center (Nicola, 1987). Swedish Hospital has 24 NICU beds, according to a 1988 newspaper article (Rhodes, 1988). The only other neonatal intensive care beds in the state are located in Spokane. (It should be noted that the NICUs and IICUs are similar medical units; their distinction is that NICUs are physically associated with obstetric units.) There are an average of 450 occupied pediatric beds (excluding NICU beds) in the state of Washington; one-third of these are located at Children's.

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Table 1

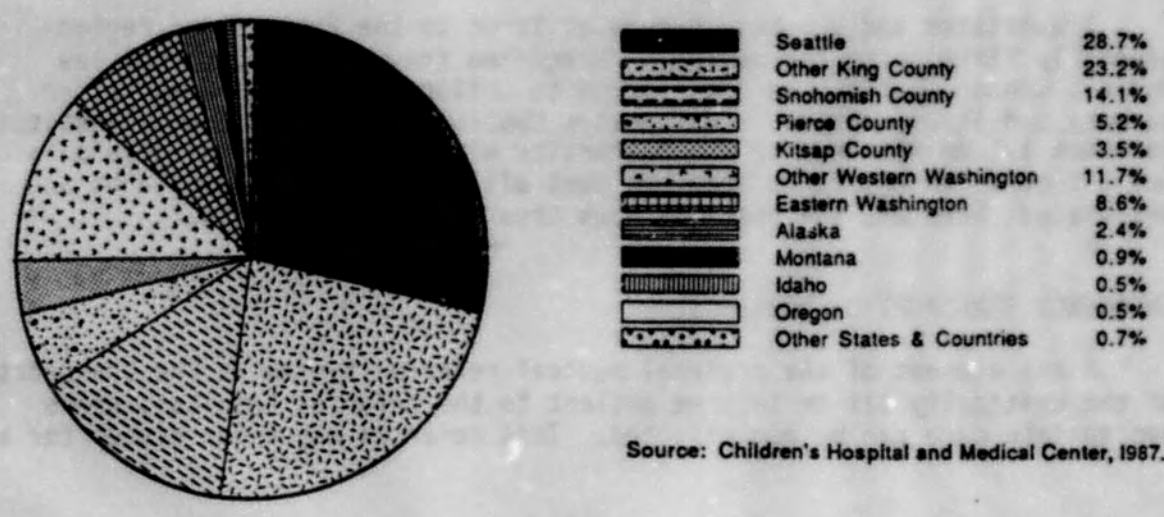
CHILDREN'S OUTPATIENT AND INPATIENT ORIGIN IN FISCAL YEAR 1986
(by area)

Service Area/ County	Day Surgery and Outpatient (1986)	Inpatients (1986)	Percentage of Inpatients
Primary Service Area			
Seattle	30,254	2,280	28.7%
King County	15,588	1,845	23.2%
(Subtotal)	45,842	4,125	51.9%
Secondary Service Area			
Snohomish County	8,543	1,119	14.1%
Pierce County	2,025	416	5.2%
Kitsap County	1,572	275	3.5%
(Subtotal)	12,140	1,810	22.8%
Tertiary Service Area (all Washington counties west of Cascades other than King, Pierce, Kitsap, or Snohomish)	5,581	931	11.7%
All Other Washington Counties (east of Cascades)	3,055	681	8.6%
Alaska	607	190	2.4%
Montana	163	74	0.9%
Idaho	123	39	0.5%
Oregon	194	40	0.5%
(Subtotal AMIO)	1,087	343	4.3%
Other States and Countries	317	55	0.7%
GRAND TOTAL	68,022	7,945	100.0%

Source: Children's Hospital and Medical Center, 1987.

Figure 1

Origin of Children's Inpatients - Fiscal Year 1986



Source: Children's Hospital and Medical Center, 1987.

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The University of Washington Medical Center high-risk obstetrical program uses the University of Washington Medical Center's NICU beds so that most low birthweight babies born at the University of Washington Medical Center do not have to be transported between hospitals. Even with an effective maternal transport program, there are mothers who deliver low birthweight babies in community hospitals; many of these babies need to be stabilized and transported to a tertiary care hospital. There is a system, administered by the Division of Neonatal and Respiratory Diseases of the Department of Pediatrics of the University of Washington School of Medicine that determines the most appropriate medical institution (University Medical Center or Children's) to which low birthweight babies born in outlying hospitals should be transported. The factors that go into the decision include patient diagnosis, bed availability and the availability of appropriate staff to care for the patient. Because it is preferrable to transport the mother prior to the delivery of known high risk infants, University of Washington Medical Center's NICU cares primarily for infants delivered at University of Washington Medical Center. Although the majority of infant transports are to Children's, infant transports are made to both hospitals.

Pediatric medical emergencies in the Puget Sound region that require hospitalization are generally admitted to the Pediatric Intensive Care Unit (PICU) of Children's, which has 17 beds, or to the six-bed PICU at Mary Bridge Children's Hospital in Tacoma. There also are six to ten PICU beds located at both Deaconess Medical Center and Sacred Heart Medical Center in Spokane. Children's, through its formal affiliation agreement, is the pediatric teaching hospital for the University of Washington's School of Medicine, which does not have a PICU.

The types of patients admitted to Children's PICU include: near drownings; myocarditis; smoke inhalation; meningitis; and shock, precipitated by any cause.

Tacoma General and Mary Bridge have a wide range of pediatric specialties represented on their staff, and handle most neonatal and pediatric emergencies, generally referring only those patients requiring sophisticated pediatric surgery, such as cardiac surgery, to Children's or University of Washington Medical Center (Nicola, 1987).

Traumatized and severely burned children in the Puget Sound region generally first go to the region's recognized trauma center, Harborview Medical Center, but may be transferred to Children's for follow-up after surgery and stabilization. (Harborview Medical Center is a County institution that is administered by the University of Washington.) Children's is not a trauma center, as it does not meet all criteria necessary to be so designated; however, the hospital does treat some trauma cases.

EMERGENCY TRANSPORT OF PATIENTS

A key element of the regional medical referral system is the transport of the critically ill or injured patient to the referral hospital, where appropriate care can be administered. This referral may occur either for a

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patient in a clinic or hospital who needs the services offered by a more sophisticated and/or specialized medical facility, which is termed an interhospital transport, or for a patient in the "field" (home, work, play or the scene of an accident), which is termed a pre-hospital transport.

The Emergency Medical Service (EMS) system refers to the extension of medical services to critically ill and injured patients and, if necessary, the transport of these patients to appropriate medical facilities. Children's defines critically ill or injured patients as those patients who might die or become seriously damaged unless appropriate treatment is received immediately (Neff, 1986).

The State of Washington's Department of Health coordinates EMS planning for the entire state. The EMS transport system in the central Puget Sound region is comprised of Medic One units, Fire Department aid units, private ground ambulance, military and private helicopter services, and the specific emergency medical services offered by area hospitals. In King County, the King County EMS Division (of the Seattle-King County Department of Public Health) coordinates the EMS system.

Transporting critically ill and injured children to Children's has long been a service offered by the hospital. Sending a specially trained transport team to referral hospitals has ensured specialized medical care at the referring hospital and en route, and it increases the potential for better outcomes for the patients brought to Children's. The Children's/ University of Washington Medical Center pediatric ground transport team has been in operation about ten years and currently brings more than 300 transports per year by ambulance to the intensive care units and emergency rooms at both hospitals.

Under emergency conditions, the interhospital transport of patients may occur by ambulance, by helicopter, by fixed wing aircraft, or by a combination of these modes. In November 1986, the American Academy of Pediatrics' Committee on Hospital Care published general guidelines on the transport of pediatric patients. These guidelines indicate that the factors of greatest importance in selecting mode of transport are: (1) the optimal interhospital transport time indicated by the nature and severity of the patient's clinical condition; (2) carrier and personnel availability; (3) the region's geography; (4) weather and traffic conditions; and (5) cost. If a patient's condition is unstable (deteriorating because of irregular heart beat, respiration or other vital function), even a minimal shortening of transport time to the receiving hospital by one mode of transportation rather than another may be lifesaving (American Academy of Pediatrics, Committee on Hospital Care, 1986).

The Washington State Medical Association's EMS Standards Committee has developed guidelines to assist in the selection of appropriate modes of transport. (See discussion under Washington State Medical Association, below.) Because a patient's presenting conditions may be complex and the attending medical personnel are best able to observe and synthesize the medical data with which they are presented, it is the opinion of the Seattle-King County Department of Public Health that any recommendations regarding the selection of appropriate transportation mode be used as guidelines and not as standards (Nicola, 1986).

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Interhospital Transport

The Washington State Medical Association's EMS Committee has recommended general criteria for interhospital air ambulance use, including the requirement for critical care en route that otherwise would not be available; the time and critical nature of the injury or illness; and the need to minimize time out of the hospital; and alternate travel modes being unavailable or undesirable. In addition, the conditions of patients warranting air ambulance interhospital transport have been identified by the committee. These recommendations have been attached to Dr. Bud Nicola's updated report, which is included in Appendix A to this Final EIS.

Pre-Hospital Transport

Pre-Hospital transport refers to the transport of injured or ill patients from non-hospital settings to hospitals or other medical centers. King County coordinates the delivery of certain emergency medical services throughout the County. The King County EMS system is a layered system response program: local Fire Departments' Aid Service, staffed by an Emergency Medical Technician (EMT), responds to all calls. EMTs have a minimum of 81 hours of training, while paramedics, who are trained to perform emergency work in the field, have at least 1,500 hours of training. Thus, paramedic units are dispatched to the more severely injured or ill patients in the field, including patients facing life-threatening medical situations. In King County, seven area hospitals provide medical control to paramedics (please refer to discussion below regarding medical control):

Auburn General	Auburn
Evergreen General	Kirkland
Harborview Medical Center	Seattle
Highline Community	Burien
Overlake	Bellevue
Northwest	Seattle - Shoreline
Valley Medical Center	Renton

Volunteer medic units also are located in Carnation, Duvall, Enumclaw, Issaquah and on Vashon Island (Call, 1986b).

Paramedics operate as an extension of the physician services offered at the base hospital. Unless otherwise stipulated by the patient or patient's physician, paramedics will recommend transport of those patients requiring advanced treatment to the closest facility that provides the appropriate level of care. To that end, the King County Medical Society, the King County Emergency Medical Society, the King County Emergency Medical Services Coordinating Council and EMS Division of the Seattle-King County Department of Public Health have developed a classification of hospitals according to the services that they provide. The King County EMS Division has prepared a Patient Distribution Guide to assist field and base hospital medical staff in determining the appropriate medical center for treating the patient. The King County Medical Society has assumed responsibility for periodically updating the Guide.

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The Patient Distribution Guide classifies Children's as a Group A, Group B, and Group E hospital. The Group A hospitals, of which there are 25, are characterized by the following services (Seattle-King County Department of Public Health, Emergency Medical Services Division, 1978):

- 24-hour Emergency Room Physician, trained in resuscitative measures
- Intensive Care Unit, staffed and operated at all times
- Coronary Care Unit, staffed and operated at all times
- Laboratory and X-ray unit services available at all times
- Major sub-specialty services available (on call) within one hour of notification

The 15 Group B hospitals satisfy the criteria for categorization as Group A and also have a neurosurgeon "actively involved with the hospital and [who] will examine and operate on patients in that hospital if it becomes necessary" (King County Department of Public Health, Emergency Medical Services Division, 1978).

Only Harborview Medical Center is categorized as either a Group C (operating room staffed 24 hours a day) or Group D (intensive burn patient care) hospital.

Group E hospitals are subgrouped into specialized services, including alcohol, psychiatric, neonatal, cardiac bypass and hyperbaric treatment. Only two hospitals in King County - Children's and University - offer neonatal services, while Children's is one of six designated hospitals that can perform cardiac bypass surgery. Although not a formal subgroup, pediatric emergencies served by the EMS system involving critically ill or injured patients are generally referred to Children's (Call, 1986b). In 1985, there were a total of 141 patients who were served by the County's EMS system and subsequently transported to Children's--two of these by helicopter (Call, 1986b). In 1986, a total of 183 patients were transported to Children's through referral by King County Medic Units, including 13 transports by helicopter (Call, 1987). Additional EMS ground transports were made by the Seattle Fire Department, which provides comparable services in incorporated Seattle.

The County's EMS Division has established guidelines for paramedics in South King County in order to assist in selecting air or ground transport for critically ill patients (Call, 1986a). The underlying principle in the consideration of pre-hospital air transports is that the helicopter provides a rapid method for getting the appropriate medical help to the patient, not that the patient gets to the hospital quickly (Call, 1986a). The following guidelines are used by EMS paramedics in South King County in order to assess the need for helicopter transport (Call, 1986a):

"1. Must be an extremely ill patient [such] that the arrival at a hospital capable of providing specialized care will immediately save their life or reverse their medical deterioration. Examples of presenting medical problems that would most likely indicate use of a helicopter in order to expedite transport of a patient are as follows:

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a. Gunshot wound with vitals of blood pressure (BP) less than 80 and heart rate (HR) over 120 with possible respiratory problems

b. Aneurysm (aortic) with BP less than 100 and dropping, or other internal bleeding signs requiring immediate intervention

c. Major medical problems in a pediatric patient where time is critical for survival of the mother and/or baby

d. Multiple injuries that indicate bleeding of such a nature that the patient is in danger of bleeding out within minutes

e. Obstetrical problems that require immediate medical intervention and that are not generally handled at local hospitals

f. Major head injuries

"2. Time must be the major consideration when using a helicopter. Overall, the time discussed means the helicopter must be able to reach the designated receiving hospital in less time than the paramedic unit could reach the hospital if they scooped and ran. The time on scene is always a major concern and under no circumstances should there be a delay at the scene waiting for a ride from the helicopter. If a patient is committed to a ground vehicle, under most circumstances transportation should continue in the vehicle to avoid unnecessary delays or interruption in treatment by the ground vehicle.

"3. Generally, a helicopter should only be used in areas in eastern and southeastern King County when the patient must be transported for specialized care to a distant hospital such as:

Harborview Medical Center	- Major trauma, head injuries, burns
Children's Hospital and Medical Center	- Pediatric medical emergencies that would be delayed by ground transportation
University of Washington Medical Center	- Obstetrical emergencies

"4. Permission to use any helicopter by a paramedic must be obtained from the medic unit's base hospital physician.

"5. Helicopters should only be requested when there are qualified emergency medical personnel on scene who can evaluate the patient's needs. Paramedics should be responsible for requesting helicopter transport as they are usually the most qualified medical personnel. While in route to an accident, it may be appropriate for paramedics to consult with EMTs on scene regarding the patient's condition.

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"6. Under no circumstances should paramedics request dispatch centers to get comparative estimated time of arrival from MAST and Airlift Northwest. The paramedics are expected to make a decision regarding which helicopter transport service can best serve the needs of the patient, and to request it. If the first service of choice is not available, then the second helicopter service should be requested."

THE MEDICAL RATIONALE FOR THE USE OF HELICOPTERS IN THE TRANSPORT OF PATIENTS IN WESTERN WASHINGTON

During the Korean conflict, it was recognized that the helicopter's ability to land nearly anywhere and then to transport the patient rapidly to Mobile Army Surgical Hospitals (MASH) greatly increased the ability of wounded soldiers to receive medical treatment. During the Vietnam War, the airborne MASH teams provided rescue, medical stabilization, and evacuation to approximately one million military and civilian personnel. Postwar studies on the application of military helicopters in a civilian context provided the basis for the development of medevac operations that were inaugurated by the Maryland State Police in 1969. The first civilian helicopter ambulance service in the United States was initiated in 1972 at Saint Anthony's Hospital in Denver. By 1988, this concept had expanded to include 135 hospital-based helicopter ambulance services with more than 30 other programs not operated by hospitals (Collett, 1988a).

Although many outlying hospitals are equipped and staffed to respond to emergency medical conditions, there are situations when the severity of the conditions warrant treatment at a tertiary care center. For examples, pediatric surgeons and pediatric plastic surgeons are most capable of performing surgery on severed arteries, dialysis may be required to treat severe toxic shock, and other conditions are best served by the recognized medical specialists that work in the infant and pediatric intensive care units.

It is important to emphasize that not all patients in these medical situations warrant helicopter transport to the Emergency Room entrance; that is a decision properly made by the referring physician in consultation with the advanced care unit or by the transport physician (Nicola, 1986).

The role of helicopter transport is generally described in a statement from the Puget Sound Health Systems Agency:

"Helicopter transport is appropriate when it operates within a regional emergency medical service (EMS) system. It is most valuable in linking rural and other isolated populations and medical facilities to tertiary trauma centers in Seattle.

"Medical conditions which require helicopter transport are those in which more rapid transport and the availability of highly specialized care en route can affect outcomes when compared to alternative methods of transportation. Helicopter transport is not inherently better than ground transport in ensuring survival and recovery.

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"Emergency services have developed as part of a regional system in Washington, and helicopter transport is integral to the provision of these services" (Puget Sound Health Systems Agency, 1985).

Patients who are transported to Children's by helicopter are in critical condition. Critically ill and injured patients who are brought to Children's include but are not limited to near-drownings, premature births, severe injuries, overwhelming infections, and ingestion of toxic substances. Appendix D (formerly Table 2 in the Draft EIS) presents data on the medical conditions of patients who were transported directly to Children's by Airlift Northwest helicopter from the time their helicopter transport service was initiated through March 1989.

According to Children's, two main objectives in a helicopter transport system are to reduce the time before appropriate advance treatment can begin and to decrease patient manipulation.

Critical Time Saved

Surgical emergencies, as well as overwhe'ming infections, near drownings, and trauma, are some of the conditions that require immediate, advanced medical intervention. Since delay in the initiation of advanced treatment may affect patient outcome, transport time has a direct bearing on the patient's prognosis. For the most critical patients, every moment lost increases mortality (Neff, 1986). Table 2 compares the time hypothetically involved in transporting and transferring an infant and equipment from Enumclaw to Children's Emergency Room via helicopter and by ground ambulance. For illustrative purposes, it is assumed Airlift's helicopter based at Harborview is used; Airlift also has a helicopter based at Boeing Field. The table indicates that a helicopter transport could save as much as one hour and twenty-six minutes, compared to a transport by ground ambulance for the sample case shown.

Decreased Patient Manipulation

Whenever a patient is loaded or unloaded during an emergency transport, there are risks associated with patient handling. Two major risks are the possibility of critical life support tubes and intravenous lines becoming dislodged, and the consequences of a lowered body temperature (hypothermia), especially for patients in an isolette.

Isolettes are self-contained units that incorporate advanced life support systems. The replacement of dislodged breathing tubes and intravenous lines is more difficult for infants and children than for adults because of the size of the tubes and lines, and the size of the child's esophogus and veins (Kilian, 1987b). If an isolette that keeps a transported infant warm is opened to replace a tube that has been jostled, there is a risk that the child will become hypothermic if the outside temperature is below the ideal temperature of approximately 91°F (Neff, 1986). The hypothermic infant will try to breathe faster due to increased oxygen needs, which only results in more heat loss. An accumulation of acid in the blood

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is also associated with hypothermia, which can contribute to the rupture of a premature infant's fragile blood vessels in the brain, which, in turn, can cause brain damage or brain death.

Discussion of Medical Need

The City of Seattle's Department of Construction and Land Use requested that Dr. Nicola, during his tenure as the Director of the Seattle-King County Department of Public Health, provide expertise in the assessment of medical need for the proposed Children's helistop. Dr. Nicola prepared recommendations based on a review of the literature, discussions with transport physicians, a review of helicopter flight logs, public hearing testimony and discussions with knowledgeable individuals both in and out of the region (Nicola, 1986). Dr. Nicola's original findings were appended to the Draft EIS. Based on comments received on Dr. Nicola's original report, DCLU requested that Dr. Nicola update his examination of medical need. This updated report is appended to this Final EIS.

In Dr. Nicola's review of the literature examining the situations warranting helicopter transport, there are several cited studies that relate severity of illness to the need for transport. The majority of the documentation addresses the effectiveness of helicopters in transporting trauma patients. However, there are several studies that address children transported by helicopter.

One study revealed that, over a six and one-half year period, 81% of the patients transported by helicopter to a regional children's hospital were admitted to the ICU or were taken to surgery (overall mortality of 9%) (Ann. Emerg. Med., Feb. 1984; 13[2]:108-11). A second study demonstrated that nearly half of the 267 children arriving directly from the injury scene were delivered by helicopter (overall mortality of 6%) (J. Pediatric Surg., Feb. 1985; 20[1]:8-13).

A third study cited in Dr. Nicola's report evaluated air transport of 569 patients in a rural EMS system and, using un form guidelines, determined that helicopter transport was essential to 16.5%, helpful to 10.9%, and not a factor to the preservation of life in 54.7% of the cases. "In spite of rapid evaluation and maximal intervention, . . . 17.9% of the patients died. The group for which air transport was judged 'not a factor' (54.7%) consisted of patients whose injuries would not have proven fatal had their transportation to the tertiary care center been delayed. Retrospective analysis of the data available to the tertiary care center at the time of the decision to transfer the patients by air revealed that it was not possible to differentiate those patients who did not benefit from the service from those for whom the service was judged essential or helpful (Am. Surg. 1984 Apr.; 3-1348:183-8)" (Nicola, 1987).

A fourth study examined helicopter transports in Michigan and, using a Trauma Intervention Scoring System, determined that nearly two-thirds of the patient transports were thought to be medically necessary both at the time of the transport as well as in retrospect; the remaining third were almost

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Table 2

COMPARISON OF ELAPSED TIME FOR TRANSPORT OF A PATIENT
BY GROUND AMBULANCE AND BY HELICOPTER FROM ENUMCLAW TO CHILDREN'S

Mode	Transport Step	Time (in Minutes)
GROUND	. Dispatching	3
	. Private ambulance to Children's for pickup of equipment and pediatric transport team	16
	. Travel from Children's to Enumclaw Emergency Room (ER), including transfer of equipment from ambulance to Enumclaw ER	65
	. Stabilization of patient (see Note [3])	20
	. Patient loading	3
	. Return trip from Enumclaw to Children's	65
	. Patient unload and transport to Children's ER	1
	TOTAL TRANSPORT TIME:	173
	TOTAL TRANSFERS: 2 (2 hours and 53 minutes)	
HELICOPTER	. Dispatching; aircraft preparation (see Note [2])	10
	. Air travel from Harborview to Enumclaw ER, including transfer of equipment to Enumclaw ER (see Note [4])	24
	. Stabilization of patient (see Note [3])	20
	. Patient loading	3
	. Air travel from Enumclaw to Children's Helistop (see Note [5])	26
	. Patient unload and transport to Children's ER (see Note [6])	4
	TOTAL TRANSPORT TIME:	87
	TOTAL TRANSFERS: 3 (1 hour and 27 minutes)	

Transporting an infant via helicopter from Enumclaw to Children's would save approximately one hour and 26 minutes compared to ground transport.

Notes:

[1] Table updated in 1991.

[2] It is assumed that Airlift's helicopter based at Harborview is used; Airlift also has a helicopter based at Boeing Field. Dispatching time would vary between 5 and 10 minutes, assuming the medical transport team is in-house (at Harborview). In the event that a specialized transport team configuration is required and/or an isolette is needed, then the dispatching time could be as long as 27 minutes.

[3] Stabilization varies between 20 and 90 minutes, depending on the patient's condition and whether specialized care not available at the referring facility must be administered by the transport team.

[4] Travel from Harborview to Enumclaw ER includes the following: air travel from Harborview to Enumclaw helistop (15 minutes); helicopter shutdown and transfer of equipment to ambulance (3 minutes); ground travel from helistop to Enumclaw ER and transfer of equipment to ER (6 minutes).

[5] Travel from Enumclaw ER to Children's includes: ground travel from Enumclaw ER to helistop and transfer of patient to helicopter (8 minutes); air travel from helistop to Children's Helistop (18 minutes).

[6] Includes 3 minutes for patient preparation, while aircraft shuts down, and 1 minute for transfer.

Sources: Shepard Ambulance, 1987; Childs, 1987 and 1991a.

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equally divided among those patients whose flights were thought to be appropriate at the time of flight, but were later found not to be medically necessary, and those patient transports that were found to be not necessary (Annals Em. Med., Jan. 1986; 15[1]:79-80).

A fifth study examined seven hospital-based helicopter transport medical emergency services that treated and transported 1,273 blunt trauma patients. The study indicated there was a 21% reduction in expected morbidity in five of the seven services; however, there is some debate about the methodologic soundness of the study (Nicola, 1985). The authors noted that the data must be viewed with caution and further suggested that predicted reduction in total trauma-related mortality may be more directly correlated to experienced medical teams reaching a patient than to the transport of a stabilized patient by helicopter rather than by ground transport (Annals Em. Med., Sept. 1985; 14[9]:859-61).

Dr. Nicola's review of literature concluded:

> ". . . that there are medical conditions (especially trauma) where time of transport is critical regardless of mode of transportation, that specific clinical criteria may be helpful in selecting helicopter versus ground ambulance transport but do not help in predicting patient outcome, and that the experience of other tertiary centers, while helpful in describing the seriousness of injury seen in the usual patient populations transported, do not clearly shed any statistical light on (DCLU's) question (of the appropriate location for siting Children's helipad)." (Nicola, 1985 and 1987)

Dr. Nicola's review of the literature and case histories of patients transported by helicopter to Children's resulted in the determination that: "In most cases, Harborview or [the University of Washington's Intramural] Field would be adequate sites for most patients transported by helicopter to Children's; however, there will be a small number of cases where the ability to land at the hospital may be life saving" (Nicola, 1987).

Dr. Nicola also concluded that of the 15 to 20 patients that Children's Hospital estimates would be transported to Children's by helicopter each month, an estimated four or five "may have a medical need for helicopter transport to the doors of the hospital" (Nicola, 1987). (A discussion of the number of flights is presented later in this chapter and also in more detail in Chapter III.) The outcome of these patients may be adversely affected by a ten minute delay in receiving treatment in the hospital (Nicola, 1987).

Dr. Nicola further noted that "the literature review indicated that there are no definitive predictive clinical indicators of prognosis; that is, any number of transports to the doors of Children's would have to include an additional number of patients whose condition at time of referral was appropriate for air transport . . ., but who over time were determined not to have need of helicopter transport as essential. There also needs to be some flexibility for seasonal variation in disease" (Nicola, 1987).

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HELICOPTER EMERGENCY MEDICAL SERVICES
IN THE PUGET SOUND AREA

In 1990, there were three carriers that transported 227 Children's-destined patients by helicopter. As Figure 2 indicates, nearly 88% of these patients were transported by Airlift Northwest. Other carriers included Military Assistance to Safety and Traffic (MAST), and Med-Flight. Two other carriers, the Coast Guard and the Navy, did not transport any Children's-destined patients by helicopter. Only those patients transported by Airlift Northwest landed at Children's. Patients transported by other carriers landed at the Intramural Field helistop. During 1986, the percentage of total transports by Airlift Northwest was about 80%. In 1987 the percentage increased to 95%, then dropped to 86% in 1987 and 89% in 1989.

Airlift Northwest

After nearly ten years of transporting critically ill and injured children by commercial air carrier and charter flights, Children's Hospital joined with three other regional medical centers (University of Washington Medical Center, Harborview Medical Center, and Providence Medical Center) to form Airlift Northwest. Started in 1982, Airlift Northwest is a Seattle-based air ambulance service designed to support the regional medical referral system and specifically to make specialized critical care accessible to patients throughout the Pacific Northwest and Alaska. Airlift Northwest provides medically outfitted, ventilator-equipped, jet and rotary winged aircraft, with teams of medical specialists to resuscitate and provide proper care to patients who are being transported. Patients are taken to the receiving hospital designated by the referring physician. Patients requiring tertiary care generally will be transported to appropriate care facilities of one of the four members of the Airlift Northwest consortium. Airlift also will transport patients to hospitals that are not members of the consortium.

Airlift Northwest is a cooperative venture among the four public and private member institutions, with Harborview serving as the primary administrative arm of the consortium. An Inter-Hospital Agreement between the four hospitals characterizes the program and organizational structure, the roles of support personnel, the sharing of equipment, the allocation of costs and distribution of revenues, indemnification, record-keeping, services extended to non-participating hospitals, and provisions for amendment and termination of the agreement (Childs, 1986b). A copy of the contract is on file with DCLU. At one time Airlift Northwest was negotiating a contract with Multicare (Mary Bridge Children's Hospital) to become an Associate Member of Airlift Northwest. It is expected that an agreement will be signed in the near future, although Multicare's membership status is not expected to alter existing referral patterns (Childs, 1989c). In addition, St. Joseph's Hospital in Tacoma and Virginia Mason and Swedish Hospital of Seattle have become Associate Members (Childs, 1991).

Harborview, as the administrative arm of the consortium, contracts with Seattle Jet Center to provide fixed-wing aircraft, pilots, mechanics, and fuel for Airlift Northwest. Airlift Northwest's jet used for the transport of patients who are located more than 120 miles from the King County Airport (Boeing Field) base. In addition to a Citation 500 "Eagle" aircraft, Air

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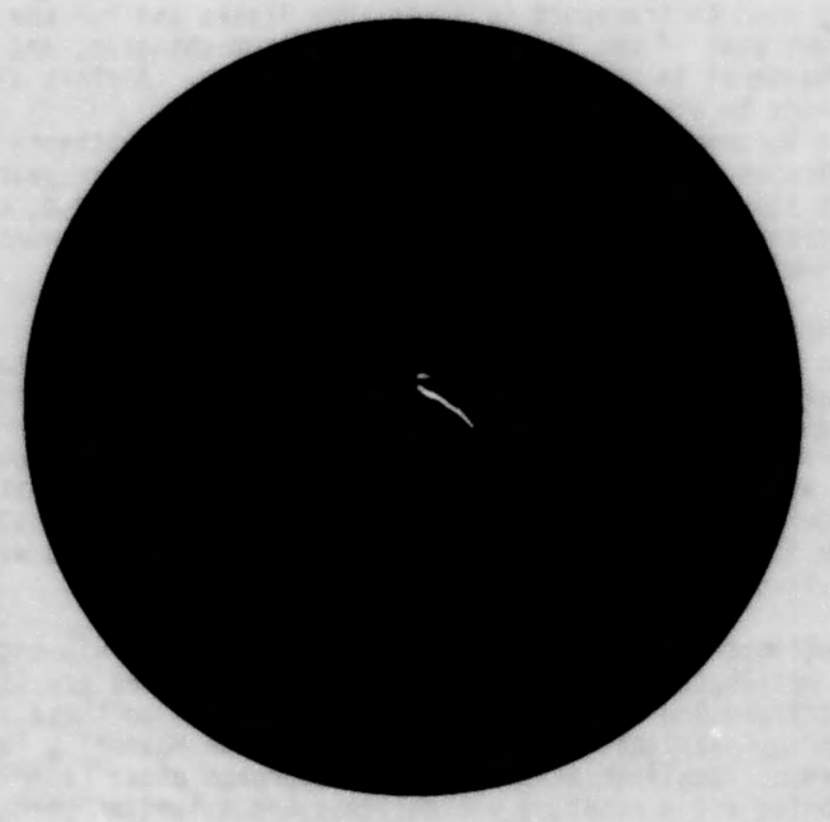

NOTE: IN 1990, THE NAVY DID NOT TRANSPORT ANY PATIENTS TO CHILDREN'S HOSPITAL.

Sources: Childs, 1991; Mirabal, 1991; Bradley, 1991; Robinson, 1991; Johnson, 1991.

Figure 2 **Frequency of Use of Helicopter Services Transporting Patients to Children's Hospital in 1990.**

SHAPIRO & ASSOCIATES

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lift dedicated a Learjet 35A in May 1990 to be used for patient transport. Other similar aircraft are available as backup, both at Seattle Jet Center and Boeing Field, as well as elsewhere within the area. These fixed-wing aircraft are used to transport patients from Alaska and for the majority of missions flown east of the Cascade Mountains in Washington, and elsewhere (Idaho and Montana) in the four-state referral area. Airlift also will accept missions to other states.

Airlift Northwest annually transports hundreds of patients by aircraft. Table 3 indicates the frequency of use in previous calendar years; projections through 1995 also are presented. From 1982 through 1990, Children's-destined patients represented an average 30.7% of the total number of Airlift's fixed-wing transports.

In order to transport patients more effectively from areas in the Puget Sound region that are not easily accessible by ground transportation and not served efficiently by fixed-wing, Airlift Northwest added a helicopter service in April 1985 consisting of one full-time (24 hours per day) helicopter. Harborview contracts with Hospital AirTransport to provide the rotary-wing aircraft, pilots, and mechanics to Airlift Northwest. A second, medically-equipped helicopter became available "half-time" in 1988; this aircraft and its transport team are based at Boeing Field and will be available fill-time (24 hours per day) in May 1991.

Both helicopters operated by Airlift Northwest are twin-engine Agusta 109 Mark II helicopters. The helicopters' specifications are listed in Table 4. Airframe and avionics systems that are used on these aircraft include: Loran C navigation computers and Distance Measuring Equipment (DME) receivers; localizer and glide slope approach aids; radar altimeter; air conditioning and a rotating searchlight; and a landing gear configuration using wheels (Childs, 1991b; Collett, 1991c).

Standard medical equipment on Airlift Northwest's helicopters includes the following:

- 2 patient stretcher rack
- Patient oxygen system with two 50 psi oxygen outlets and portable oxygen tanks
- Compressed air system with one 50 psi air outlet
- Patient suction system with continuous and intermittent regulator capabilities and portable suction unit
- 115 volt electrical system with 2 wall-mounted outlets in cabin
- Overhead lighting with high intensity halogen lamp
- Overhead IV hooks
- Double lock narcotics safe
- Lifepak 5 cardiac monitor/defibrillator
- Intravenous infusion pumps
- Doppler
- Oxygen saturation monitor
- Pacemaker generator
- Obstetric doppler
- Pediatric and adult pneumatic anti-shock trousers
- Non-invasive and invasive pressure monitor
- Advanced Cardiac Life Support (ACLS)/Advanced Trauma Life Support (ATLS) medication and supplies.

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Table 3

TOTAL AND CHILDREN'S-DESTINED PATIENT TRANSPORT INVOLVING AIRLIFT NORTHWEST'S FIXED-WING AND ROTARY AIRCRAFT (1982-1995)

Year	Fixed-Wing Transports		Rotary Aircraft Transports	
	Total	Children's-Destined	Total	Children's-Destined
1982[a]	190	54	0	0
1983	358	96	0	0
1984	486	163	0	0
1985[b]	532	228	259	41
1986	467	176	709	124
1987	487	145	1,013	180
1988	572	141	1,293	162
1989	595	164	1,352	212
1990	582	142	1,481	193
1991[c/d]	590	151	1,700	201
1992[c/d]	600	153	1,850	204
1993[c/d]	610	156	1,925	207
1994[c/d]	620	158	2,000	210
1995[c/d]	630	161	2,050	212

[a] Fixed-wing service began February 1982.

[b] Rotary service began in April 1985. The total number of patients transported to Children's includes landings outside the emergency room, and landings with [illegible]ound transports from the Intramural Field, Boeing Field, and Harborview Medical Center.

[c] "These numbers are considered 'ballpark' figures from which actual volumes may deviate significantly" (Childs, 1991).

[d] Children's-destined fixed-wing transports for 1991-1995 are based on the average percentage of Children's-destined transports relative to total transports for the years 1988-1990. The average percentage for fixed-wing was 25.56%. For 1992 and 1995 Children's-rotary transports, the projection is based on Carona's analysis (1991); estimates for 1991 and 1993-1994 were not projected.

[e] N/P: Not Projected.

Notes: The number of transports reflects the total number of patient transports and does not reflect all flight segments for the pickup of medical transport team (if necessary), the pickup and delivery of the patient, and the return of the helicopter to base.

The number of transports has been revised from the Draft EIS. In addition, all figures are now based on calendar year totals rather than fiscal year totals.

Only transports by Airlift Northwest are shown. Transports by other carriers are not included.

Sources: Actual number of transports from Childs, 1991; estimates from Childs, 1991 and Carona, 1991.

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Table 4

SPECIFICATIONS OF HELICOPTERS TRANSPORTING PATIENTS TO CHILDREN'S HOSPITAL AND MEDICAL CENTER

	Airlift NW	Med-Flight	MAST		Coast Guard		Navy
Specifications	Agusta 109 Mark II	MBB 105	Huey UH 1	Blackhawk UH 60	[illegible]	HH 65A	SH 3D
DIMENSIONS							
Rotor tip to tail	42.8 feet	38.9 feet	57.1 feet	64.8 feet	[illegible].3 feet	45.8 feet	71.8 feet
Rotor diameter	36 feet	32.3 feet	48.3 feet	53.7 feet	53.0 feet	39.2 feet	62.0 feet
Rotor ground clearance	7 feet	9.8 feet	13.6 feet	9.5 feet	13.2 feet	11.5 feet	14.3 feet
WEIGHT							
Maximum gross	5,730 lbs.	5,070 lbs.	10,500 lbs.	–	8,300 lbs.	8,500 lbs.	20,500 lbs.
Average empty	3,892 lbs.	3,370 lbs.	–	–	–	–	–
ENGINES	Twin Detroit Allison turbines	Twin Allison C20 turbines	Single engine turbine	–	Single engine turbine	Twin engine turbine	–
FUEL CAPACITY	146 gals.	153 gals.	–	–	199 gals.	291 gals.	848 gals.
RANGE	430 miles	352 miles	345 miles	–	276 miles	460 miles	–
SPEED							
Maximum	195 mph	167 mph	–	–	123 mph	190 mph	–
Cruising	180 mph	150 mph	52 mph	–	104 mph	144 mph	–
SEATING							
Pilots	1	1	2	–	2	2	2
Attendants	2	2	2	–	1	1	3
Patients	2	2	5	–	3	3	3

Notes: (1) One way maximum number of miles.

Source: Childs, Robinson, Dethlefs, Volk, Pegram, 1987; USDOT, 1977; Childs, 1991.

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The helicopters also can carry a 160-pound isolette unit (with ventilator) for the transport of neonates. The isolette unit is powered by the aircraft electric system while in the helicopter or by its self-contained battery pack. Additional medical equipment can be carried to provide the specific support necessary to individual patients.

Possible transport team members for Airlift Northwest include approximately 40 flight physicians and nurses who are trained and experienced in a variety of specialty branches of medicine, such as pediatrics, treatment of infectious diseases, treatment of burns, and neonatology. The medical transport team for a given mission is selected based on the particular medical needs of the patient. Although formerly based at Boeing Field, one Airlift helicopter and its transport teams now is based at Harborview. A second half-time helicopter, which will become available full-time in May 1991, along with its transport teams is based at Boeing Field. A standard transport team configuration is one pediatric/neonatal-specialty flight nurse and one adult-specialty flight nurse. Transport team members on a particular mission may require the expertise of a medical professional (or team) who is not at the helicopter base but rather at another location. Currently, if the medical professional (or team) is located at Children's, then he/she/they either reports to the helicopter base or is picked up by Airlift Northwest at the University of Washington's Intramural Field. The flight nurses are medically trained in altitude and flight physiology, and stabilization and transport of critically ill and injured patients. This orientation process takes approximately three months. The medical teams also receive a two-day orientation from Airlift pilots on helicopter operations and safety procedures. Safety issues also are addressed during quarterly Airlift Northwest meetings and, if warranted, during staff meetings.

The number of missions by Airlift Northwest helicopters has exceeded Airlift Northwest's projections that were presented in the Draft EIS. For the years 1986 through 1990, the total number of transports projected in the Draft EIS were 57.0 per month (1986), 60.0 per month (1987), 61.0 per month (1988), 62.0 per month (1989), and 63.0 per month (1990). The actual number of transports per month in those years by Airlift Northwest and the percent increase over Draft EIS projections were 59.1 (4% increase), 84.4 (41% increase), 107.8 (77% increase), 112.7 (82% increase), and 123.4 (96% increase).

Of the total transports for 1986 through 1990, the Draft EIS also projected the number of transports that would be destined for Children's Hospital. These projections included: 9.7 per month (1986), 10.2 per month (1987), 10.3 per month (1988), 10.5 per month (1989), and 10.8 per month (1990). The actual number of Children's-destined patient transports per month by Airlift Northwest in the same years and the percent increase over Draft EIS projections were 10.3 (7% increase), 15.0 (47% increase), 13.5 (31% increase), 17.7 (68% increase), and 16.1 (49% increase).

Figure 3 illustrates the monthly number of Airlift Northwest helicopter transports to Children's from the time the service began in April 1985 through December 1990. Figure 3 also includes a 12-month trend line, which

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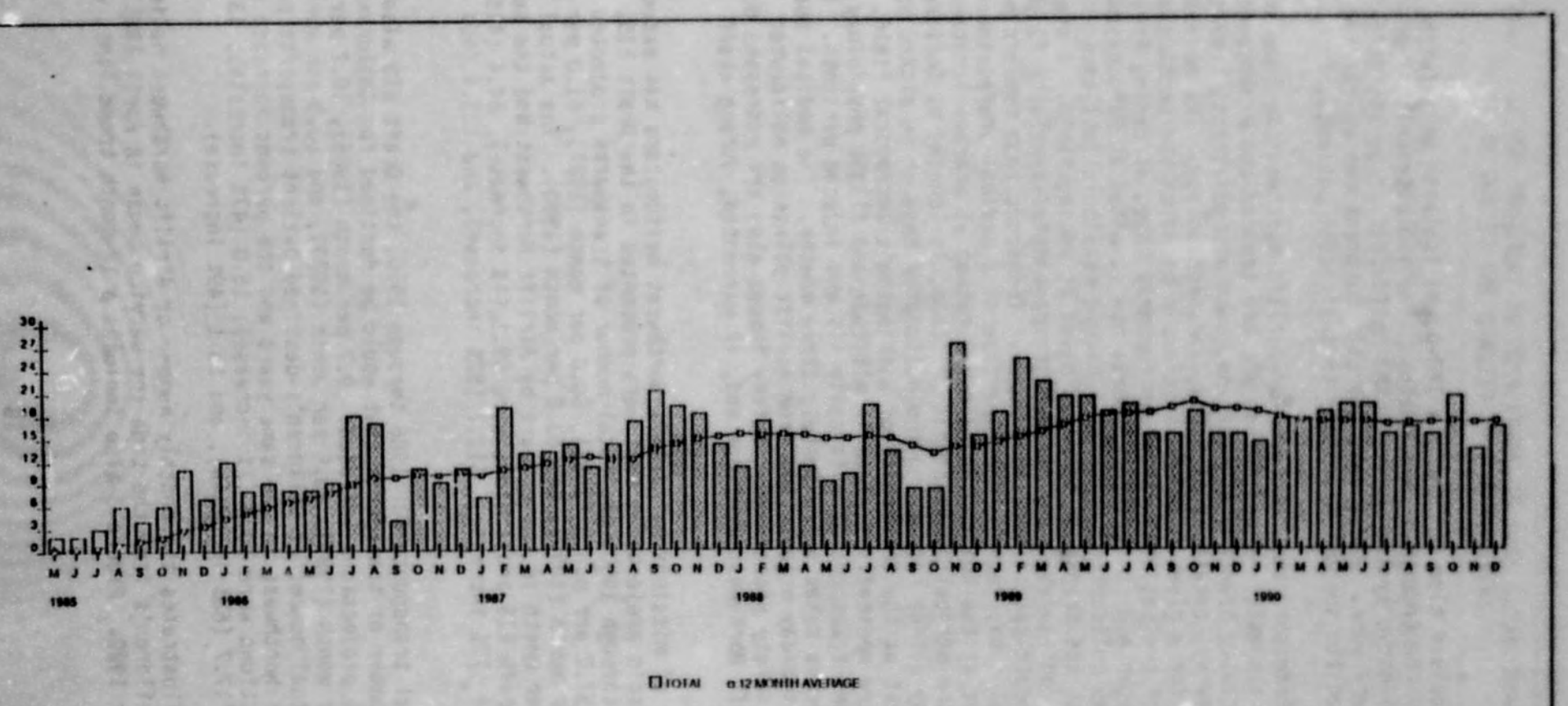

Figure 3

Airlift Northwest Transports of Patients to Children's Hospital and Medical Center (May 1985 - Dec 1990)

Source: Childs, 1987-1991.

illustrates average numbers of flights over a longer period and thereby tends to compensate for the month-to-month fluctuations. From this illustration, several trends are apparent. First, there is a considerable amount of variation in the number of transports that occur on a month-to-month basis. From the trend line it is evident that during Airlift Northwest's first 15 months of service, there was growth in the number of transports. This initial growth was followed by a trend toward a stable number of transport missions (on the average) for a period of approximately one-half year. This stable period was followed by a period of growth that was not nearly as great as the initial growth rate. Since this second period of growth ended in approximately January 1988, the average number of missions, as evidenced by the trend line, was relatively stable at 13-15 missions per month through mid-1988. This stable period was followed by a slight decline. Then, in November 1988, the greatest number of patient transports to Children's (27) to date occurred. This was followed by a third period of growth that ended in December 1989. Since then, the 12-month average number of missions has ranged between 15 and 18 Children's-destined transports per month.

Because of the increase in the actual number of missions from the Airlift Northest projected number of missions presented in the Draft EIS, Children's commissioned a study to forecast the number of missions expected for the transport of patients by Airlift Northwest helicopter to Children's. This study, which is available for review at DCLU, concluded that the projected (1995) number of patient transports exceeded Airlift Northwest's earlier forecasts; however, they confirmed the forecasted use (15-20 patient transports per month) identified by Dr. Neff, the Medical Director of Children's, in the Draft EIS. Table 3 identifies the historic and projected use of Airlift Northwest helicopters for the transport of patients to Children's.

With respect to Children's-destined patients, the Airlift Northwest helicopter transport service provides intensive care support to a number of critically ill or injured patients. Appendix D describes Airlift helicopter transports of those patients whose conditions were severe enough to warrant landing outside the emergency room at Children's through March 1989. This table identifies the date, time, origination of flight, the age and condition of patient, admitting unit, and discharge data or status. Approximately 29% of the children transported directly to Children's were newborns. Approximately 17% of the patients were more than three years old.

In September 1989, the Medical Director of Airlift Northwest approved standing orders for landing at Children's and issued a medical justification form, which the medical transport team must complete and submit to the Medical Director following a Children's landing. The form provides for the justification for landing a patient at Children's. As specified in the standing orders, a landing at Children's is authorized by the Medical Director of Airlift Northwest if during the transport of a critically ill or injured child any of the following clinical conditions occur: unstable airway; inability to ventilate/oxygenate; inability to maintain adequate cardiac output; inability to maintain adequate cerebral bloodflow; or the persistence of unstable vital signs despite heroic attempts to control them (Childs, 1990).

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MAST

Military Assistance to Safety and Traffic (MAST) is responsible for the emergency transport of all military personnel and their dependents within 100 nautical miles of Fort Lewis. Military personnel and their dependents must use MAST, unless a private airlift service is arranged and paid for by them or the military. MAST will fly civilians in areas where there are no civilian transport programs or where civilian programs do not have the appropriate equipment to respond (e.g., a mountain rescue) or when civilian programs are unavailable because they already are on a mission. MAST units accept missions according to the following criteria: (1) life and death emergencies; (2) loss of limb or eyesight; (3) undue suffering; and (4) only accessible transport due to terrain, etc. The MAST program is intended to supplement the available emergency medical services and not to compete with private enterprise.

MAST helicopters transfer patients from accident sites or hospitals to Harborview, Children's, and other hospitals in Seattle, and to Multicare (Mary Bridge Children's Hospital) and St. Joseph in Tacoma. The MAST program in Puget Sound is based at Fort Lewis where six "Huey" helicopters are located; a seventh "Huey" is located at the U.S. Army's Yakima facility.

The "Hueys" are Vietnam-era helicopters that are noisy, slow and characterized by a lot of vibration.

MAST patient transport missions may be requested by physicians, law enforcement officials, or other responsible officials. The helicopters are equipped with medical supplies and configured with the capability to transport three litter and two ambulatory patients plus a crew of four (two instrument-certified pilots, a crew chief, and a medic). The helicopter's specifications are identified in Table 4.

MAST is a training program for military medics, and as such is designed to support military capabilities and operations. In times of peace, MAST personnel develop and maintain patient care skills and are trained by both civilian and military personnel, including physicians. New personnel entering the MAST unit are graduates of the military basic training program and also of advanced training programs in which they are taught military occupational skills. Serving in the MAST program and communicating and working with civilian hospitals allows recruits to continue Emergency Medical Technician (EMT) training.

MAST flys with EMTs and without advanced life support (ALS) and, therefore, without drugs unless the condition of the patient warrants that the helicopter pick up a physician/paramedic team from either Madigan Army Medical Center, a local hospital, or an emergency rescue program. For patients being transported to Children's, MAST does not pick up the medical transport team at Children's. When a newborn is transferred by MAST to Children's, Madigan supplies the physician team (on an as-available basis) to accompany the baby. Madigan has two pediatric staff. However, as of July 1, 1986, Madigan no longer has neonatal staff.

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For those hospitals willing to supply their own physicians for MAST flights, understaffing at the referring hospital could occur during the physician's absence. Because MAST must return as quickly as possible to their base, they do not fly physicians, paramedics, or other civilian personnel back to the originating site unless that site is on the return flight path. Thus, the referring hospital will be without the services of the physicians involved in the transport until they are able to return. Other medical personnel may need to fill in for the medical team involved in the transport. On missions to Seattle hospitals, MAST will fly physicians back to Madigan, as long as they are ready to go quickly, because Madigan is on the MAST return flight path.

In 1985, Fort Lewis-based MAST (54th Medical Detachment) flew approximately 400 missions. Approximately 70% of these missions were field-site pickups (pre-hospital transfers) and the remainder were interhospital transfers. Transports were evenly divided between civilian and military personnel. In 1986, MAST transported 18 patients to Children's (Madden, 1987). It is estimated MAST transported 17 patients each year to Children's in 1987 and 1988, while in 1989 and 1990, 19 and 20 patients, respectively, were transported (Bradley, 1991). The majority of these patients were landed at the Univeristy of Washington Intramural Field and transported by ground ambulance to Children's.

MAST's civilian advisory committee, has been chaired by Bill Peterson, since April 1990.

Med-Flight

Med-Flight is a state-licensed, hospital-based airmedical transport program sponsored by St. Joseph Hospital in Bellingham. Its primary service area is the four northwest counties of the state - Whatcom, Skagit, Island and San Juan. Med-Flight's helicopter, an MBB-105, is a single-pilot aircraft with room for two litter patients, a nurse, and a medic. The specifications of the aircraft are identified in Table 4. The aircraft is equipped with life support systems, drugs, and a ventilator. In most cases, Med-Flight responds to calls initiated by physicians; however, public safety authorities, such as representatives of a fire department or a law enforcement agency, can initiate an emergency flight. In extreme situations, Med-Flight will respond to calls transmitted by marine radio. Med-Flight transported 29 patients by helicopter to Children's between 1985 and 1989: one in 1985; four in 1986; seven in 1987; nine in 1988; and eight in 1989 (Robinson, 1987 and 1991). It is estimated Med-Flight transported 6-10 patients to Children's in 1990 (Robinson, 1991). The majority of the patients flown to Children's did not land at the Children's campus.

Navy

The Navy's airmedical operations, which are based at Whidbey Island, respond to situations involving life-threatening emergencies in an area stretching from Ocean Shores, Washington, to the Canadian border, and from the inland waters of the Puget Sound to the Cascades. The Navy flies the SH 3D, the specifications of which are identified in Table 4. The SH 3D

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carries a crew of five, including two pilots, a first crewman, a rescue swimmer, and an in-flight medical technician. The helicopter can accommodate up to three litter patients and is supplied with basic equipment, such as a cardiac monitor, suction, splints, oxygen, and a delivery pack. Most Navy operations involve evacuations from the scene of an emergency with the objective of transporting the patient to an adequate medical care facility as quickly as possible. Because Navy helicopters do not carry drugs or sophisticated medical equipment, they are primarily used for "scoop and run" missions. However, interhospital transfers from Whidbey Naval Hospital to military hospitals at Bremerton or Madigan, or to Seattle area hospitals, also are performed. The Naval Search and Rescue (SAR) unit at Whidbey Island is one of only three SAR units worldwide authorized to perform high altitude (7,000 feet or more) rescue operations. The vast majority of the Navy's patients are active or retired military personnel and their dependents; civilian rescue operations are performed only when the Navy is the last resort. The Navy transported ten patients by helicopter to Children's in 1985; eight in 1986; zero in 1987; one in 1988; one in 1989; and zero in 1990 (Harmon, 1987; Reeves, 1990; Mirabal, 1991). None of these patients landed at the Children's campus.

Coast Guard

The U.S. Coast Guard station at Port Angeles responds to life-threatening emergency medical calls from the Strait of Juan de Fuca north to the Canadian border and in Puget Sound south to Tacoma. Airmedical operations are conducted up to 50 miles off the coast. Inland operations are infrequent. The Coast Guard flies the HH 52A, a two-pilot helicopter accommodating one attendant and up to three litter patients. The specifications of this aircraft are identified in Table 4. The helicopters are supplied with basic medical equipment, including a medevac bag, oxygen, a heart monitor, and a defibrillator. This equipment is intended to stabilize a patient until he/she can be provided with care at a hospital. A hospital or physician can request Coast Guard emergency helicopter service. Calls, in which a clear threat to life exists, receive an immediate response. When there is a question as to the gravity of a person's condition, the Coast Guard duty physician makes the decision as to whether to send a helicopter to the scene. The Coast Guard does not perform interhospital transports or similar services. There is no record of Coast Guard transports to Children's (Johnson, 1990 and 1991).

A REVIEW OF THE AUTHORITY OF FEDERAL, STATE, LOCAL AND PRIVATE AGENCIES WITH RESPECT TO AIR AMBULANCE SERVICE AND HELISTOP SITING

This section highlights key jurisdictional issues with respect to emergency helicopter transport.

A review of the missions of various public and private agencies indicates that there is no single agency with jurisdiction regarding the siting of a helistop and the operation of an emergency airborne patient transport service. Rather, there are a number of agencies that have

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specific, defined authority. These agencies include the Federal Aviation Administration, the State of Washington's Department of Health, and the Seattle City Council, which is supported by the Department of Construction and Land Use, and the Seattle-King County Department of Public Health.

In addition, there are a number of agencies and organizations that provide support of an informal and/or advisory nature. Among these agencies are the Washington Department of Transportation, the Seattle Area Hospital Council, the Washington State Medical Association, the Association of Air Medical Services, and the National Emergency Medical Services Pilots Association.

Federal Aviation Administration (FAA)

The FAA is a federal regulatory agency responsible for the promotion of aviation safety. As such, it provides programs certifying pilots and ensuring that aircraft are operated in a manner consistent with established regulations. The FAA has no regulations for the construction of private helistops. Rather, there are guidelines for their construction contained in an Advisory Circular, "Heliport Design."

Helicopter operations are subject to specific FAA regulations, including FAR Parts 61, 91, and 135. FAR Parts 61 and 91 of these regulations pertain to General Rules for Aviation and to the qualifications of pilots and airmen, and equipment specifications. FAR Part 135 deals with regulations for air taxi and commercial operations, which includes operations of helicopter ambulance services. Generally, helicopters, because of their ability to hover, change direction quickly, and change altitude with minimal horizontal movement, are given more latitude in their operations than fixed-wing aircraft.

A relevant component of these regulations is the requirement that while operating under Visual Flight Rules (VFR), a helicopter must maintain an altitude of at least 300 feet, except in the vicinity of the landing and take-off area. It also prohibits operating under VFR when visibility is less than one-half mile. Helicopter operations also are restricted by FAR Part 135 during icing conditions. Finally, during normal weather conditions, EMS pilots are limited to eight hours of flight time during a 24-hour period.

It is important to note that the FAA does give pilots discretion in deviating from the flight path. They will investigate complaints; however, the FAA generally would not take action on a complaint unless the pilot was operating in an inherently unsafe manner (Benedict, 1986). Section 135.19 of the Federal Aviation Administration Regulations relating to Air Taxi Operators and Commercial Operators states the following:

"(a) In an emergency involving the safety of persons or property, the certificate holder may deviate from the rules of this Part relating to aircraft and equipment and weather minimums to the extent required to meet that emergency."

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The FAA considers air ambulance services as "Air Taxi" services in their permitting and licensing process. This type of use has to comply with more stringent regulations for the pilots, the companies, and the aircraft than other types of helicopter uses. First, the air taxi helicopters are inspected by the FAA at least annually and often more frequently. General aviation craft are rarely inspected more than every five years. Second, air taxi pilots undergo more stringent flight testing than general aviation pilots. FAA Inspector Benedict characterized the distinction by stating, "With general aviation pilots, we have to be convinced that there is no serious doubt as to their control over the aircraft. With air taxi pilots, there can be absolutely no doubt at all as to their full control over the aircraft at all times." Air taxi pilots are also required to have more flight hours than general aviation pilots. However, Benedict's opinion is that this is more stringently enforced in insurance company standards than in the FAA regulation.

The establishment of a helistop facility requires the proponent to file with the FAA Form 7480, which identifies the proposed landing area and the approach and departure paths. The FAA reviews the form and either approves, revises, or denies the request for flight path approval. Children's submitted a Form 7480 to the FAA on February 14, 1985 with a revised submission on August 9, 1989. The request was approved with an expiration date of December 31, 1990. A request for extension was submitted November 12, 1990 and an extension to December 31, 1991 was approved November 19. 1990 (Chamberlain, 1990; Katz, 1990).

The Federal Aviation Administration has developed a design guide to help in the construction or improvement of heliports. For a private use heliport, such as Children's, the FAA criteria are guidelines rather than regulations. The design guidelines consider takeoff and landing area, touchdown pad and surrounding area, and obstructions within the aircraft approach area.

The consistency of the helistop proposed by Children's with the FAA cri[illegible]ia is discussed in more detail in Chapter IV.

[illegible] of Washington Department of Health

Health planning in the State of Washington is performed on a statewide basis. The Department of Health is the designated health planning agency for the state. Its duties include needs assessment for tertiary care services, planning, evaluation, and administration of the Certificate of Need program. The Department of Health was created in 1989, and it now administers programs formerly under the Department of Social and Health Services (DSHS) and health related programs formerly administered by the Department of Licensing (Pugh, 1991).

Certificate of Need Program

The Certificate of Need Program is a process for reviewing certain specified health care services or facilities. Air ambulance programs

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established by hospitals were subject to review as new tertiary care services under a regulation issued by the Department of Health that was repealed in 1986. Helistops are not subject to Certificate of Need review.

Emergency Medical Services Program

The State of Washington, through RCW 18.73, amended, provides statewide emergency medical services (EMS) program planning with funding and guidelines to continue EMS systems development and improvement. Key functions of the EMS Division of the Department of Health are to prescribe minimum requirements for equipment (including ambulances) and personnel engaged in pre-hospital EMS, to establish EMS system standards, and to evaluate program development, expansion and improvements. The Washington Administrative Code (248-17-135) provides specific regulations of air ambulance services. The Washington Administrative Code (248-18-285) also provides specific regulations for the provision of emergency care services:

"Emergency care services. The hospital shall have a well defined system for providing emergency care services. The nature and scope of the hospital's emergency care services should be in accord with the community's needs and the hospital's capabilities.

(1) The hospital shall provide the following basic, outpatient emergency care services.

(a) Assessment of a person's condition to determine the nature, acuity, and severity of the person's immediate medical need.

The condition of each person, who comes or is brought to the hospital for emergency medical care, shall, upon arrival, be assessed by a registered nurse, physician, or physician's assistant for the purpose of determining the nature and urgency of the person's medical need and the timing and place of the person's care and treatment.

(b) Immediate diagnosis and treatment of any life threatening cardiac arrythmia, respiratory insufficiency or shock.

(c) Appropriate transfer or referral of a patient who needs medical care services not provided by the hospital. Prior to transfer of an emergency patient to another health care facility, the hospital shall:

(i) Perform the emergency procedures needed to minimize aggravation of the patient's condition during transport to the other health care facility; and

(ii) Ascertain that the means by which the patient is to be transported to the other health care facility are suitable for the patient."

Currently, the EMS Division has no direct authority with respect to the proposed Children's helistop, except for equipment and personnel being certified to meet State standards. The Systems Development Administrator of the EMS Division staffs the Washington State Medical Association's EMS Standards Committee's Subcommittee on Air Ambulances (see below).

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Standard of Care. According to the State of Washington, Title 7, RCW 7.70.040, hospitals must adhere to an accepted standard of care in providing their services to the public. Accordingly, the following "shall be necessary elements of proof that injury resulted from the failure of the health care provider to follow the accepted standard of care:

1) The health care provider failed to exercise that degree of care, skill, and learning expected of a reasonably prudent health care provider at that time in the profession or class to which he belongs, in the state of Washington, acting in the same or similar circumstances;

2) Such failure was a proximate cause of the injury complained of."

Children's argues that the provision of helistop facilities at the hospital to accommodate the most critically ill and injured transport patients is essential in providing an accepted standard of care to the public.

Puget Sound Health Systems Agency

The Puget Sound Health Systems Agency (PSHSA) was a non-profit, quasi-public corporation that was founded in 1976 for the purpose of assisting in implementing the (National) Health Planning and Resource Development Act. The PSHSA is no longer an active entity.

City of Seattle - Land Use

The City of Seattle guides land use through its comprehensive plan and land use policies, and regulates land use through its Land Use Code. As a major medical center, Children's is designated a major institution and, as such, is subject to Seattle s major institutions policies.

The original major institutions policies were adopted on July 6, 1981 (Resolution 26579; Seattle Municipal Code (SMC) 23.16.010) and the Land Use Code on April 25, 1983 (Ordinance 111100 and 111101; SMC 23.48). Within major institutions' boundaries, helistops are allowed as a Council conditional use, if the Council finds that (SMC 23.48.005):

"a. The helistop is needed to save lives;
b. The helistop is located so as to minimize impacts upon surrounding residential property;
c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies."

Further, this section of the Land Use Code states: "The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas."

As new development occurred and master plans were prepared under the original major institutions policies (1981) and Land Use Code (1983),

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concerns with the implementation of the policies and code were raised by the major institutions and citizen groups in neighboring communities. In response to these concerns, the major institutions policies were revised in Resolution 28081 adopted March 26, 1990, as amended by Resolution 28191 adopted June 25, 1990.

Application for construction of the Children's helistop was filed with the Department of Construction and Land Use and the Draft EIS on the Children's helistop proposal was issued prior to adoption of the revised major institutions policies.

This EIS is designed to fulfill the SEPA requirements of the Conditional Use Permit. With respect to the specific findings of medical need necessary to secure a conditional use permit, DCLU requested that Dr. Nicola, the former Director of Seattle-King County Department of Public Health, assist DCLU in the medical need determination. (For the convenience of the reader, Dr. Nicola's updated report is appended to this Final EIS.) Although a land use discussion was not required to be incorporated into the EIS, the subject was covered in the Draft EIS and is addressed in this Final EIS, as well as assembled into responses to comments on the Draft EIS that are presented in Chapter V of this Final EIS. The other conditional use issues, including restricted use, sensitive siting and alternative locations also are addressed in this EIS.

Seattle-King County Department of Public Health

As a joint City/County agency, the Seattle-King County Department of Public Health serves all residents of King County. The Department operates health centers throughout the County, numerous satellite clinics in schools and community centers, a regional center for tuberculosis control, and a sexually transmitted disease control program and clinic located at Harborview Medical Center. The agency provides health services for the jail, vital statistics information, and operates the public health laboratory.

The Department includes the Divisions of Alcoholism and Substance Abuse, Emergency Medical Services, and the Medical Examiner. The Division of Emergency Medical Services plans, develops and administers paramedic services outside Seattle, and assists fire departments to improve emergency medical services.

The Department also has provided expertise to the City of Seattle's Department of Construction and Land Use regarding the issues of medical need and noise and vibration associated with siting and operating a helistop at Children's.

State of Washington Department of Transportation

The Washington Department of Transportation has the responsibility of providing statewide transportation planning services, enhancing safety and funding transportation improvements. The Division of Aeronautics deals specifically with air transportation, by participating in statewide trans-

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portation planning, assisting in the enforcement of FAA Regulations, investigating aircraft accidents, providing search and rescue support for missing General Aviation aircraft and providing funding for public aviation facilities. The Department does not have specific authority with respect to the siting of a helistop at Children's nor the operation of the helicopter service (Hamilton, 1986).

Association of Air Medical Services and National Emergency Medical Services Pilots Association

The Association of Air Medical Services (AAMS), formerly the American Society of Hospital Based Emergency Air Medical Services (ASHBEAMS), and the National Emergency Medical Services Pilots Association (NEMSPA) are voluntary organizations that were established within the airmedical community to provide organization and guidance to the industry. These organizations do not have legal authority to impose regulations except to the extent that hospitals or helicopter operators comply with their guidelines in order to be accepted as members.

As a result of the relatively high number of EMS helicopter accidents in 1985, AAMS and NEMSPA leaders met in February 1986 and agreed that uniform guidelines and standards were needed in the industry.

AAMS adopted both fixed-wing and helicopter standards in January 1987. The ten rotorcraft standards were developed as guidelines, and are intended to assure the quality of patient care and the safety of both crew and patients. These standards address aircraft; medical flight crew capabilities; staffing; training; mission preparedness; capabilities of receiving hospitals; program review; integration of programs with existing EMS systems and interhospital transfer networks; communications; and education. The guidelines and the consistency of the Airlift Northwest program with these guidelines also is discussed in Appendix B of this Final EIS. Airlift Northwest joined AAMS in September 1990 The Seattle Jet Center and Hospital AirTransport are associate members of AAMS.

In June 1987, NEMSPA finalized its safety guidelines for pilots, aircraft, and operations of EMS helicopters. The guidelines address minimum experience and qualifications of pilots; minimum initial pilot training; minimum recurrent pilot training; aircraft type and equipment; minimum staffing requirements; duty time limitations; Visual Flight Rules Weather Minimums; medical staffing on board the aircraft; and safety programs for the member programs. The consistency of the Airlift Northwest program with these guidelines are identified in Appendix B of this Final EIS.

In addition to AAMS and NEMSPA there are other industry organizations that have become active in the promotion of aeromedical safety. These organizations include the Helicopter Association International, the National Flight Nurses Association, and National Flight Paramedics Association.

Washington State Medical Association

The Washington State Medical Association is a trade organization that represents medical doctors in the state. Physician members voluntarily

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serve on committees that include, among others, the EMS Standards Committee, which has a subcommittee that specifically addresses issues involving air ambulance services.

The EMS Standards Committee's Subcommittee on Air Ambulance Services has submitted to the Department of Health a set of air ambulance protocols to be used by the air ambulances that operate in the state. A set of these protocols has been appended to Dr. Nicola's updated report, which appears in Appendix A of this Final EIS. The protocols set forth policies that include criteria for use of pre-hospital air ambulance services; criteria for non-use of air ambulances; and present examples of patient medical conditions that would warrant the use of an air ambulance. The protocols also address the use of air ambulances for interhospital transports, including the following general criteria:

1. Requirement for critical care en route that is not otherwise available.

2. Time critical injury or illness.

3. Need to minimize the patient's time out of the hospital.

4. Alternate modes of travel are unavailable or undesirable.

As in the case of pre-hospital transfer protocols, the criteria for interhospital transports identifies those special patient medical conditions that warrant the use of an air ambulance.

In concert with the development of these protocols, the Department of Health has drafted proposed amendments to the sections of the Washington Administrative Code (248-17-020,135,136,137,138) that address the licensing, personnel and equipment requirements, and selection and use of an air ambulance service. According to Howard Farley of the Department of Health, the amendments are in draft form, and public hearings will be scheduled after the parties reach a consensus on the proposed language (Farley, 1990).

Washington State Hospital Association

The Washington State Hospital Association is an independent trade organization that represents approximately 90% of the hospitals in the state. The Association's activities include advocacy, education and lobbying of both the Legislature as well as regulatory agencies. The Association is not directly involved in the issue of emergency airborne transport services (Mero, 1986).

Seattle Area Hospital Council

The Seattle Area Hospital Council is a trade organization that represents the major hospitals in King County and southern Snohomish County. The purpose of the Council is to provide a forum for issue identification, discussion, and collective action that is responsive to the needs expressed by member hospitals in their continued efforts to discharge their individual and collective responsibilities. The Council is not directly involved in the issue of emergency airborne transport services (Nell, 1986).

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Chapter III

Description of the Proposed Action and Alternatives

III. DESCRIPTIONS OF THE PROPOSED ACTION AND ALTERNATIVES

This chapter states the sponsor's objectives, describes how alternative helistop locations were identified and screened, characterizes the process used to project the estimated number of patients transported by helicopter to Children's and the associated number of missions, and provides a detailed description of the Proposed Action and alternatives, including descriptions of the helistop and flight paths.

One alternative that was evaluated in the Draft EIS, the University of Washington Medical Center Helistop Alternative, is not being considered by the University of Washington at this time. However, to retain consistency with the content of the Draft EIS, this alternative has been included in this document. Where appropriate, the status of this alternative is noted in the text.

This chapter also describes an alternative that was not described in the Draft EIS. This new alternative, or Preferred Alternative, is characterized by the most critical patients landing at the Kitchen Garden helistop at Children's campus. All other (less critical) patients that are being transported by helicopter to Children's would land either at Harborview and/or the University of Washington's Intramural Field Helistop, if permitted, and would then be taken to Children's via ambulance.

Because the Preferred Alternative incorporates components of other alternatives that were analyzed in the Draft EIS, it was determined by DCLU that a Supplemental Draft EIS would not be necessary. Chapter IV of this Final EIS does incorporate an assessment of the impacts associated with the Proposed Action, the Preferred Alternative, as well as other alternatives. Chapter V, which contains responses to comments received or the Draft EIS, also addresses the Preferred Alternative, where appropriate.

SPONSOR'S OBJECTIVES FOR THE PROPOSED ACTION

The Proposed Action is the construction of a helistop at the Kitchen Garden site outside the Emergency Room of Children's Hospital and Medical Center. The helistop would be used as a landing area for helicopters transporting critically ill and injured patients to Children's. The sponsor's objectives for the Proposed Action are:

- to make specialized medical expertise available to critically ill and injured patients in the least amount of time;
- to minimize transport time from place of patient pickup to the Emergency Room entrance of Children's; and
- to minimize the number of patient transfers that could result in patient destabilization.

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OVERVIEW AND LOCATION

The 23-acre Children's Hospital and Medical Center campus is located at 4800 Sand Point Way N.E., Seattle, Washington, along a portion of the western edge of the Laurelhurst neighborhood. The campus is less than one mile east of the University of Washington campus (see Figure 4, Vicinity Map).

The campus boundary on the northwest is Sand Point Way N.E. to and along N.E. 50th Street, south along 44th Avenue N.E. to and along N.E. 47th Street, to and south along 45th Avenue N.E., to and along N.E. 45th Street to approximately 42nd Avenue N.E., if extended, and north to Sand Point Way N.E. (see Figure 5, Campus Map).

The Children's campus site generally slopes downward to the west and south. It is landscaped and provides a sense of open space to the area. Principal access to the campus is via a signalized intersection with Sand Point Way N.E. The principal drive - Penny Drive - winds generally west to east and provides access to the various entrances to the medical center building and parking areas. The principal structural feature of the hillside campus is the medical center building, which contains the medical facilities and equipment. A parking garage contains four levels of parking: three for staff, and one for patients and visitors. There are two primary paved surface parking areas and several smaller parking areas that provide additional parking for visitors, service vehicles and medical staff.

The southern edge of the proposed helistop pad would be located approximately 142 feet north of the existing Emergency Room entrance doors and approximately 144 feet northwest of the top of the parapet of the Medical Pavilion. North of the site is Penny Drive and the parking structure; east of the site is the driveway to the Emergency Room entrance and parking lot; west of the site is the service driveway that provides access to the loading dock. A brick, natural gas meter house is located approximately 38 feet northwest of the northern edge of the proposed pad (see Figure 6).

The surrounding neighborhood consists primarily of single-family residences, with densities ranging from one dwelling unit per 9,600 square feet (primarily along the Lake Washington shoreline) to the maximum single-family density of one unit per 5,000 square feet to the northwest of Children's campus. South and east of the hospital there is a large area zoned for one unit per 7,200 square feet, with a number of smaller, non-conforming lots in this area. One block east of the campus is the Laurelhurst Elementary School, with Laurelhurst Playfield. A half block southeast of the Children's campus is the Battelle Memorial Institute research campus. Four blocks east of the Children's campus is the Villa Academy; with St. Bridget's Church located north of N.E. 50th Street at 49th Avenue N.E., to the south of the school.

There are several multifamily residential and commercial uses concentrated along both sides of Sand Point Way N.E. and the Burke-Gilman Trail. Multifamily densities range from medium density, Lowrise 3 developments to lower density, Lowrise 2 developments. In the area near the

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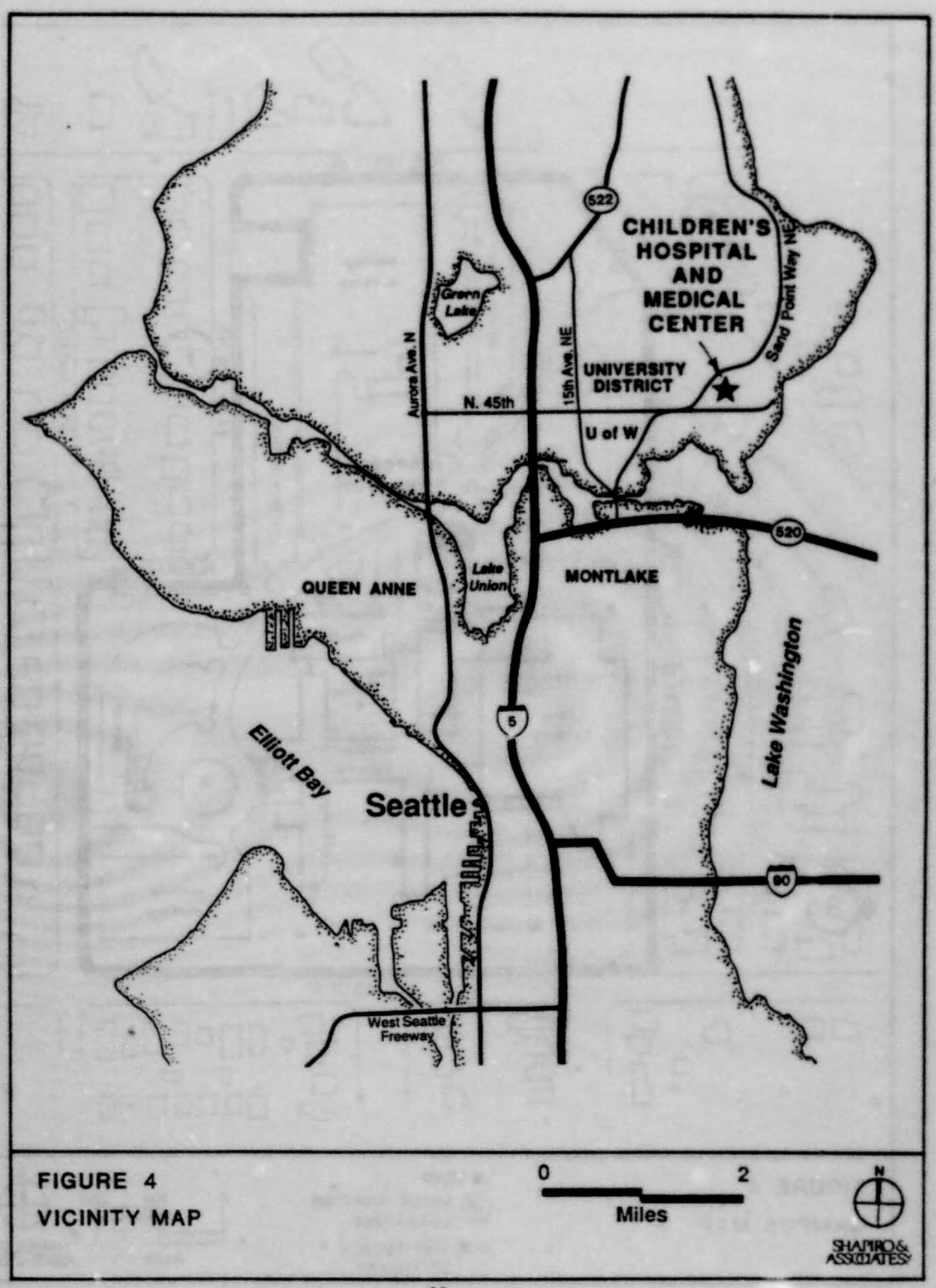

FIGURE 4
VICINITY MAP

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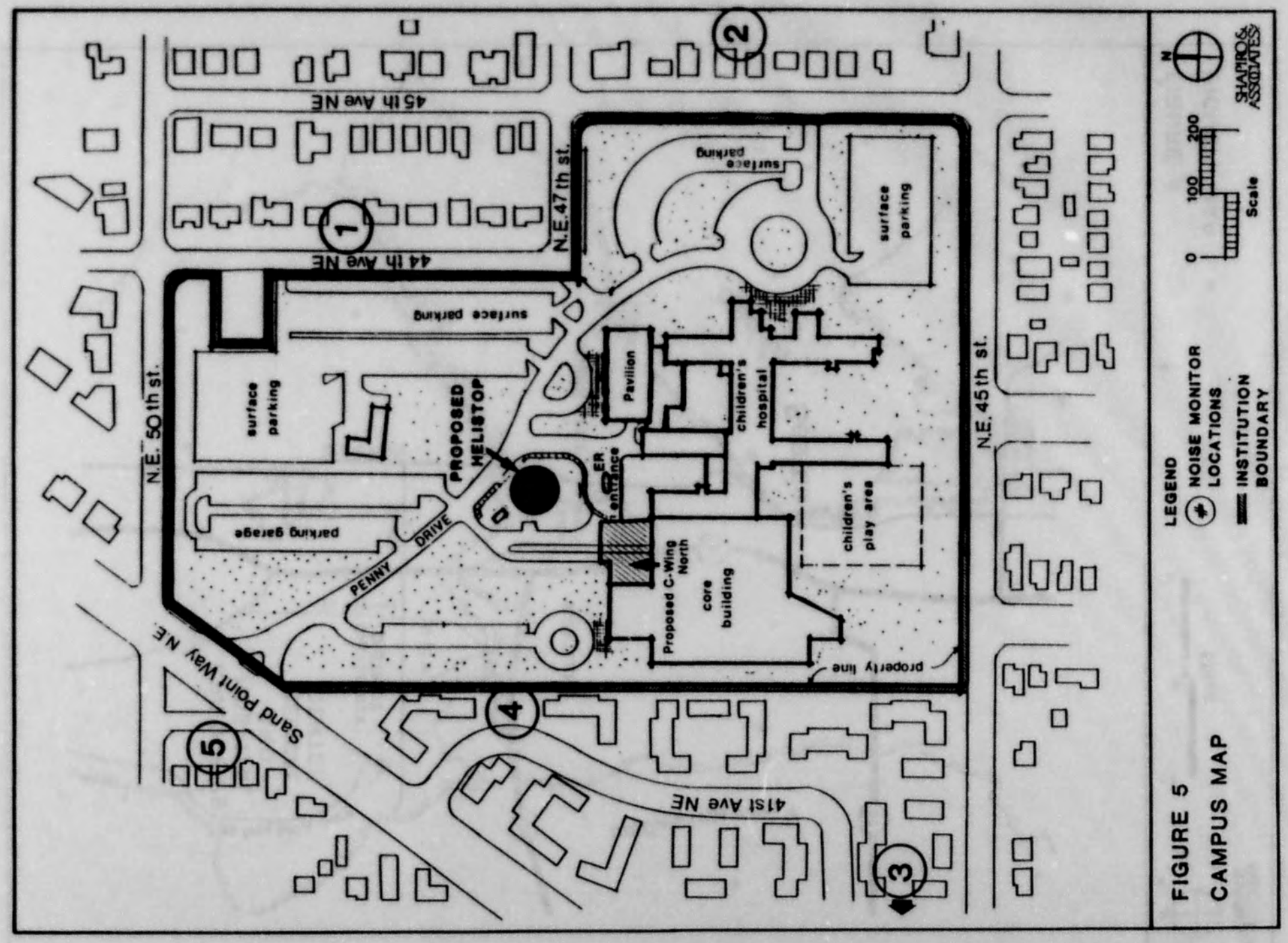

FIGURE 5
CAMPUS MAP

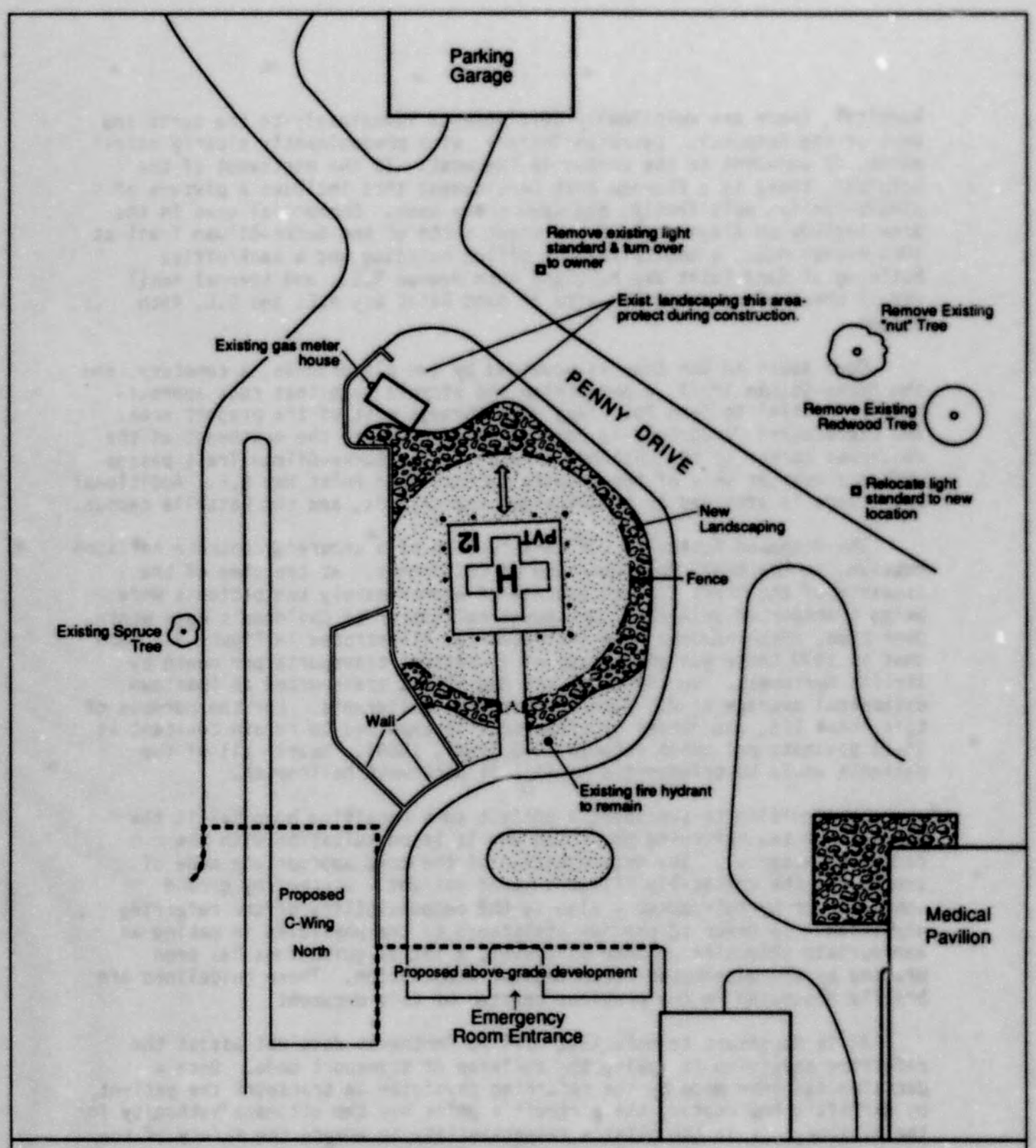

Figure 6

Children's Helistop Site

The helistop would be floodlit by groundlights located at helipad corners. In addition there are ten ground lights around the helipad perimeter. There is one fire extinguisher located on either side of the gate.

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hospital, there are multifamily developments immediately to the north and west of the hospital. Laurelon Terrace, with predominantly elderly occupants, is adjacent to the campus on the west. To the northwest of the hospital, there is a Planned Unit Development that includes a mixture of single-family, multifamily, and open space uses. Commercial uses in the area include an Albertson's Supermarket north of the Burke-Gilman Trail at 40th Avenue N.E., a medical/dental office building and a bank/office building at Sand Point Way N.E. and 40th Avenue N.E., and several small retail shops along the south side of Sand Point Way N.E. and N.E. 45th Street.

Open space in the area is provided by two playgrounds, a cemetery, and the Burke-Gilman Trail, a pedestrian and bicycle path that runs approximately parallel to Sand Point Way N.E. through most of the project area. The Laurelhurst Playground is located immediately to the southeast of the southeast corner of the Children's campus. The Burke-Gilman Trail passes within a quarter mile of the hospital across Sand Point Way N.E. Additional open space is provided by schoolyards, churchyards, and the Battelle campus.

The Proposed Action is the construction of a secured, concrete helistop outside the Emergency Room entrance of Children's. At the time of the issuance of the Draft EIS, an average of approximately ten patients were being transported by Airlift Northwest helicopter to Children's each month. Over time, these numbers have increased (as illustrated in Figure 3), such that in 1990 there was an average of 16 patient transports per month by Airlift Northwest. In 1990 MAST and Med-Flight transported an (maximum estimated) average of 2.5 patients/month to Children's. For the purpose of this Final EIS, the number of transports is expected to remain constant at 15-21 patients per month through 1995 (Neff, 1989). Nearly all of the patients would be transported by Airlift Northwest helicopter.

The decision to transport a patient to a receiving hospital is the decision of the referring physician who is in consultation with the receiving hospital. The determination of the most appropriate mode of travel for the critically ill or injured patient - whether by ground ambulance or by helicopter - also is the responsibility of the referring physician. In order to provide assistance to the physician in making an appropriate selection of mode of travel, a set of guidelines has been drafted by the Washington State Medical Association. These guidelines are briefly discussed in the previous chapter of this document.

It is important to note that Airlift Northwest does not assist the referring physician in making the decision of transport mode. Once a decision has been made by the referring physician to transport the patient by Airlift's helicopter, the aircraft's pilot has the ultimate authority for the mission. It is the pilot's responsibility to ensure the safety of the crew, patient(s), public, and aircraft. The pilot makes the final determination of whether the helicopter will fly or not fly on a particular mission.

In general, most of the transport missions for Children's-destined patients would involve three flight segments. This description differs from that contained in the Draft EIS, which indicated a total of four flight

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segments would be involved. With the basing of most transport teams at Harborview and Boeing Field, it usually would not be necessary to pick up the medical crew at Children's or at the Intramural Field. The first segment would be from the helicopter base (Harborview or Boeing Field) to the location of the patient, the second would be the transport segment to Children's with the patient; and the final segment would be the return to the helicopter base for dispatch to the next mission. Thus, one flight segment described in the Draft EIS would be eliminated.

A patient transport mission, however, still could involve four flight segments: departure from the helicopter base to Children's helistop or the Intramural Field for pickup of a specialized medical crew; departure and flight to the location of the patient; return flight to Children's helistop with patient; and departure for return to base or the next mission. Based on historical data on Airlift Northwest flights of Children's-destined patients, it is estimated that approximately 1% to 3% of the missions would require the pickup of the medical transport crew at the Children's Helistop or the Intramural Field (Childs, 1987). It also should be noted that during inclement weather conditions requiring pilots to fly under instrument flight rules helicopters would land at Boeing Field, since Children's does not support radar-controlled landings.

ALTERNATIVE HELISTOP LOCATIONS

Alternative helistop locations were considered by Children's during the development of the concept of siting the helistop adjacent to the Emergency Room entrance with convenient access to the Emergency Room, operating and recovery rooms, and intensive care units (ICUs).

Campus Alternatives

Landing helicopters on the roof of the medical center was judged unacceptable because major structural changes would be needed in order to support the weight of the helicopter and extend the elevator (Donelson, 1986). This alternative would be at least twice as expensive as the proposed location, depending upon the extent of structural modification that would be necessary (Donelson, 1986). Moreover, it would be necessary to transport the patient via a circuitous route through the medical center to the Emergency Room, operating room, or ICUs.

Landing helicopters on the roof of the parking garage was judged unacceptable because of the need for patient transfer to an ambulance and attendant delays in transit of the patients to the Emergency Room, operating rooms, and ICUs. The flight path would take the helicopter over residences to the north of Sand Point Way N.E. and N.E. 50th Street.

Landing helicopters outside the east entrance to the medical center was judged unacceptable because of the need to transport the patient via ambulance to the Emergency Room entrance with attendant delays or, alternatively, the need to transport the patient via a circuitous route through the medical center - including a change of floors. The helicopter flight path also would be closer to residences along 45th Avenue N.E., as well as to the nearby elementary school.

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Landing helicopters outside the south entrance to the medical center (illustrated as the core building in Figure 5) was judged unacceptable because of the need to transport the patient via ambulance to the Emergency Room entrance with attendant delays or, alternatively, to transport the patient via a circuitous route through the medical center including a change of floors. The helicopter approach also is more obstructed because of the layout of the building and surrounding tall trees, and would result in the helicopter flying closer to residences along N.E. 45th Street.

Landing helicopters outside the administrative wing entrance (the northwest corner of the medical center) was judged unacceptable because of the need to transfer the patient to an ambulance and transport the patient to the Emergency Room with attendant delays or, alternatively, to transport the patient via a circuitous route through the medical center - including a change of floors. The helicopter flight path also would be closer to Laurelon Terrace.

Landing helicopters on one of the surface parking lots (see Figure 5) was judged unacceptable because of the need to transfer the patient to an ambulance for transport to the Emergency Room entrance with attendant delays. Moreover, the helistop and helicopter flight paths would be closer to residences to the east, particularly along 44th Avenue N.E. and 45th Avenue N.E.

From a safety perspective, flat surfaces, such as rooftops, generally present the least accident risk during landing due to an absence of vertical obstructions. Rooftops, however, can be less safe in the event of engine failure due to the structure's height and lack of a uniform surface on which to make an emergency landing. The other Campus Alternatives discussed above are all considered to be somewhat less safe than the Proposed Action due to their proximities to obstructions, their locations in topographically depressed areas, or their proximities to residential or educational land uses (Hill, 1986). The significance of the safety distinctions are believed by the Airlift Northwest pilots to be negligible (Hill, 1986).

Off-Campus Alternatives

The principal off-campus helistop locations that have been suggested include sharing University of Washington's Intramural Field helistop, sharing a rooftop helistop with University of Washington Medical Center, using the helistop at Sand Point Naval Air Station, sharing Harborview's helistop, sharing radio/television station helistops, and landing patients at Boeing Field. As part of the EIS scoping process, three off-campus alternatives were selected for detailed analysis: the helistop at the Intramural Field; a shared rooftop helistop with the University of Washington Medical Center (an alternative that is not under consideration by the University at this time); and use of either Boeing Field or Harborview (the No Action Alternative).

The Intramural Field Helistop Alternative involves the use of an existing landing area at the Intramural Field. Improvements may be made at this location in the future. In 1988, a total of 206 medical helicopter landings occurred at the Intramural Field, of which 124 (about 10 per month)

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were Children's-destined patients (University of Washington, 1990). In 1989, a total of 249 landings occurred, of which 178 (about 15 per month) were Children's-destined patients (University of Washington, 1990). In 1995 an estimated average of 15 to 21 Children's-destined patients would be brought to the Intramural Field each month plus patients being transported to the University Medical Center. Each patient transport mission normally would involve three flight segments - similar to the Proposed Action - plus transfer of the patient into an ambulance and ground transport of the patient to Children's. (An additional segment could occur if the medical transport team is picked up at Children's or the Intramural Field prior to departing to the location of the patient.)

The University of Washington Medical Center has, in the past, considered using a helistop that has been constructed on the roof of its expansion wing; however, this option is not currently under consideration. Under this alternative, an estimated average of 15 to 21 Children's-destined, critically ill or injured patients would be brought to the University of Washington Medical Center helistop each month in 1995; additional flights would involve University of Washington Medical Center-destined patients. (Refer to the discussion of the Intramural Field for number of Children's-destined patients landed in 1988 and 1989.) Each patient transport would involve three flight segments - similar to the Proposed Action and Intramural Field Alternative - plus roof-to-ground transfer and transfer of the patient into an ambulance for transport to Children's. (An additional segment could occur if the medical transport team is picked up at Children's or the Intramural Field prior to departing to the location of the patient.)

With the objectives of minimizing transfers and transport time, the Proposed Action location was judged by the project sponsor to be the most suitable from a medical perspective for transporting critically ill or injured patients. Moreover, the proposed Kitchen Garden Helistop is located near the central portion of the campus: such a location minimizes off-site noise impacts without sacrificing patient care.

THE PROPOSED ACTION

Demolition, Site Development, and Improvements

The proposed helistop site is located at a landscaped site called the "Kitchen Garden." Portions of the existing garden would be relocated to a new site(s) on campus. Three taller trees that existed at the time of the preparation of the Draft EIS have been removed. Several other trees on the north side of Penny Drive also would be removed.

Following clearing, a new concrete retaining wall would be constructed along the western edge of the site. Approximately 500 cubic yards of earth would be imported to the helistop site and used as fill to raise and level the site to the final design elevations. The fill would be removed from other (as yet unspecified) locations on Children's campus.

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The helistop would consist of a concrete pad and a grass unobstructed area (see Figure 6). The concrete pad would be a 40 by 40 foot concrete area that, in turn, would be within a 48-foot radius, circular unobstructed area of grass. The concrete pad would provide stable support for the helicopter. The center of the concrete pad would be marked with a white cross, with arms 30 feet long and 10 feet wide. The center of the cross would be marked with a 6x10-foot, red "H" that would designate the helistop from the air. A 30-inch tall fence with locked gate would surround the circular area. An approximately 45-foot-long concrete walk would link the helipad to the existing sidewalk.

The helistop would require the construction of approximately 2,050 square feet of concrete (impervious) surface for the helipad and walkway. Fifty seven hundred square feet would be sodded and approximately 2,500 square feet, according to the Landscape Plan, would be landscaped in juniper, azalea, and other low shrubbery along the outside of the fence. Other existing landscaping would be retained.

The helistop would be equipped with ground lights that would be turned on for nighttime landings. These lights would meet minimum FAA standards and would not have any off-site spillage because of the absence of horizontal throw. In effect these pilot-preferred lights "glow," rather than emanate direct rays of light (Hill, 1986). The shrubbery and positions of the medical center building and parking garage would reduce the potential for any helistop safety lighting to create light and glare impacts off-site. For flight safety, obstruction lights would be placed on the main hospital building, Medical Pavilion as well as on the parking garage. In addition a high intensity strobe light, which would flash 20 times per minute and be visible from 5-10 miles, would be turned on by the ground crew when a hospital-destined helicopter was approaching. The helistop also would have a glide slope indicator light. These special lights appear green to incoming pilots when the aircraft is approaching at a pre-designated, safe angle. The light appears yellow for aircraft that are too high and red if too low. Wind socks that indicate wind direction and speed also would be placed on the helistop and on the medical center rooftop.

Signs warning motorists of the possibility of helicopter operations would be posted on Penny Drive and, if necessary, on Sand Point Way N.E. No aviation fuel would be stored on campus.

Number of Transports and Flights

The worst-case estimate of patient transport missions presented in the Draft EIS was derived by Children's medical and planning staff by assuming that the Airlift Northwest patient transports by helicopter would increase at the rate of 10% per year from 1987 through 1990. As mentioned in the previous chapter, there has been a change in the number of Children's-destined patient transports by Airlift Northwest. In order to determine whether the increased number of transports to Children's represented a maturation of the Airlift Northwest program or some other explanation, a study was commissioned. The purpose of the study, which is available for review at DCLU, is to forecast the expected number of missions associated with the transport of patients by Airlift Northwest helicopter to Children's.

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The forecast methodology examined the geographic service area of Airlift Northwest's pediatric transport program, determined the historic number of the service's pediatric flights, and based on population data obtained from the State, projected the annual number of patients that would be transported to Children's through 1995 (Carona, 1991). The forecast methodology applied a use-rate based projection method (Carona, 1991). The 1987 Washington State Health Plan adopts use-rate based methods for the projection of most hospital and acute medical services (Carona, 1989 and 1991).

This forecast methodology projected that in 1991 there would be 201 patients transported by Airlift Northwest helicopter to Children's. As presented in Table 3 of the previous chapter the number of missions will increase to 212 in 1995. When MAST and Med-Flight transports are included, these numbers are slightly greater (15-21) than the range of transports (15 to 20 patients per month in 1990) that was projected by Dr. Neff, the Medical Director of Children's, as presented in the Draft EIS. However, it should be noted that the Neff projection is for 1990, whereas the Carona projection is for 1995.

Children's estimates that in 1995 an average of 15 to 21 critically ill or injured patients could be transported to the medical center by helicopter each month (Neff, 1989). The majority of the patients would be transported by Airlift Northwest.

There may be situations that would result in an increase or decrease to this historic use-rate based projection. These additional patient transports reflect several factors that are difficult to predict with any reliability but that, nevertheless, could influence the number of patient transports: advances in medical technologies; growth in population of children; inability to predict disasters - such as toxic spills, nuclear facility accidents, earthquakes; increased poverty that results in the increase in premature births (Neff, 1986); changes in the hospital referral patterns or the capabilities of Children's or of other community hospitals (Nicola, 1986b); or addition of competing helicopter service (Nicola, 1987). It is conceivable that the number of patients warranting helicopter transport to Children's in 1995 could exceed the 15-21 per month average that has been projected. The number of transports also could decrease under some of these scenarios.

Children's is obligated by state requirements (WAC 248-18-285 [see Chapter II]) to treat all emergency patients brought to the hospital; the hospital construes this regulation to mean that no helicopter transporting an emergency patient can be refused permission to land at the proposed helistop, if constructed, or elsewhere on the campus grounds. The City contends that if the City of Seattle land use laws prohibit landings of helicopters on Children's campus, then the landings could only occur at authorized locations.

The reader should note that at the time of the preparation of the Draft EIS, the Airlift Northwest helicopter and pilots were based at Boeing Field. At that time medical transport teams also were based at Boeing Field.

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However, for some transports, the patient's condition required specialty lead physicians and flight nurses who ordinarily were based at Harborview. (There are some medical transport team members based at Children's. The majority of the patients being transported at this time do not require their expertise.) In order to increase dispatch efficiency, Airlift began to base the helicopter operations out of Harborview in the spring of 1987. A second, medically equipped helicopter became available "half-time" (12 hours per day) in 1988; this aircraft and its transport team are based at Boeing Field and will be available full-time in May 1991. Thus, Airlift will have full-time helicopters based at both Harborview and Boeing Field.

As previously noted, each Airlift Northwest patient transport mission ordinarily involves three separate flight segments: one for the pickup of the patient, the second for delivering the patient, and a third for return to base or next mission. Four flight segments could occur if the medical transport team would have to be picked up at Children's or the Intramural Field. Thus, if there were 20 patient transports per month, there could be a maximum of 60 to 80 flight segments per month (with the lower estimate reflecting no separate flight to pick up the medical transport team and the higher total corresponding to pickup of the medical crew at Children's or the Intramural Field). During inclement weather requiring pilots to fly under instrument flight rules, helicopters would land at Boeing Field and patients would be transported to Children's by ground ambulance.

Based on data from existing flights (Appendix D), it is estimated that 18% of the flights would occur in nighttime hours (10:00 p.m. to 7:00 a.m.). For the purpose of these environmental analyses, it is assumed that 25% of the transports would occur in nighttime hours.

As a policy, Children's would discourage MAST transports from landing at the Children's campus helistop. Any MAST flights to Children's, however, would normally involve two or three flight segments, as there would be no pickup of the pediatric medical crew at Children's.

If the pending helistop application is approved, Children's representatives would meet with representatives of Med-Flight and other air ambulance services to establish procedures for accepting landings and the transported patients.

Helicopter Operations

The process of transporting a patient to Children's may be considered by separating the mission into a series of discrete steps. The following description is intended to provide the reader with an overview of the process and does not constitute the full array of operational or medical procedures that would be involved in a patient transport by helicopter.

There is a difference in the helicopter transport process depending on whether the patient is in the field, or is the subject of either a pre-arranged or unscheduled interhospital transport. There are also distinctions between private air ambulance services and the military (MAST, Navy, and Coast Guard) services. Interhospital transports by Airlift are

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expected to constitute nearly all of the helicopter transports of patients to Children's. For illustrative purposes, an unscheduled Airlift Northwest interhospital transport to Children's is profiled. It is assumed in the following example that Airlift's full-time Agusta 109 helicopter, which is based at Harborview, is used. Airlift also has a part-time (12 hours per day) Agusta based at Boeing Field, along with the flight crew; this helicopter will be available full-time in May 1991.

- The system is activated by a referring physician or designee contacting Airlift Northwest's Medical Director or representative.

- The patient s medical profile is described and the attending physician, referral hospital, and landing area are identified.

- The Airlift Northwest Medical Director and/or representative provides the referring physician with an estimated time of arrival (ETA).

- The on-duty helicopter pilot is alerted, as are the on-duty flight nurses, which would be based at Harborview in this example. The helicopter takes off from its Harborview base approximately 5-10 minutes after receiving the initial request from the referring physician. If an isolette is required on the mission, the time before takeoff will be longer and could be as long as 27 minutes, if a transport team specialist is not in-house.

- The helicopter arrives at the referring hospital's designated landing area or helistop. The patient may be at the landing area and prepared for flight or the medical crew may have to go to and prepare the patient by administering specialized care that may not be available at the referring facility. Elapsed ground time could be as little as ten minutes for the former or one and one-half hours for the latter. Transfer by ground ambulance from the referring hospital to the helicopter may or may not be involved.

- The medical crew monitors the patient en route and administers medication and/or other care as needed. En route the helicopter contacts Children's and relays medical condition and needs, and flight information (e.g., ETA).

- Prior to ETA, Children's secures the area surrounding the helistop and stops traffic on adjacent Penny Drive.

- The helicopter arrives at the helistop and shuts down the engines. The patient is unloaded and wheeled to the Emergency Room door, approximately 142 feet away. After retrieval of any equipment and communication of essential medical information from the medical transport team to ER staff, the pilot restarts the engines and after an estimated total ground time of approximately 20-30 minutes (or longer, if the isolette is being retrieved) returns to Harborview.

Those missions in which a patient is first transported to Boeing Field by fixed-wing and then transported to Children's by helicopter (approxi-

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mately 1-2% of the helicopter transports to Children's) already have a pediatric medical crew in attendance. Consequently, there usually would be no need to pick up a specialty transport crew at Harborview or Children's. However, there would be three flight segments if the aircraft used is based at Harborview or two flight segments if the helicopter is based at Boeing Field.

Flight Path - General

Flight path information in this chapter is based on the approaches and departures that have been designed by Airlift Northwest pilots. Final approach and departure routes would require FAA approval pursuant to Airspace Review; however, the FAA allows the pilot to deviate from designated flight paths (Benedict, 1986). In selecting flight paths, the Airlift Northwest helicopter pilots comply with FAA regulations and are sensitive to safety, to reducing patient transport time, and to noise considerations. In general, when and where possible, the pilots avoid flying over hills and over or near densely populated areas (Hill, 1986). The minimum altitudes, specified in Airlift Northwest's operations manual, is 500 feet over congested areas and 800 feet at night, except for takeoff and landing (Childs, 1989).

For a helistop at Children's, the Intramural Field, or University of Washington Medical Center, the flight paths would be comparable for flying into the vicinity. Only the individual approach and departure routes would be different.

In general, aircraft from the north or south would follow the I-5 corridor. When coming from the south, aircraft would turn toward Children's once past Capitol Hill. When headed from the north, aircraft would turn toward Children's when approximately even with N.E. 45th Street. Aircraft from the east generally would pass south of Webster Point and north of Madison Park, before turning north over Union Bay and entering the final approach. Aircraft from the west would generally pass between Magnolia/Queen Anne and Ballard/Fremont and turn toward Children's once over Portage Bay (see Figure 7, Generalized Flight Paths).

The land uses vary considerably in the areas over which Airlift Northwest helicopters would primarily fly. These land uses range from urban freeway to commercial to residential.

As allowed by the FAA, actual flight paths could be different, depending on meteorological and patient conditions and the specific origin of the patient being transported. The helicopter would not be used during adverse weather conditions.

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The Airlift Northwest rotary-wing program operates under the following minimums:

Mode of Flight	Ceiling	Visibility
Day Local Area	800 ft	1 mile
Day Cross-Country	1,000 ft	2 miles
Day Cross-Country (mtns)	1,000 ft	2 miles
Night Local Area	800 ft	2 miles
Night Cross-Country	1,000 ft	3 miles
Night Cross-Country (mtns)	2,000 ft	5 miles

This non-local daytime minimum differs from that in the Draft EIS, which stated a 500-foot ceiling or less than one-mile visibility is required. The change reflects a revision to the HAT operations policy (Childs, 1989d). Day local area minimums of an 800 foot ceiling and 1 mile visibility is expected to occur approximately 2.5% of the time. Night local area minimums are expected to occur approximately 3.5% of the time (Felton, 1990). (Refer to Appendix B for additional minimums.) As a company policy, the helicopter does not fly in winds in excess of 40 knots (Hill, 1986).

Flight Path - Approach to and Departure from Children's Helistop

Two final approach-departure paths into the Children's helistop would be used by Airlift Northwest. A primary approach-departure path would be used under most wind conditions, while the secondary approach-departure path would be used when winds out of the northwest quadrant are in excess of approximately 17 knots. Based on surface wind data for Naval Air Station Sandpoint, winds in excess of 17 knots from the northwest quadrant are expected about 0.6% of the time (Felton, 1990). Data for Seattle-Tacoma International Airport indicate a smaller frequency of occurrence, approximately 0.2% of the time (U.S. Air Force Air Weather Service, 1970). These winds would be most likely to occur during the winter months (U.S. Air Force Air Weather Service, 1970). For either the primary or secondary approach-departure a "noise abatement" profile would be followed.

The primary approach to the Children's helistop (see Figure 8) would originate approximately at the intersection of N.E. 45th Street and Union Bay Place at an altitude of 1,000 feet. At that approximate point, the pilot would decelerate from approximately 160 to 120 knots but not reduce altitude. The pilot would maintain the 1,000-foot altitude and airspeed for approximately the next 1,500 feet, while staying within the general N.E. 45th Street/Sand Point Way N.E. corridor. Approximately southwest of the intersection of Sand Point Way N.E. and 40th Avenue N.E., the landing gear would be lowered and the pilot would begin to descend at a rate estimated at 1,500 feet per minute. The helicopter would continue northeast along Sand Point Way N.E., decelerating to a speed of approximately 74 to 80 knots prior to the turn onto the Children's campus and final approach. The rate of descent decreases considerably in the final stages of the approach in the noise abatement approach-departure path. The helicopter would enter the Children's campus north of the main entrance and, while approximately over the parking garage at an altitude of 500 feet, would turn south toward the helistop. Under most wind conditions, the helicopter would then make its final descent to the helistop directly from the north.

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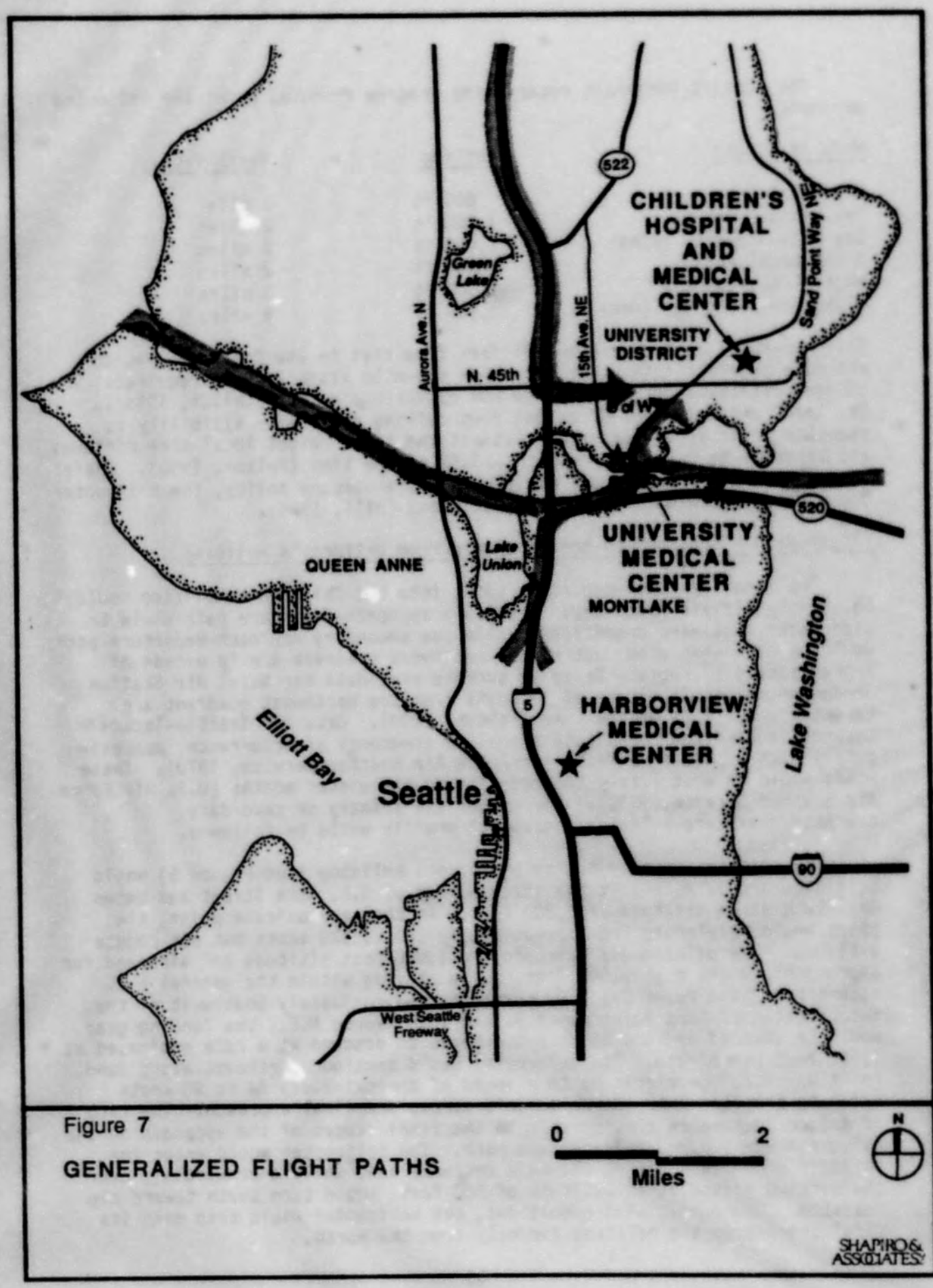

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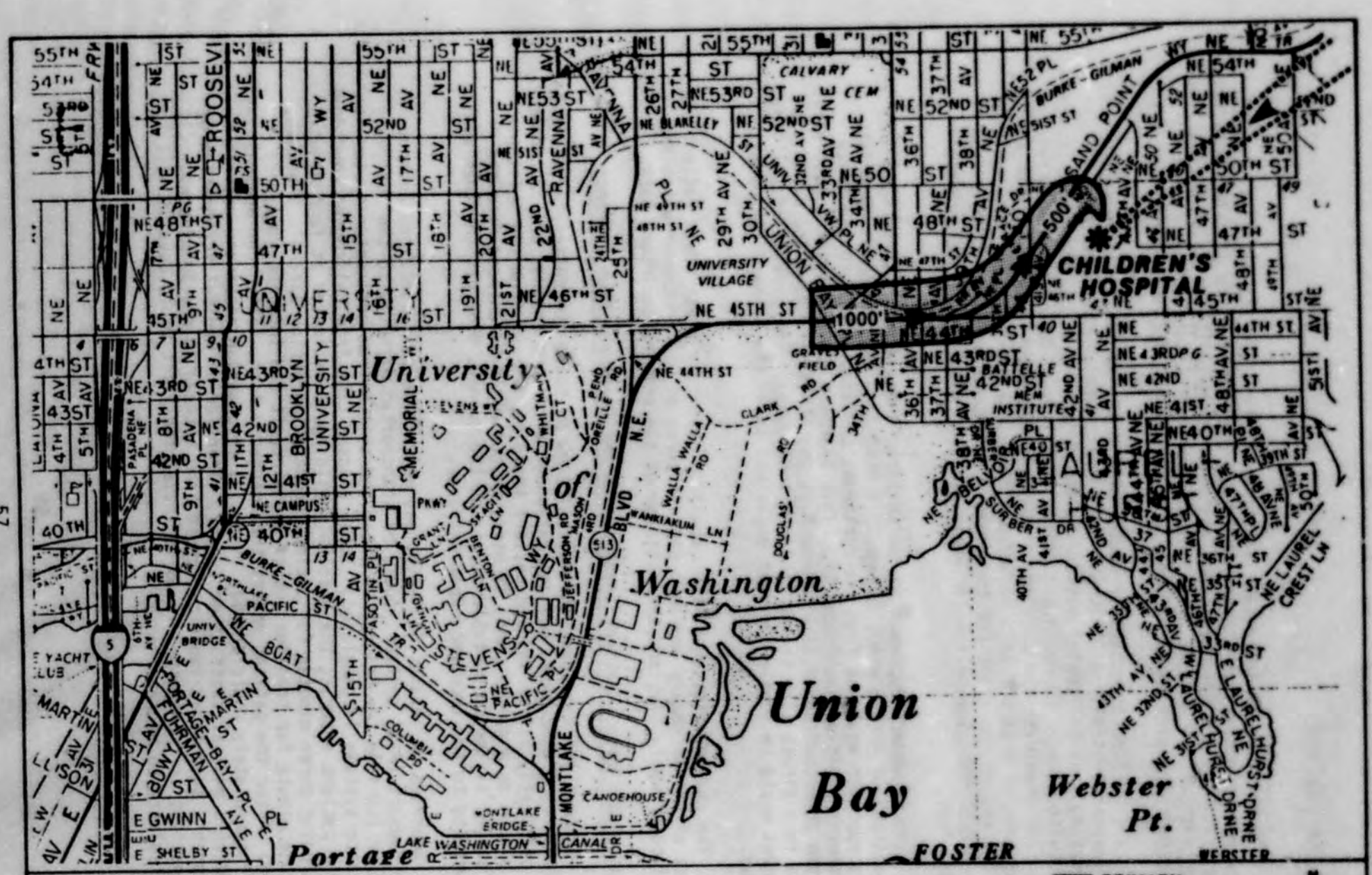

FIGURE 8

PRIMARY AND SECONDARY APPROACH AND DEPARTURE PATHS TO CHILDREN'S HELISTOP

In the case of infrequent strong easterly winds the helicopter would turn more tightly over the main entrance and approach the helistop more from the west. In the case of strong westerly winds (also estimated at less than one-tenth of one percent of all winds) the helicopter would make a wider turn over the parking garage and approach the helistop more from the east.

The helicopter generally would land on the helistop facing south. The helicopter typically would shut down its engines on the helistop. In departing, the helicopter would rise to approximately 35 feet, turn counter-clockwise toward the north and climb rapidly so as to be at approximately 500 feet when over the parking garage. The departure path would be over the same general area but at a higher altitude than the approach path, so that at the end of the climb (at the point of commencing deceleration on the inbound flight) the helicopter would be at an altitude of approximately 2,000 feet.

The secondary approach to the Children's helistop would be used only in conditions of strong winds (above 17 knots) from the northwest quadrant. This approach would be from the northeast and also would use the noise abatement profile (see Figure 8). This approach would originate just north of the intersection of 55th Avenue N.E. and Windermere Road and would proceed in a direct line to the Children's helistop. The profile of the final descent would be similar to that explained under the primary approach, above.

The characteristics of the secondary departure route would reflect those of the secondary approach path in terms of the area over which the helicopter would fly, and the altitude of the primary departure path.

Ground Activities - Patient Transport to the Emergency Room Entrance

Once at the helistop, the medical crew on board the helicopter would be assisted by ground-based medical personnel after the engines are shut down. The critically ill or injured patient would be removed from the helicopter and placed on a gurney, and, if used, oxygen would be changed from the helicopter system to portable oxygen on the gurney. The patient then would be wheeled to the Emergency Room entrance.

Neonates or infants in isolettes, which have self-contained Advance Life Support (ALS) systems, could be transported directly to the Emergency Room or ICU from the helicopter after the switch from helicopter systems to isolette systems is completed. Total elapsed time from helicopter touchdown to the patient entering the hospital building is estimated at four minutes (including three minutes for patient preparation during aircraft shutdown, and one minute for transfer out of the aircraft and into the Emergency Room). After the patient enters the Emergency Room, helicopter medical staff immediately would provide essential information about the patient to Children's medical staff as necessary. Transfer of medical information or equipment, such as an isolette, could take between 20 and 30 minutes. (If the patient is transported in an isolette, the pilot would usually wait for the isolette to be returned.)

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Mitigation Measures that are a Part of the Proposed Action

As part of the Proposed Action, the proponent has incorporated mitigation measures that would reduce the adverse impacts associated with the project. During helistop construction the contractor would be required to implement erosion control measures. Children's has moved the oxygen tank that previously was located west of the Kitchen Garden to a location inside the hospital structure. This relocation reduces the risk of a punctured oxygen tank fueling combustion in the event of an accident at the helistop.

The proposed helistop would incorporate a fire suppression system consisting of a minimum of one 60B:C fire extinguisher. (A fire hydrant is located adjacent to the helistop.) No aviation fuel would be stored on campus. Children's has been trained and is equipped in shutting off the natural gas supply line that serves the campus.

The helistop would be fenced for security. Procedures have been developed and responsible personnel trained for controlling vehicular and pedestrian traffic. Warning signs would be posted on Penny Drive. The helistop would be landscaped. "Glow" rather than direct beam landing lights would be used for the helistop; these lights would be operated only during nighttime use. A glide slope indicator light would be installed as part of the helistop. Additional safety lights would be installed on the Medical Pavilion, Medical Center, and parking garage. Engines normally would be shut down during medical crew pickup, if any, and patient delivery.

Missions would be limited to those associated with critically ill or injured patients. Children's and Airlift have actively participated in the development of communications guidelines to ensure communication from air-to-ground is facilitated. Children's has adopted a policy discouraging MAST helicopters or other air ambulances from landing at the helistop unless there is adequate two way communication available and the patient is unstable and might not survive or tolerate any further transport, delay, or transfer to another carrier. Children's would contact other vendors in the area as well as other services that could transport patients to Children's. The purpose of the contacts would be to inform the vendors and services: of the existence of the helistop; of restrictions on use; of the helistop's capabilities in terms of accommodating helicopters of different sizes; of flight path protocols; of protocols for communicating with the hospital; and of protocols for communicating with other helicopters in queuing situations.

Airlift's flight path has been designed to reduce, as far as practicable, flight over sensitive properties - with general flight paths following I-5, arterials and water bodies. The primary approach and departure path has been designed in order to minimize impacts on adjacent, nearby, and sensitive properties. A noise abatement flight path - involving flying higher for a longer period during approach and departure - would continue to be used.

Airlift Northwest guidelines on acceptable weather conditions are more restrictive than those of the FAA. In addition, Airlift has personnel levels (pilots per aircraft) that meet or exceed NEMSPA/AAMS levels, a

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minimum experience requirement and ongoing certification for pilot hiring that exceeds AAMS requirements, and ongoing training for pilots and medical team personnel that address the majority of guidelines and standards that have been developed by AAMS and NEMSPA. Airlift Northwest's helicopter features medical and safety equipment that is consistent with the standards for such equipment established by NEMSPA and AAMS. (The reader is referred to Appendix B, which identifies the guidelines that have been developed by these two organizations as well as Airlift Northwest's consistency with these guidelines.) The design of the helistop proposed for Children's would comply with all local, state, and federal safety regulations with respect to the design helicopter (Agusta).

Children's has agreed to the development of and participation on a Medical Review Committee. The purpose of the Medical Review Committee would be to review compliance of the Kitchen Garden Helistop use with the Council Conditional Use Permit criterion that states that use of the helistop will be restricted to occurrences involving life-threatening emergencies. As presently conceived, the committee would examine the records of transports directly to Children's to determine their consistency with the criterion and, if appropriate, recommend corrective action. The Medical Director of Airlift Northwest would retain ultimate authority and responsibility for all Airlift Northwest missions. Additional review criteria could be added by the City as conditions for approval to any permit issued for the helistop.

As envisioned by the project sponsor, the five-member advisory committee would be chaired by the Director of the Seattle-King County Department of Public Health. Other members of the committee would include a representative of Children's, a representative of the Washington State Medical Association, a representative of the Washington State Society of Pediatrics, and a citizen appointed by the Mayor and confirmed by City Council. The City of Seattle could add members to the advisory committee, to include doctors not affiliated with Children's and citizens familiar with the medical issues involved. The committee's duration, as proposed, would be three years, unless extended by the Mayor and Council.

The committee's responsibilities would include developing written guidelines for determining whether helicopter transport to Children's campus involves a life-threatening emergency; conducting semi-annual reviews of transports to Children's campus to determine whether each transport involved a life-threatening emergency; reporting the committee's findings, including recommendations for actions to decrease the incidence of medically unnecessary helicopter landings at the Children's campus, if any; and developing procedures for ensuring that proceedings and results are open and available to the public to the extent allowed by the laws and administrative rules governing confidentiality of patient medical records.

A memorandum from the project sponsor discussing the committee's purpose, composition, responsibilities, staff support and funding, operations, reports and recommendations, and evaluation and duration is incorporated into this Final EIS as Appendix C.

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It should be noted that in September 1989 the Medical Director of Airlift Northwest approved standing orders for landing at Children's and issued a medical justification form, which the medical transport team must complete and submit to the Medical Director following a Children's landing specifying the justification for landing. As specified in the standing orders, a landing at Children's is authorized by the Medical Director of Airlift Northwest if during the transport of a critically ill child any of the following clinical conditions occur: unstable airway; inability to ventilate/oxygenate; inability to maintain adequate cardiac output; inability to maintain adequate cerebral blood flow; the persistence of unstable vital signs despite heroic attempts to control them (Childs, 1990).

DESCRIPTIONS OF ALTERNATIVES TO THE PROPOSED ACTION

Intramural Field Helistop Alternative

The Intramural Field Helistop Alternative is the University of Washington Medical Center's existing helistop, and is referred to by the University of Washington as the University of Washington Medical Center East Campus site.

The Intramural Field site is located in the midst of the University of Washington Athletic Field complex just east of the University Campus, south of N.E. 45th Street, and west of the Laurelhurst neighborhood. The primary land uses surrounding the site are athletic fields and parking lots. The University Village shopping mall is located north of the site, across N.E. 45th Street, with residential uses to the north, east, and west of University Village. It is located near the University of Washington's Intramural Field, off Union Bay Place N.E., approximately one road mile from Children's Emergency Room entrance (see Figure 9).

Under this alternative, Children's would have to obtain approval from the University of Washington to jointly use this site, and a legal agreement between Children's and the University of Washington would be developed and signed. This use agreement currently is being developed.

The University does not plan to change the general location of the current helistop. However, improvements may be made to the site in the future in order to improve the safety of the landing site and facilitate its use during wet weather. Site improvements could include construction of a fence, lighting (requiring extension of electricity to the site), paving, installation of a fuel separation and holding tank (in case of a fuel spill), and a wind sock. The University has met with Children's to discuss potential design improvements.

The Intramural Field Helistop Alternative differs from the Proposed Action in terms of the need to transfer the patient to ground ambulance for transport to the Children's Emergency Room entrance and the final approach and departure routes of the helicopter. In instances where pickup of the medical crew at Children's or the Intramural Field is needed, there could be as many as 30-40 landings and takeoffs at the Intramural Field, for the 15

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to 21 month transport missions (affiliated with Children's - not taking into account the transports associated with University of Washington Medical Center) projected to occur by 1995. Similar to the Proposed Action, landing at Boeing Field and ground transport of the patient to Children's could occur during inclement weather when pilots fly under instrument flight rules.

Flight Path

The flight path to the general vicinity of the Intramural Field Helistop would follow that path described under Flight Path - General, above. The flight path to the helistop would generally be of slightly shorter duration than flights directly to Children's. The approach and departure paths presented in this Final EIS differ somewhat from those presented in the Draft EIS. In order to avoid disturbing wildlife in the ecological area east of the Intramural Field, the flight paths from the south and east have been redefined to fly along Montlake Boulevard N.E. and also to fly at a higher altitude. Final paths would need to be approved by the FAA.

As illustrated in Figure 9, there are several approach and departure paths that would be used by Airlift Northwest helicopters flying into the Intramural Field Helistop.

From the east, the helicopter would pass south of Webster Point over Union Bay at an altitude of approximately 1,000 feet before descending into a turn south of Husky Stadium. Following Montlake Boulevard N.E., the helicopter would be at an altitude of approximately 500 feet when opposite the Stadium. Approximately at the point where the helicopter is past the Hec Edmundson Pavilion, it would turn northeast toward the helistop.

From the south and west, the helicopter would follow SR-520 at an altitude of 1,000 feet before turning north to follow Montlake Boulevard N.E. toward the helistop. The final approach would be identical to that described above for missions originating from the east.

From the north, the helicopter would fly along I-5, turning toward the east and descending from 1,000 feet to 500 feet along the N.E. 45th Street corridor. At the intersection of N.E. 45th with 25th Avenue N.E. the helicopter would turn toward the southeast and make its final descent into the helistop.

If winds out of the south exceed 17 knots, an alternative final approach route would be used by aircraft originating from the south, east, and west. Such aircraft would follow the same initial routes, but they would continue north on Montlake Boulevard to N.E. 45th Street, where a sharp turn would be made to allow for a southerly descent onto the helistop.

The departure would involve vertical lift to an altitude of 35 feet, turning and ascending along one of the routes designated as an approach path depending on the aircraft destination. The ascent rate would be comparable to that described for the Proposed Action.

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Figure 9

Proposed Flight Paths for Intramural Field Heilstop

Ground Activities - Patient Transport to the Children's Emergency Room Entrance

Once the helicopter with medical crew and patient has landed at the Intramural Field Helistop, the pilot would shut down engines. A ground-based crew with ambulance and driver would meet the aircraft and assist the helicopter's pediatric crew in unloading the critically ill or injured patient for transport to Children's. Patient landing and preparation and transfer of the patient out of the aircraft into the ambulance would average six minutes (with a minimum of 4.5 minutes and a maximum of 13 minutes). Ambulance travel time from the Intramural Field Helistop to Children's averages two minutes (with a minimum of 1.5 minutes and a maximum of three minutes). Transfer out of the ambulance and into the Emergency Room would take between one and four minutes. The transfer process, depending on life support system and stabilization needs, and the ground travel time, depending on traffic, could result in an absolute minimum of seven minutes or as long as 20 minutes elapsing before the patient is in the hospital (Kilian, 1987b). For transport of patients on a gurney or in the isolette, or if the patient is intubated (using a breathing tube) the transfer is more difficult because if any IVs or tubes are inadvertently disconnected, then reconnection must be made and stabilization must occur prior to the ambulance leaving for Children's.

The transfer process also is made more complex when the patient is being hand-ventilated or is being administered treatment that requires the full attention of a transport team member (Kilian, 1987a). If the ambulance electricity or oxygen supply is used, the transfer and transport process will take longer (Kilian, 1987a). Exposure to adverse weather and/or field conditions increases the potential for destabilization (Andrews, 1986). The transfer process is summarized along with estimated minimum, average and maximum transfer times in Table 5. These transfer times are compared to those of other alternatives in Figure 11.

The Seattle-King County Department of Public Health concluded that "there are hospital transfers to Children's where 10 minutes are critical to a severely ill infant or youngster, but the actual number of such cases is small" (Nicola, 1987). Delays in treatment of other patients, while perhaps not a life or death situation, could result in suffering, the need for prolonged treatment, permanent disability or other unfavorable outcome. Examples of these other situations include patients with impaired breathing, diaphragmatic hernia, aspiration of a foreign body, cardiac irregularities, near drownings and vascular collapse from general infections (Neff, 1986).

Muddy conditions on the field also could expose the patient to risk of complication in the event that attendant(s) slip during transport and jostle connecting lines to the ALS System. Because of the uneven surface, there is the potential for attendant(s) to slip and fall during the transfer of a patient out of the helicopter (Kilian, 1987a; Childs, 1991a).

This alternative does not meet the proponent's objectives for all landings, because the alternative involves two additional transfers (in and out of the ambulance).

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University of Washington Medical Center Helistop Alternative

While not under consideration at this time, the University of Washington has proposed using the helistop located on the roof of the East Wing to the University of Washington Medical Center. If the University of Washington were to propose use of the helistop, its purpose would be to allow critically ill patients (high risk obstetrical patients, premature infants with respiratory distress, cardiac patients, etc.) destined for University of Washington Medical Center to be transported directly from the helicopter to the University of Washington Medical Center, thereby saving time and the need for potentially destabilizing patient transfers involved with patient transports from remote landing locations. The existing Intramural Field helistop would remain, if the University Medical Center rooftop helistop were to be used.

This alternative proposes that the University of Washington Medical Center, also a member of the Airlift Northwest consortium, share use of the rooftop helistop with Children's, if the helistop receives the applicable land use approvals. However, for patient care and liability reasons, it is unlikely that the University of Washington Medical Center would allow Children's-destined patients to be landed on the helistop on the roof of the hospital (Shawcroft, 1986).

For the purpose of environmental analysis it is assumed that the characteristics of transport missions for Children's-destined patients would be identical to the Proposed Action and the Intramural Field Alternative.

The University of Washington Medical Center Helistop has been designed as a 3,300-square-foot area on the roof of the hospital's new east wing. The structure has been built to accommodate the landings of aircraft that weigh less than 6,000 pounds, which would preclude MAST, Coast Guard, and Navy helicopters from landing (see Table 4 for specifications of helicopters). The flight path and requirements for patient transfer are different than those proposed for either the Children's or Intramural Field Helistop Alternatives.

The University of Washington Medical Center is located on the southern boundary of the University of Washington Campus, immediately northwest of the Montlake Bridge. The hospital is surrounded primarily by the University of Washington Campus, which is located to the north, northeast, and east of the site. There are other University-oriented uses to the west of the site, with some commercial activity along N.E. Boat Street, west of the site. To the southeast of the site immediately south of the Montlake Cut of the Lake Washington Ship Canal is an area of single-family residences and the Seattle Yacht Club. Portage Bay lies to the southwest of the site.

Flight Path

The flight path to University of Washington Medical Center's rooftop helistop is more compact and the flight would generally be of slightly shorter duration for flights from the south, east and west than the approaches to either the proposed Children's or Intramural Field Helistops. Moreover, the rooftop location decreases the total helicopter descent distance.

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Table 5

STEPS AND THEIR TIME REQUIREMENTS FOR TRANSFERRING PATIENTS FROM THE INTRAMURAL FIELD HELISTOP TO CHILDREN'S EMERGENCY ROOM

Step	Time[1] Minimum	Typical	Maximum
The Life-Pak Monitor is changed from the monitor ledge to the gurney. Any of the helicopter-based systems (i.e., oxygen) that were connected to the patient while in the helicopter would have to be disconnected and the patient placed on portable oxygen. (For those patients in isolettes, there would be a need to be disconnected from aircraft electrical systems and switched to the isolette's battery pack. For isolette patients on high percentage oxygen, the team would disconnect the infant from the ventilator and hand-ventilate while the oxygen hoses were being changed from the aircraft to the isolette system.)	3 min.	3 min.	5 min.
The patient is transferred from the helicopter across the helistop to the awaiting ambulance, transferred into and secured in the ambulance, in which any support systems may have to be reconnected. The patient would face the greatest risk of advanced life support systems disconnecting during this transfer. See Note [2], below.	1.5 min.	3 min.	8 min.
The patient may require stabilization before the ambulance can leave the Intramural Field. See Note [2], below.	0 min.	-Average Not Possible-	
The patient and medical team would be driven from the helistop to the Children's Emergency Room entrance.	1.5 min.	2 min.	3 min.
Any support systems would have to be disconnected at the hospital for final transfer out of the ambulance and into the Emergency Room.	1 min.	2 min.	4 min.
TOTAL TRANSPORT TIME FROM INTRAMURAL FIELD TO CHILDREN'S	7 min.	10 min.	20 min.

Notes:

1 Time estimates for each of the steps assume that the patient is not transferred in an isolette, which may take longer, particularly if destabilization occurs.

2 Those patients who are in most critical condition likely are those that have IVs or monitoring devices connected, and/or that have CPR or hand-ventilation (forced respiration) being performed. The transfer of these patients typically is accompanied by two transport team members carrying the patient and at least one other transport team member administering care. The transfer of these critical patients is more complex, often more time-consuming, and more likely to have destabilization occur.

Sources: Childs, 1987; Shepard Ambulance, 1987, Shapiro and Associates, Inc., 1987.

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In the past when the University of Washington Medical Center considered its rooftop helistop, there were discussions with Airlift Northwest that resulted in adjustments of the proposed approach and departure routes compared to those that were identified in the Draft EIS.

The revised flight approach to the University Medical Center Helistop from the north, south, or west would begin from a point along I-5. Depending on the location of the patient pickup site, the helicopter would head either north or south towards the University of Washington. If the approach along I-5 were from the south, the helicopter would turn east at approximately SR-520 (see Figure 10) at an elevation of about 1,000 feet. After crossing Montlake Boulevard N.E., it would turn north heading across the Ship Canal and then, reducing altitude to about 500 feet, it would head west over the Canoe House for the final approach from the east and descent onto the rooftop helistop.

If the approach along I-5 were from the north, the helicopter would turn east at N.E. 45th Street at an altitude of about 1,000 feet. The aircraft would then turn south at Montlake Boulevard N.E. (see Figure 10) and pass over Hec Edmundson Pavilion at an altitude of approximately 500 feet. The approach would continue south on Montlake Boulevard N.E. and N.E. Pacific Place, with the helicopter making the final descent to the helistop from the north.

An approach from the east would pass across Union Bay at an elevation of approximately 1,000 feet. In the vicinity of the Hec Edmundson Pavilion, the helicopter would descend to an altitude of about 500 feet and turn towards the south over Montlake Boulevard N.E. and N.E. Pacific Place for the final descent to the helistop.

The alternative flight path would follow the same initial route as the approach from the south and west, heading east along SR-520. After crossing Montlake Boulevard N.E., the helicopter would turn north across the Ship Canal and, descending to an altitude of about 500 feet, would turn west and then south around the Hec Edmundson Pavilion. The helicopter would then travel south over Montlake Boulevard N.E. and N.E. Pacific Place for the final descent onto the rooftop helistop.

When parked on the rooftop, all Airlift Northwest helicopters would face in a south to south-easterly direction.

Due to the limited size of the landing area and the proximity of the Medical Center building to the pad, the helicopter would be unable to turn around over the pad, rendering it unable to depart in the same direction from which it approached (Hill, 1986). Thus, the helicopter would have to approach from one of the indicated directions, and depart from the other on every flight. Following liftoff, any flight path could be followed after the helicopter clears the building.

Ground Activities - Patient Transfer to the Children's Emergency Room Entrance

Generally, the process of transporting a patient from the University of Washington Medical Center Rooftop Helistop to Children's would resemble the

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Figure 10

Proposed Flight Paths for University Medical Center Helistop

process in transporting a patient from the Intramural Field. The two primary exceptions would be transporting the patient from the rooftop to the ground via elevators, and the added distance for the ambulance to travel. Once the helicopter with medical crew and patient has landed, the pilot would shut off the engines. A ground-based crew would meet the aircraft and, with the helicopter's medical crew, transfer the patient out of the helicopter and onto a gurney and wheel it inside to the elevators. The patient would be transported via elevator down five floors through the University of Washington Medical Center to the Emergency Room. The patient would be wheeled out of the Emergency Room and transferred into the waiting ambulance and secured. The patient could need the disconnection of systems from the aircraft and reconnection in the ambulance and then disconnection of the system at the Children's Emergency Room entrance. The patient would face the risk of destabilizing during these transfers. It is estimated that the transfer process into the ambulance, including patient landing and preparation, transfer of the patient out of the aircraft into the elevator, through the Emergency Room, and into the ambulance would average nine minutes (with a minimum of 7.5 minutes and a maximum of 16 minutes). The transfer takes three minutes longer than a transfer at Intramural Field to allow for transport in the elevator to the waiting ambulance.

The approximately two-mile trip from the University of Washington Medical Center to Children's would include travel along N.E. Pacific Street, N.E. Pacific Place, Montlake Boulevard N.E. and then onto N.E. 45th Street and Sand Point Way N.E. Traffic at the intersection of N.E. Pacific Place and Montlake Boulevard N.E. is likely to be congested during commuter hours and on event days at Husky Stadium, Hec Edmundson Pavilion or on campus. Alternative routes exist through the University's East Campus that could avoid traffic on Montlake Boulevard N.E. and N.E. 45th Street. The ambulance would have to pass through several road and parking lot gates, which must be opened by the University. This alternative route could avoid part of the congestion on Montlake Boulevard N.E., but the ambulance would still have to travel through the intersection of Montlake Boulevard N.E. and N.E. Pacific Place, and the backroads would be subject to congestion during sporting events. According to Shepard Ambulance, the travel time from University of Washington Medical Center to Children's takes a minimum of three minutes, a maximum of 20 minutes and averages five minutes (Berschauer, 1987). Thus, it is estimated that from the time of landing on the roof of University of Washington Medical Center, it would take a minimum of 11.5 minutes for a patient to enter Children's Emergency Room. The average transfer time is estimated at 16 minutes and the maximum is estimated to be 40 minutes. If the patient is in an isolette, it would take slightly longer. Any manipulation of life support systems or need for restabilization would add to this travel time total. Consequently, the risk to the patient would be greater than that for the Intramural Field Alternative. See Figure 11 for a comparison of University of Washington Medical Center transport times and transport times for landings at Children's and the Intramural Field.

The transport of the critically ill or injured patient from the University of Washington Medical Center rooftop, through the hospital to an ambulance and transport to the Children's Emergency Room entrance conflicts with the sponsor's objectives for minimizing the numbers of transfers and transport time.

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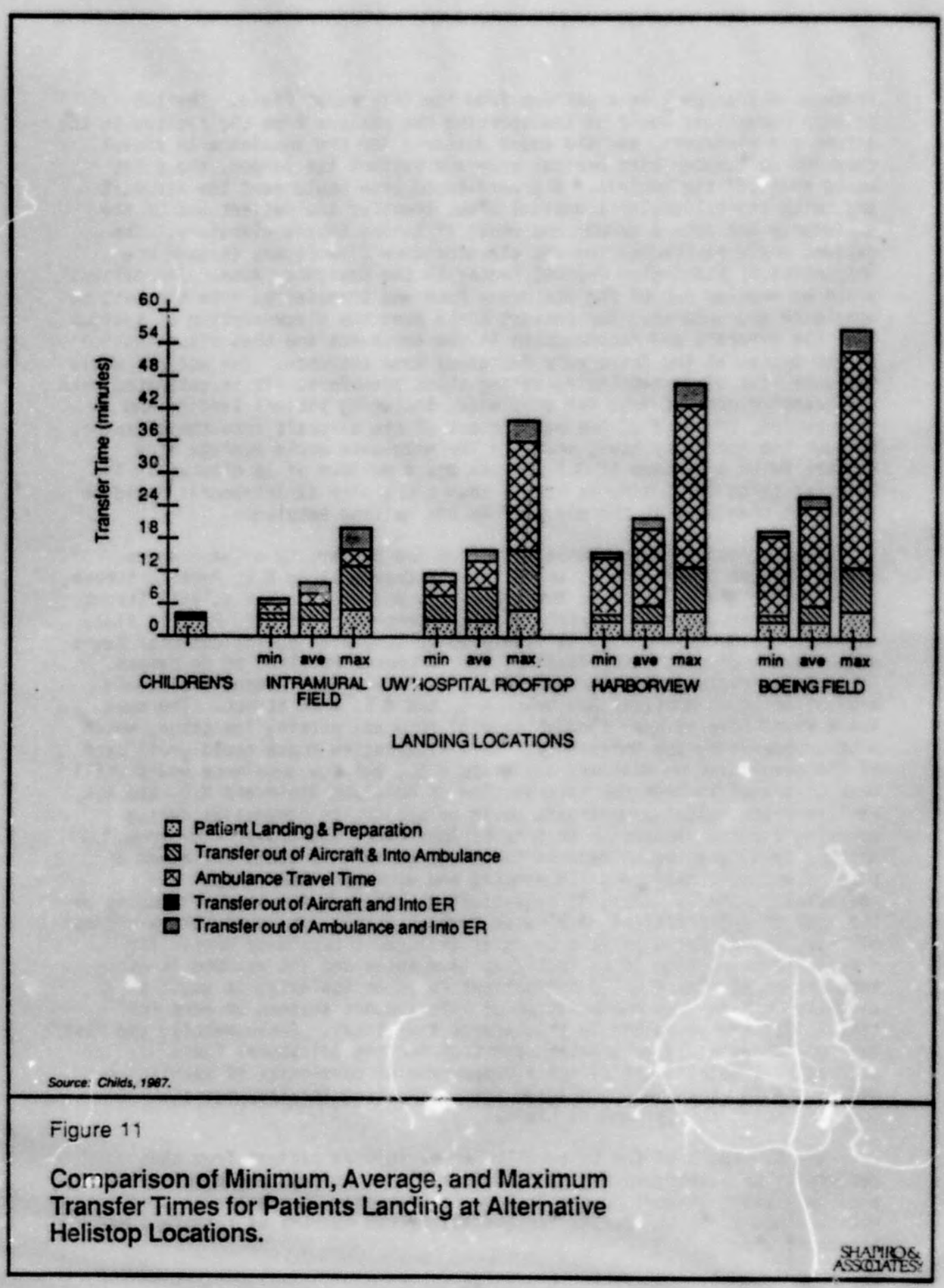

Source: Childs, 1987.

Figure 11

Comparison of Minimum, Average, and Maximum Transfer Times for Patients Landing at Alternative Helistop Locations.

SHAPIRO & ASSOCIATES

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Limited Landings - No Construction of the Proposed Action or Alternatives

The Limited Landings Alternative is characterized by no construction of a helistop at Children's or use of the Intramural Field or the University of Washington Medical Center's rooftop helistop (if its use were approved by the Seattle City Council; this option is not being considered by the University at this time). Critically ill and injured patients who otherwise would be transported to Children's by an Airlift Northwest helicopter would be off-loaded at Harborview or Boeing Field, transferred to a ground ambulance and driven to Children's. MAST helicopters would probably continue to land at the Intramural Field. There would, however, be continued limited landings in the driveway area outside the Children's Emergency Room entrance for the most critically ill or injured patients. Similar to the Proposed Action, this alternative would involve up to three flight segments (with an additional segment possible, if pickup of the medical transport team at the Intramural Field or Children's is necessary). In addition, landing at Boeing Field and ground transport to Children's could occur during inclement weather requiring pilots to fly under instrument flight rules.

Prior to the ambulance departing from either Harborview or Boeing Field, critically ill and injured patients would need to be disconnected from the systems in the helicopter, transferred to an ambulance, reconnected and, possibly, restabilized. This process is expected to take an average of six minutes (with a minimum of 4.5 minutes and a maximum of 13 minutes) for either Harborview or Boeing Field. This is the same amount of time as for transfers at the Intramural Field Helistop.

Ambulance travel time from Harborview Helistop to Children's averages 14 minutes (with a minimum of 10 minutes and a maximum of 30 minutes); from Boeing Field to Children's, 18 minutes (with a minimum time of 14 minutes and a maximum of 40 minutes) (Berschauer, 1987). Actual ambulance travel time is affected by traffic conditions and is likely to be lengthened or complicated during commute hours; during delays due to traffic backing up with Montlake Bridge openings; during events at the University, Seattle Center, or other locations in Seattle; or during construction that affects traffic on I-5, SR-520, Montlake Boulevard, or Sand Point Way N.E.

Thus, total minimum elapsed time for transit from landing at Harborview to a patient entering Children's Emergency Room entrance would be 15.5 minutes, would average 22 minutes and could take as long as 47 minutes.

From Boeing Field, the transfer would take a minimum of 19.5 minutes, would average 26 minutes and could take as long as 57 minutes. Additional time could be required if the patient is destabilizing or in an isolette. See Figure 11 for a comparison of patient transport times.

The helicopter's medical crew could judge whether patient and/or traffic conditions warranted landing the critically ill or injured patients in the driveway area outside the Children's Emergency Room entrance.

Dr. Neff, Children's Medical Director, has indicated that if Airlift were allowed to land only outside the Emergency Room, at Harborview and/or Boeing Field, then the majority of the patients would land outside the

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Children's Emergency Room. The decision to land these patients outside the Children's Emergency Room would be based on the need to minimize the risk of destablization and adverse outcome. The remainder of the critical patients could be effectively transported by helicopter to Harborview and/or Boeing Field and then transported by ground ambulance to Children's.

In instances in which landings occur outside the Children's Emergency Room entrance, it would be necessary to secure the landing zone area. This would be accomplished by security and/or other personnel from Children's. The flight approach to this landing zone area would be similar to that for the proposed helistop.

The flight path in and out of the Intramural Field for MAST transports would be identical to that described under the Intramural Field Helistop Alternative. Muddy conditions or uneven terrain on the field also could expose the patient to risk of complication in the event that attendant(s) slip during transport and jostle connecting lines to the ALS systems (Kilian, 1987a; Childs, 1991a).

Because of the additional transport time and need for potentially destabilizing transfers, the Limited Landing Alternative does not meet the sponsor's objectives.

The Preferred Alternative - Landing the Most Critical Patients at Children's Helistop with Other Patients Landing at the Intramural Field

Children's asserts that the best alternative from a patient care perspective is that all patients transported to Children's by helicopter land at a paved, secured helistop outside the entrance to the Emergency Room (the Kitchen Garden site). Children's believes, however, that without inordinately sacrificing patient care, the majority of Children's-destined patients can land at the existing helistop at the Intramural Field and then be transported to the hospital by ambulance. Only the most critically ill or injured patients would have a medical need to land at the hospital.

These principles, along with the desire to minimize impacts on the community, are the premise of a new alternative (or Preferred Alternative) that is presented in this Final EIS. The Preferred Alternative combines some of the features of the alternatives that were examined in the Draft EIS and also includes mitigation measures that had not been incorporated previously.

The helistop at Children's would be a paved, fenced landing pad that would have the same features as those described under the Proposed Action. The only difference in the helistop would be that there would be fewer takeoffs and landings at the Children's campus.

Children's proposes in the new Preferred Alternative that only the most critically ill and injured patients land at a helistop that would be constructed at the Kitchen Garden site. These landings typically would involve patients who had destabilized in flight or patients whose outcomes would be adversely affected by a longer transport time. All non-emergent patients would land at the Intramural Field, if allowed, and be transported

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to the hospital by ground ambulance. If the Intramural Field site were not authorized, the Harborview facility would be used. Similar to the Proposed Action, up to three flight segments would be involved (with an additional segment possible if pickup of the medical transport team at Children's or the Intramural Field is necessary). In addition, landing of the patient at Boeing Field and ground transport to Children's could occur during inclement weather requiring pilots to fly under instrument flight rules. Transport times would be identical to those described for the Proposed Action and Intramural Field alternative.

In 1990, there were an average of 4.3 airlift missions per month that landed at Children's; the remainder landed at the Intramural Field or at Harborview (Carona, 1991). Based on historical use data the average number of monthly Airlift missions that would land at the Kitchen Garden Helistop would be slightly greater in 1995 (Carona, 1991). In addition there would be occasional landings by MAST and Med-Flight. Under this alternative, the number of monthly transports landing at Children's is projected to be 3-5 in 1995 (Neff, 1989).

Dr. Neff has indicated that if Airlift were allowed to land only at the Kitchen Garden Helistop and at Harborview, then there would be a far greater number of patients that would land at the Kitchen Garden Helistop than would be the case if patients are transported to Children's and the Intramural Field. The decision to land these patients at the Kitchen Garden site would be based on the need to minimize the risk of destabilization and adverse outcome. The remainder of the critical patients could be effectively transported by helicopter to Harborview and then transported by ground ambulance to Children's.

The initial decision of whether to land at the Kitchen Garden site or Intramural Field site would be made by the referring physician and/or the attending medical team. If the patient's condition were to deteriorate during the flight to the Intramural Field, the medical team on board the helicopter could decide to land at the Kitchen Garden site during sudden life-threatening situations.

As in the case of the Proposed Action, in order to ascertain that the landings were appropriate (i.e., limited to life-threatening emergencies), Children's would participate in a Medical Review Committee that would examine the flights landing at Children's campus. The authority of the committee could be extended to the transports landing patients at the Intramural Field. It could recommend additional guidelines for deciding which patients should land at Children's. The Medical Review Committee is briefly discussed above and described in a memorandum contained in Appendix C to this Final EIS.

No Action - No Construction of the Proposed Action or Alternatives

Under a No Action Alternative, no helistop would be constructed at Children's campus and no possible improvements would be made to the University of Washington's Intramural Field site. Additionally, Children's-destined patients being transported by helicopter would not be permitted to

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land at the University of Washington Medical Center Helistop (this option is not being considered by the University at this time); or in the driveway area outside the Children's Emergency Room entrance.

Children's-destined patients flown by helicopter would land either at Boeing Field or Harborview and be transported by ambulance to Children's. As described in the Limited Landings Alternative, the total minimum elapsed time for transport from landing at Harborview or Boeing Field to entering Children's Emergency Room entrance would be 15.5 or 19.5 minutes, respectively, with additional time required if the patient requires stabilization or is in an isolette. Under most situations average transport time from Harborview is 22 minutes and could take as long as 47 minutes. From Boeing Field the average transport time is 26 minutes and could take as long as 57 minutes.

Because of the additional transport time and need for potentially destabilizing transfers, the No Action Alternative does not meet the proponent's objectives.

COMPARISON OF ENVIRONMENTAL IMPACTS OF ALTERNATIVES

Implementation of the Proposed Action or other alternatives would cause environmental impacts of varying degree. The important potential impact areas have been identified through the scoping process and are addressed in this document. These elements include noise and vibration, aircraft safety, and the potential for the project to establish a precedent that would result in the construction of helistops at other hospitals in Seattle (cumulative impact). These elements are examined in Chapter IV.

Implementation of the Proposed Action would involve the creation of noise and vibration to which area residents would be exposed. Noise impacts would not be as great for the Intramural Field Helistop Alternative as for the Proposed Action because residential areas are further from the proposed helistop location. Noise impacts on Montlake residents would be greater for helicopter transports under the University of Washington Medical Center Helistop Alternative. The Preferred Alternative and to a greater extent the Limited Landings Alternative involve some noise at Children's from landings and takeoffs, which could affect residents in the vicinity and also involve noise at off-campus landing locations. The No Action Alternative is characterized by noise at Harborview or Boeing Field. Any alternative except the Proposed Action could involve ambulance siren noise.

The risk of aircraft accident is statistically possible under any alternative, including No Action. The construction of a structurally sound, secured, lighted landing area increases the safety of takeoffs and landings but does not eliminate the risk. The potential for non-aircraft property damage or personal injury is probably the least under the secured Intramural Field Helistop Alternative.

Approval of the Proposed Action or alternatives is not expected to have an impact on the number of emergency helistops constructed in the region.

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BENEFITS AND DISADVANTAGES OF RESERVING IMPLEMENTATION OF THE PROPOSED ACTION FOR THE FUTURE

The City of Seattle may determine that it would be desirable to reserve implementation of the project - that is to delay development of the project - until any uncertainties are resolved. Typically, such a decision is predicated upon the completion of another action or activity. Other pending actions that influence the consideration of this proposal include the State Legislature's possible consideration of pending air ambulance use criteria, and the possibility that in the future a regional or statewide air ambulance plan will be integrated into (the appropriate) EMS plans.

The benefits of reserving implementation of the Proposed Action includes the near-term avoidance of environmental effects associated with project implementation: minimizing the number of helicopter flights landing at Children's and thereby reducing the exposure of area residents and students to noise and vibration, and reducing the risk of a helicopter accident occurring in the vicinity of the helistop. In the event that a regional or statewide EMS helicopter plan is prepared in the future, delay of the project could facilitate coordination with planned helistops (to the extent that specific helistop locations are identified in a regional or state plan).

DCLU also has indicated that a term permit would allow for monitoring of safety of aircraft operations and the monitoring of the use of the helistop to ensure that patient transport missions are appropriate.

Disadvantages of delaying project implementation include delay in some critically ill and injured patients receiving treatment offered only at Children's, which could cause unfavorable outcomes, including death, for some critically ill or injured patients, and the potential that an accident occurs because of a less-than-ideally safe (unsecured, unpaved, unlit) landing situation.

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Chapter IV

Affected Environment, Impacts, and Mitigating Measures

IV. AFFECTED ENVIRONMENT, IMPACTS, AND MITIGATING MEASURES

This chapter presents analyses of environmental impacts that were deemed potentially significant through the scoping process. These elements are: emergency transport safety; noise and vibration; and cumulative impacts. For each of the first two elements, the Proposed Action is analyzed through a review of existing conditions, a description of probable impacts and impacts of the alternatives where such impacts differ substantially from those of the Proposed Action, and an identification of possible mitigating measures that are in addition to those measures incorporated as part of the Proposed Action or alternatives. A discussion of relationship to plans and policies and an assessment of cumulative impacts also are included in this chapter, as is a summary of impacts that cannot reasonably be mitigated.

EMERGENCY TRANSPORT SAFETY

Introduction

This section presents information on helicopter and ambulance safety. The helicopter safety characterization examines both general aviation (non-military) helicopter service for the years from 1976 to 1981, and Emergency Medical Service (EMS) related helicopter service from 1972 through 1989. Trends in helicopter safety also are explored qualitatively.

When the original research for the Draft EIS was conducted (early 1986), there was an emerging awareness of the magnitude of the safety problem that the EMS helicopter industry had been experiencing. It was widely recognized that 1985 had been a bad year in terms of the number of EMS helicopter accidents. The perception among the sources contacted for the Draft EIS was that, in general, the accident rate for 1985 was an aberration to an otherwise improving trend. Nonetheless, there was expressed concern that in the absence of strict safety guidelines, the rapid growth of the industry was causing the number of accidents to increase to unacceptable levels. Two trade organizations, NEMSPA and AAMS (see Chapter II), began to research the problem and establish guidelines to self-regulate the industry. As 1986 progressed and the number and rate of EMS helicopter accidents continued to increase, the media further publicized the problem.

The number and rate of accidents dropped during 1987 and 1988. 1988 also saw the completion of a National Transportation Safety Board (NTSB) analysis of safety in the commercial EMS helicopter industry. The accident rate for 1989 was comparable to the previous two years and not as great as the accident rate during the period from 1982-1986. The accident rate for 1990 dropped to zero, since no accidents occurred that year. This chapter of this Final EIS presents updated information on EMS helicopter safety.

Sources of Information

Primary sources for this study are reports by the National Transportation Safety Board, which is the federal agency with the responsibility of maintaining accident statistics on air and ground transportation; the

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Aviation Safety Institute; NEMSPA; AAMS; articles in periodicals dealing with helicopter safety and helicopter ambulance safety; and Howard Collett, who is the editor and publisher of The Journal of Air Medical Transport (formerly Hospital Aviation) and Aeromed Week. In addition, personal interviews were conducted with recognized authorities in the field of hospital aviation safety, a rotorcraft safety specialist from the Federal Aviation Administration (FAA), and helicopter pilots from Airlift Northwest. Also, Aeromedical Safety, Inc., a business that specializes in the safety of helistops and EMS helicopter program operations, physically examined the landing locations, interviewed Airlift Northwest representatives and prepared a safety report.

The National Transportation Safety Board (NTSB) maintains comprehensive statistics on accidents involving U.S. General Aviation, and publishes them in the Annual Review of Aircraft Accident Data. NTSB statistics for general aviation for the years 1975-1986 are used in this review. Data from other sources for the years since 1983 also are presented.

The NTSB also has published a detailed safety study of commercial EMS Helicopter operations. This study (NTSB, 1988a) serves as the basis for much of the EMS statistics presented in this Final EIS. In developing their data base, the NTSB assembled statistics from their own accident investigation files, the FAA's Accident/Incident Data System, the Aviation Safety Institute, AAMS and NEMSPA, and The Journal of Air Medical Transport. Their data base was further refined by adding criteria to represent true "commercial EMS helicopter accidents" (NTSB, 1988a). These criteria included: the helicopter had to be dedicated primarily to the EMS mission, including on-board equipment to provide basic life support; the helicopter had trained medical personnel on-board; and the pilot was employed primarily to fly EMS missions (NTSB, 1988a).

For the purposes of this Final EIS, it is important to define the principal safety term used by the various information sources. The NTSB defines a helicopter "accident" as an event that causes:

1. Substantial structural damage to a helicopter not including engine failure or damage limited to an engine if only one engine fails or is damaged; bent farings or cowling; dented skin; small puncture holes in the skin or fabric; ground damage to rotor or propeller blades; and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wing tips; or

2. Serious injury (hospitalization for more than 48 hours); bone fractures of any kind (excluding fingers, toes, nose); severe hemorrhages; severe nerve, muscle, or tendon damage; injury to any internal organ; second or third degree burns; or any burns covering more than 5% of the body surface.

Helicopter "incidents" are considered to be those events that result in damage or injury but that do not meet the threshold for being classified an accident by the NTSB.

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In the past, the Aviation Safety Institute (ASI) has maintained a data base of EMS helicopter accidents. However, recognizing that other organizations are maintaining accurate data, the ASI is not as systematic in their maintenance of the data base as they have been previously. The ASI's data base combines both accidents and incidents, as well as accidents that involve military aircraft and "good samaritans," which are those helicopters that do not normally fly on EMS missions but that were involved in an incident or accident while transporting a patient. The inclusion of incidents is consistent with the Institute's "belief that the helicopter community should be looking for the hazards that contribute to accidents. If the hazards are found and eliminated, accidents related to these hazards cannot occur" (Aviation Safety Institute, 1986).

Howard Collett, the editor and publisher of The Journal of Air Medical Transport and Aeromed Week, does not incorporate incidents in the data base maintained by his organization, which only considers accidents as defined by the NTSB. Accidents involving military helicopters also are not incorporated into Collett's accident frequency trend calculations, although Collett does maintain statistics on military helicopters in a separate data base. Collett also does not include "good samaritan" transports in his calculations.

Thus, each of the data bases available offers both benefits and disadvantages in application and all are used in this updated analysis of aircraft safety.

Helicopter Accident Frequency Trends

Between 1975 and 1986, the rate of helicopter accidents, as measured in number of accidents per 100,000 flight hours, decreased by more than 50%. As shown in Table 6, the number of accidents per year remained relatively stable from 1975-1983 and then decreased from 1984-1986. During that same period, the number of total flight hours increased considerably. Therefore, over the period from 1975 to 1986, the number of accidents per 100,000 flight hours decreased steadily from 27.31 to 11.16 between 1975 and 1981, increased considerably in 1982, and then decreased the following years to 11.31 in 1986.

A primary reason for this overall increase in helicopter safety has been the increased use of turbine-powered engines and the corresponding decreased use of less dependable piston engines (Collett, 1986; Benedict, 1986; and Hill, 1986). Of the roughly 170 helicopters in use in nationwide air ambulance services in 1985, only one was a piston-powered helicopter (Collett, 1986); therefore, statistics on turbine-powered helicopters generally are the most representative of EMS helicopters. Unless otherwise noted, all NTSB statistics cited in the remainder of this chapter refer to turbine-powered helicopters.

In a similar trend demonstrated in Table 7, turbine-powered helicopters have shown a decrease of approximately 39% in the number of accidents per 100,000 flight hours over the period from 1975-1986 with an 11-year average of 8.26 accidents per 100,000 flight hours. The annual number of accidents

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in turbine-powered helicopters doubled between 1975 and 1984, then decreased in the following two years. During that same 11-year period the average annual number of flight hours tripled. A comparison of Table 6 and Table 7 indicates that on the average turbine-powered helicopters were approximately twice as safe as all helicopters during the period from 1975 to 1986.

Table 6

ACCIDENT FREQUENCY FOR ALL HELICOPTERS
(1975-1986)

Year	Number of Accidents	Flight Time (in hours)	Accidents/ 100,000 hours
1975	266	947,000	27.31
1976	249	1,103,000	22.57
1977	246	1,170,000	21.03
1978	283	1,397,000	20.26
1979	265	1,522,000	17.41
1980	261	1,891,000	13.80
1981	257	2,303,000	11.16
1982	255	1,628,000	15.60
1983	238	1,709,000	13.93
1984	224	1,599,000	14.01
1985	206	1,706,000	12.08
1986	191	1,689,000	11.31
Totals	2,941	18,664,000	15.76

Note: Includes turbine-powered helicopters

Source: National Transportation Safety Board, 1986 and 1988b.

Table 7

ACCIDENT FREQUENCY FOR ALL TURBINE-POWERED HELICOPTERS
(175-1986)

Year	Number of Accidents	Hours Flown	Accidents/ 100,000 hours
1975	47	351,000	13.39
1976	39	423,000	9.22
1977	56	599,000	9.35
1978	60	631,000	9.51
1979	80	663,000	12.07
1980	80	1,172,000	6.83
1981	79	1,424,000	5.55
1982	98	1,061,000	9.24
1983	95	1,143,000	8.31
1984	96	1,021,000	9.40
1985	87	1,149,000	7.57
1986	73	900,000	8.11
Totals	870	10,537,000	8.26

Source: National Transportation Safety Board, 1986 and 1988b.

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Commercial EMS Helicopter Accident Frequency Trends

During the 1970s, many early EMS pilots were commercial pilots who branched out into EMS service. Many were "private rural pilots who wanted to relive the adrenalin rush of military helicopter service and expand the usage of their civilian aircraft businesses. Often their advertisements in the telephone Yellow Pages would list their aerial services as emergency medical, tourist, charter, cargo, and even crop dusting" (Reich and Kania, 1985). As the early industry organized (ASHBEAMS, which later became AAMS, formed in 1980) and established safety standards, the number of these part-time operators declined, with a resultant improvement in safety.

An article discussing the 1985 rash of accidents suggested that one reason for the accidents was the pilots' willingness to fly in adverse weather when other commercial helicopter pilots would not fly (Ver Berkmoes, 1986). As stated by Paul Procter, a business flying editor for Aviation Week and Space Technology, "Those guys absolutely hate the thought of losing a patient because they can't fly" (Ver Berkmoes, 1986).

EMS helicopters are frequently called in for particularly hazardous field pickups in locations that ground ambulances would have difficulty reaching. Even on relatively routine EMS flights, the pilots often land in unfamiliar surroundings in makeshift landing areas. Consequently, EMS helicopters may never reach the same safety levels associated with general aviation. It should be noted, however, that the added risk associated with these types of flights is generally limited to the field and not designated landing pads (see Accident Potential with Respect to Phase of Flight, below).

AAMS and the National Emergency Medical Services Pilots Association (NEMSPA) in 1986 developed standards on pilot training, staffing, and operations protocols. Their guidelines are summarized in Appendix B of this document. Based on the accident data, presented below, it appears that the guidelines may have contributed to improving the safety record of the industry.

NTSB has compiled statistics for the period 1980-1986 regarding EMS helicopter flights. In addition, data on 1986-1989 have been gathered by Howard Collett. From 1980 through 1990, there have been a total of 71 accidents involving civilian EMS helicopter flights (NTSB, 1988a; Collett, 1991a). Figure 12 illustrates the distribution of these accidents by type - whether fatal, injury, or property damage only. Based on patient transport data, it is determined that from 1980 through 1990, EMS helicopter accidents have occurred at an approximate rate of 9.04 times per 100,000 patient transports. The accident rate by type of accident for the period from 1980 through 1990 is presented in Figure 13 (see Table 8). The data indicate that the EMS helicopter accident rates peaked in 1982 at a rate of 27.20 accidents per 100,000 patient transports. As shown in Table 8 and Figure 13, data for 1987-1990 indicate a marked improvement in the accident rate. The absence of accidents in 1990 has been attributed by Collett to a variety of reasons, such as increased emphasis on safety, particularly the use of safety committees to oversee safety, better equipment, more experienced personnel, improved training, less demand to fly under marginal conditions,

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and an emphasis on accreditation (Lillie and Larsen, 1991). Figure 14 shows the overall distribution of fatal, injury and damage accidents for EMS helicopters between 1980 and 1990.

The EMS helicopter accidents for 1980-1986 can be analyzed in terms of the purpose of their missions. Both NTSB (1988a) and Collett (1988) have identified accidents by the purpose of the missions. The two data bases reflect different sets of accidents: all but five of Collett's 56 accidents are included in NTSB's set of 59 accidents. NTSB data indicate that approximately 78% of the EMS accidents between 1980 and 1986 were mission related (Collett's data indicate that 50% of the accidents were inter-facility transports and 27% were On-Scene Transports). Figure 15 illustrates the distribution of accidents by the purpose of the mission for 1980-1986. Thus, a 'corrected' accident potential figure would take into account the nature of the mission, so that the probability of an accident on an actual patient transport mission would be 78% of the probability for all EMS helicopters. Applying this factor to the accident potential presented on Table 8, results in a probability of 7.05 accidents for every 100,000 patient transport missions.

Table 8

ACCIDENT NUMBERS AND FREQUENCY FOR COMMERCIAL EMS HELICOPTERS
(1980-1990)

Year	Number of Accidents*	Number of Fatal Accidents*	Number of Patients Transported*	Accidents per 100,000 Patient Transports	Average Number of Patient Transports Between Accidents
1980	3	2	20,750	14.46	6,917
1981	3	1	28,071	10.69	9,357
1982	10	3	36,764	27.20	3,676
1983	8	2	45,233	17.69	5,654
1984	7	1	56,516	12.39	8,074
1985	11	6	71,831	15.31	6,530
1986	13	4	87,299	14.89	6,715
1987	3	3	97,900	3.06	32,633
1988	7	2	108,900	6.43	15,557
1989	6	4	113,200	5.30	18,867
1990	0	0	118,860	0.00	118,860
Totals	71	28	785,324	9.04	11,061

Notes: *Data for 1980-1985 are from NTSB, 1988a; data for 1986-1990 are from Collett, 1991a. NTSB data for patients transported were reported as hours flown; however, it is estimated each transport takes approximately one hour to complete. Therefore, it is assumed number of hours flown is equivalent to number of patients transported.

Source: NTSB, 1988a; Collett, 1991a.

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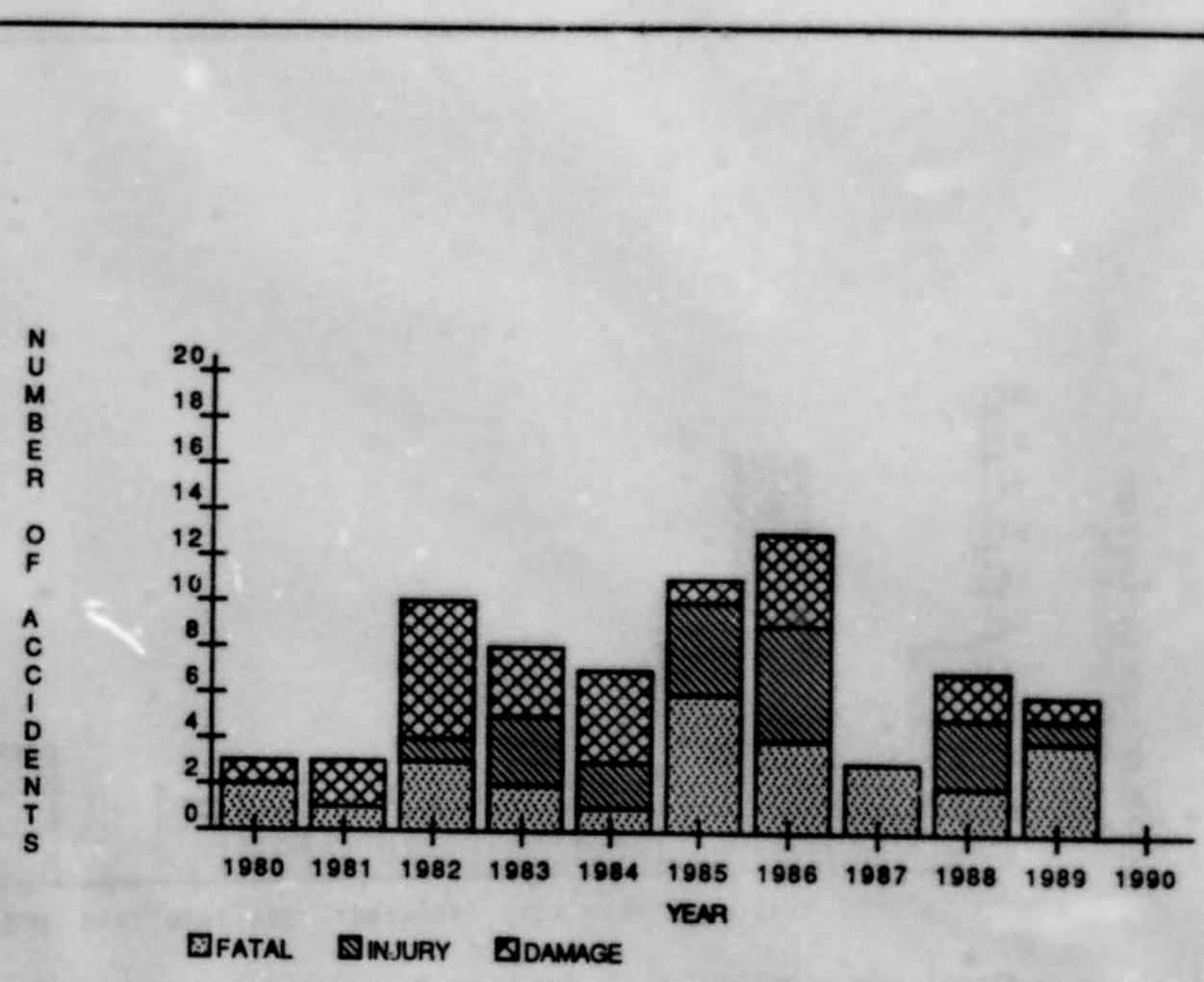

NOTE: SOME DAMAGE IS ASSUMED TO OCCUR WITH AN INJURY OR A FATAL ACCIDENT. HOWEVER FOR THE PURPOSE OF CATEGORIZING ACCIDENTS BY TYPE, AN ACCIDENT IS COUNTED ONLY ONCE. FOR EXAMPLE, IN 1987 ONLY FATAL ACCIDENTS OCCURRED AND NO DAMAGE IS SHOWN; HOWEVER, DAMAGE IS ASSUMED TO HAVE OCCURRED.

Source: NTSB, 1988a for 1980-1985; Collett, 1991a for 1986-1990.

Figure 12

Number of Fatal, Injury, and Damage Commercial EMS Helicopter Accidents, 1980-1989

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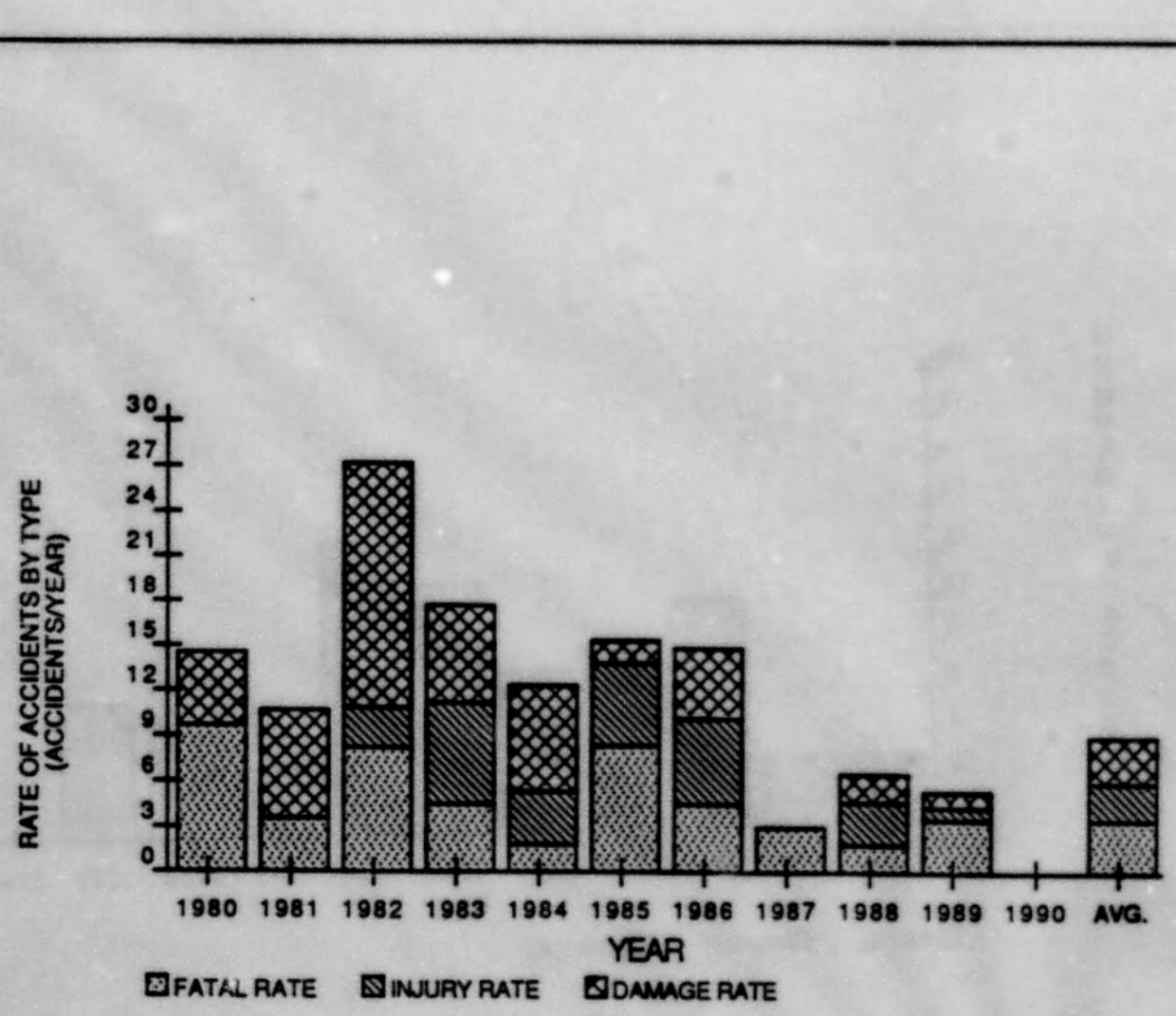

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Source: NTSB, 1988a for 1980-1985; Collett, 1991a for 1986-1990.

Figure 13

Frequency of Commercial EMS Helicopter Accidents by Accident Type, 1980-1990

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Fatal Accidents Involving Helicopters

General Aviation. As illustrated in Table 9, total fatal accidents declined from 1.71 fatal accidents per 100,000 flight hours in 1975 to 0.63 per 100,000 flight hours in 1981, and then rose to 2.00 fatal accidents per 100,000 flight hours in 1986. The 169 fatal accidents identified in Table 9 account for a total of 339 fatalities during the nine-year period (NTSB, 1986; NTSB, 1988a). Of these, 37 were ground fatalities (persons not in the helicopter at the times of the accidents).

EMS. From 1980 through 1990, there were 28 fatal accidents involving commercial EMS helicopters (see Table 8). This has resulted in an accident rate of approximately 3.57 fatal accidents per 100,000 commercial patient transports (Collett 1991a). It should be noted that the NTSB has identifed 18 fatal accidents between 1978 and 1986 (NTSB, 1988a). Four of these fatal accidents have involved "major vendors" (defined as vendors serving three or more hospitals) (Collett, 1986). There has never been a ground fatality in an EMS helicopter accident (Collett, 1991a).

Table 9

FREQUENCY OF FATAL ACCIDENTS FOR ALL TURBINE-POWERED HELICOPTERS
(1975-1986)

Year	Number of Fatal Accidents	Hours Flown	Fatal Accidents/ 100,000 hours
1975	6	351,000	1.71
1976	8	423,000	1.89
1977	8	599,000	1.34
1978	11	631,000	1.74
1979	13	663,000	1.96
1980	18	1,172,000	1.54
1981	9	1,424,000	.63
1982	21	1,061,000	1.98
1983	17	1,143,000	1.49
1984	16	1,021,000	1.57
1985	24	1,149,000	2.09
1986	18	900,000	2.00
Total	169	10,537,000	1.60

Source: National Transportation Safety Board, 1986 and 1988b.

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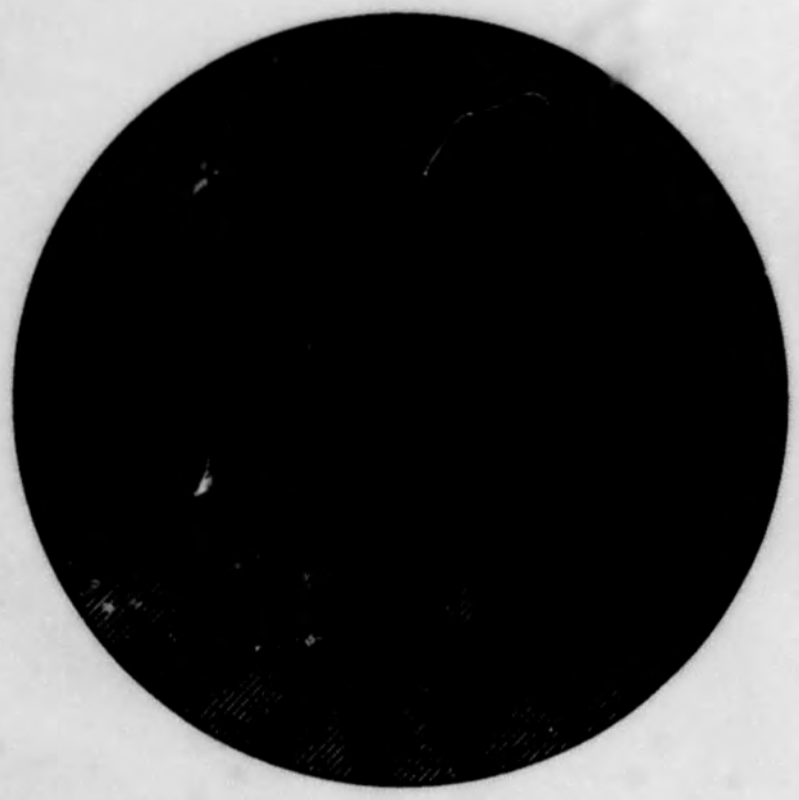

Figure 14

Distribution of Commercial EMS Helicopter Accidents by Fatality, Injury and Damage Classifications, 1980-1990

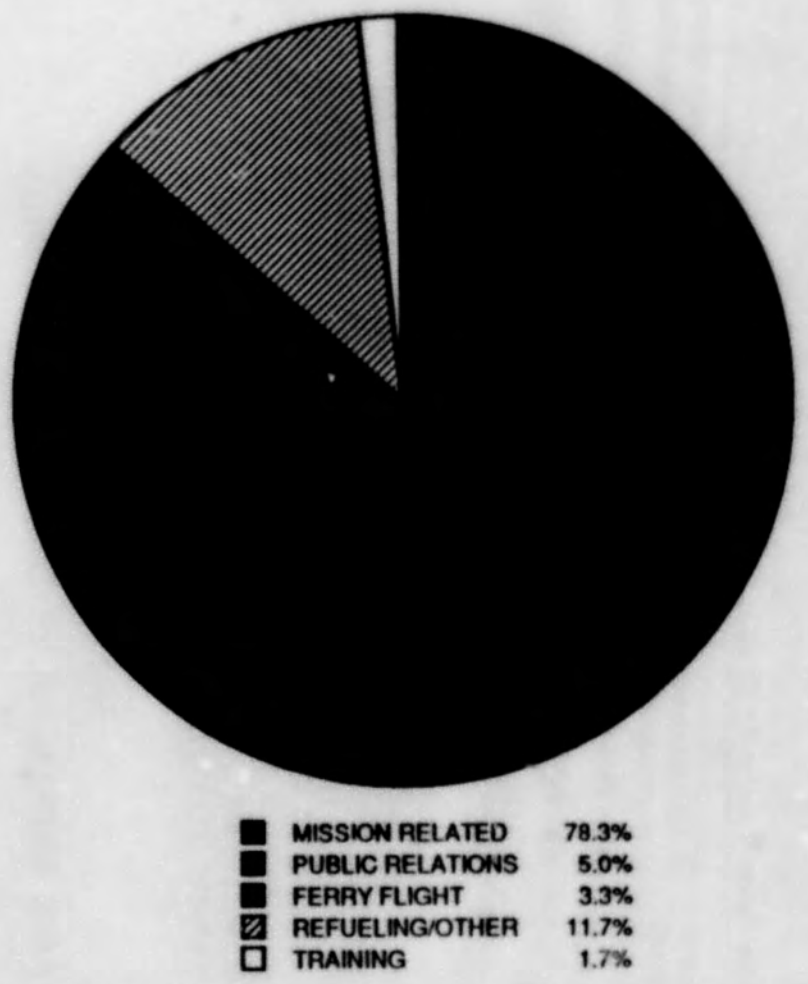

Figure 15

Frequency of Commercial EMS Helicopter Accidents by Mission Purpose, 1980-1986

Source: NTSB, 1988a; Collett, 1991a.

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Table 10

NUMBER AND FREQUENCY OF ALL HELICOPTER ACCIDENTS
IN RELATION TO AIRPORT OR HELIPORT IN 1981

Location	Accidents	Percentage
On Airport	56	21.8
On Heliport	6	2.3
On Barge/Ship/Platform	1	.4
In Traffic Pattern (only applies to airports, heliports, etc. with established traffic pattern)	4	1.6
Miles From Port:		
Within 1/4	4	1.6
1/4 - 1/2	3	1.2
1/2 - 1	3	1.2
Beyond 1	139	54.1
Unknown/Not Reported	41	16.0
TOTAL	257	100.0

Note: Totals do not add to 100% due to rounding

Source: National Transportation Safety Board, 1988a.

Accident Potential with Respect to Phase of Flight

General Aviation. The NTSB study identifies the location of helicopter accidents relative to the heliport or airport for 1981 only. These figures are available only for all helicopters (piston and turbine-powered). As shown in Table 10, more than half of the 257 accidents in 1981 (54%) occurred further than one mile from the airport or heliport. The second most frequent occurrence rate (22%) was at the airport. 2.3% of the accidents occurred on heliports. Four percent of all accidents occurred within one mile of the heliports or airport.

EMS. Of the 85 EMS helicopter accidents (including accidents on non-primary missions, i.e., flights whose purpose was refueling, maintenance, training, or public relations) that occurred through 1986, two are known to have occurred on the host hospital's landing area. (Both of these occurred when engines failed during takeoff from the landing area and takeoff had to be aborted.) There were no injuries or deaths on either occasion.

Reasons stated for accidents occurring at non-host hospital landing areas during takeoff and landing include the pilot's lack of familiarity with the landing area, poor visibility at field landing areas, panicky behavior of those on the ground attempting to guide the pilot, and the frequent need to land on marginally safe landing areas in the field. In familiar landing areas, pilots and support teams know the locations of wires

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and obstacles and are careful to avoid them. At an unfamiliar pickup point in the field, unknown wires present a more serious danger (Collett, 1986; Merrill, 1986; Poulton, 1986; Hill, 1986; Benedict, 1986).

The Aviation Safety Institute examined EMS helicopter accidents and incidents for the period from 1975-1986 and determined that the majority of the accidents occur as the aircraft is landing or taking off (Aviation Safety Institute, 1986). Figure 16 illustrates the accident frequency by phase of flight.

Causes of Accidents

General Aviation. The NTSB uses 14 different designations for types and causes of helicopter accidents, including "hard landing, collision with wires or poles, engine failure or malfunction," etc. (see Table 11). In 1981, the largest number of accidents (42%) was caused by engine failure or malfunction. Seventy-two percent of these accidents caused either minor or no injury. The other most frequent causes of accidents were "controlled" collisions with the ground and collisions with wires or poles (each causing 10.3% of all accidents). Both of these categories caused higher percentages of fatal and serious injury accidents. Nonetheless, even among turbine-powered craft, which have relatively dependable engines, engine failure or malfunction was the single leading cause of serious injury or fatal accidents. No data are available specifically on twin-engine helicopters.

Table 11

GENERAL AVIATION, TURBINE-POWERED HELICOPTER ACCIDENTS IN 1981 BY TYPE AND CAUSE

Type of Accident	Number	Percentage
Hard Landing	6	7.7
Roll Over	5	6.4
Collision between Aircraft--both in flight	1	1.3
Collision w/Ground/Water--Controlled	8	10.3
Collision w/Ground/Water--Uncontrolled	4	5.1
Collision w/Wires/Poles	8	10.3
Collision w/Buildings	1	1.3
Collision w/Dirt Banks	1	1.3
Collision w/Other	1	1.3
Engine Failure or Malfunction	33	42.3
Propeller/Rotor Failure	1	1.3
Tail Rotor Failure	7	9.0
Prop/Rotor Accident to Person	1	1.3
Miscellaneous/Other	1	1.3
TOTAL	78	100.0

Note: Total does not add to 100% due to rounding.

Source: National Transportation Safety Board, 1988a.

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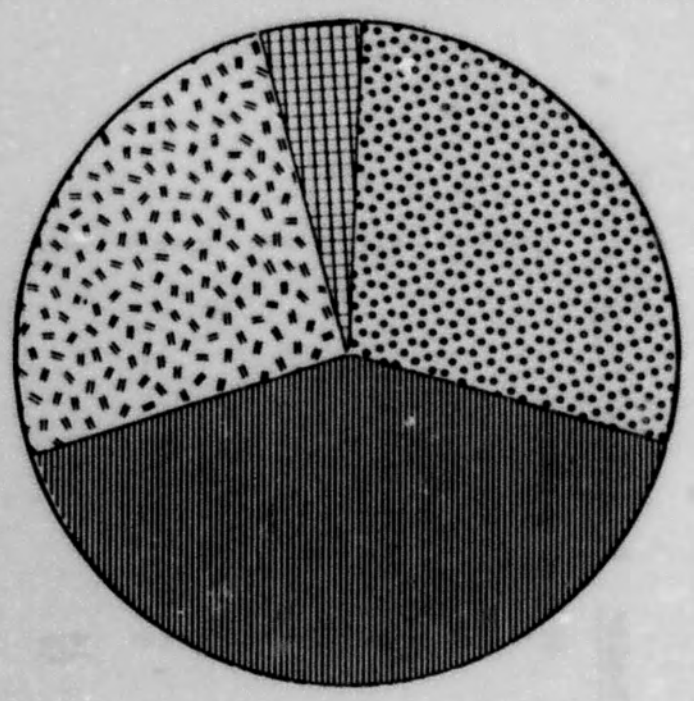
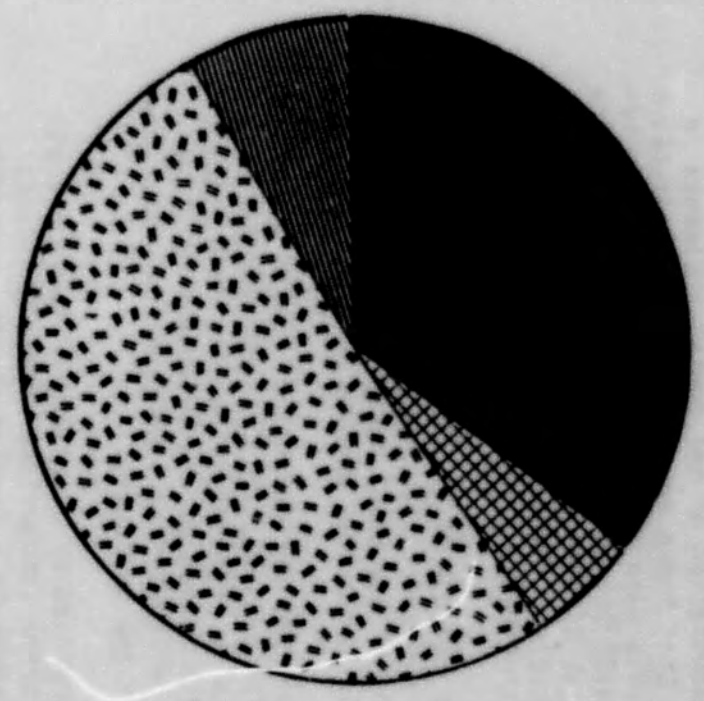


Takeoff	28.6%
Cruise	40.5%
Landing	26.2%
Ground/Taxiing	4.8%

Figure 16 **EMS Helicopter Accidents and Incidents by Phase of Flight, 1980-1986**



Darkness	35.9%
Dawn	5.1%
Daylight	51.3%
Dusk	7.7%

Figure 17 **EMS Helicopter Accidents and Incidents by Light Level, 1975-1986**

Source: Aviation Safety Institute, 1986.

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EMS. Following their initial examination of helicopter accidents in the EMS industry, the NTSB concluded that human error was involved in 68% of the accidents contained in its 1978-1986 data base of 5[illegible] accidents. As the accidents were studied further, the NTSB determined that there were certain other elements that were common to most of the accidents, including adverse weather, mechanical failure, and obstacle strikes; the remainder involved a variety of factors, with loss of control the most common.

According to the NTSB (see Table 12) 30% of the accidents were attributable to adverse weather including windshear, ice, snow, rain, fog or reduced visibility. Nearly two-thirds of the total number of accidents involving fatalities were attributable to adverse weather.

Mechanical failure was responsible for one-quarter of the 59 accidents, with the majority of the mechanical failures occurring in the engine systems. Obstacle strikes, which usually involved either the main rotor or the tail rotor coming into contact with trees, wires, buildings or other obstacles, usually occurred when the helicopter arrived at or departed from a landing area, and resulted in 21% of the accidents.

The miscellaneous category is comprised of a variety of factors that are not easily included in the other three categories. These accidents include fuel starvation, tail rotor damage by a foreign object, controls being jammed by loose equipment in the aircraft cabin, and losses of control for undetermined reasons.

Table 12

COMMERCIAL AIR AMBULANCE HELICOPTER ACCIDENTS BY CAUSE
(1972-1986)

Type of Accident	Number	Percentage	Associated Fatal Accidents
WEATHER-RELATED	18	30	11
reduced visibility-day	2		2
reduced visibility-night	13		9
adverse winds	3		0
MECHANICAL FAILURE	15	25	2
engine systems	9		2
incorrect maintenance	3		0
control malfunctions	1		0
tail rotor failure	2		0
OBSTACLE STRIKES	12	21	3
day	7		1
night	5		2
MISCELLANEOUS	14	24	2
TOTAL	59	100	18

Source: National Transportation Safety Board, 1988a.

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According to information compiled by Collett for 1972-1990, the three major causes of EMS helicopter accidents prior to 1984 were weather, engine failure, and obstacle strikes, in that order (Collett, 1991b). In 1984, obstacle strikes replaced engine failure as the second major cause of accidents. Then in 1989, obstacle strikes became the leading cause of EMS helicopter accidents, followed by weather and engine failure (Collett, 1991b).

Time of Day (Light) and Weather Conditions

General Aviation. The NTSB annual report provides data on daylight and weather conditions for 1983 accidents, but does not provide that information specifically for turbine-powered helicopters. Therefore, the information in this section is based on all helicopters. The designations used by NTSB regarding weather conditions are limited to the "Visual Flight Rating" (VFR) and "Instrument Flight Rating" (IFR) designations common to aviation regulation. These designations refer primarily to visibility. According to Federal Aviation Regulation (FAR) Part 135, helicopters may be operated under VFR when visiblility is greater than one-half mile. Visibility of under one-half mile requires that helicopters be operated according to IFR. These categories, however, are not standardized and do not necessarily account for other factors, such as wind. For example, if ten different accidents occurred under VFR conditions, it is possible that the weather could have been different for each of the ten.

The statistics show that the majority (see Table 13) of helicopter accidents in 1983 occurred under VFR conditions. Although VFR conditions generally refer to better weather conditions than IFR conditions, this can be misleading. Most accidents occur under VFR conditions because far more pilots are qualified to fly under VFR conditions than those qualified for IFR flight (generally the more experienced pilots). One common situation is that a VFR-rated pilot takes a helicopter out when the weather is good and when it turns bad, the pilot is unprepared to deal with it. The majority of accidents (88%) occur in daylight.

Table 13

LIGHT AND WEATHER CONDITIONS FOR
ALL GENERAL AVIATION HELICOPTER ACCIDENTS IN 1983

Light Conditions	Type of Weather		Not	Accidents	
	VFR	IFR	Reported	Number	Percent
Dawn	1	0	0	1	0.4
Daylight	216	5	1	222	93.3
Dusk	7	0	0	7	2.9
Night (dark)	3	4	0	7	2.9
Night (moonlight bright)	1	0	0	1	0.4
TOTAL	228	9	1	238	
Percentage	95.8	3.8	0.4		

Source: National Transportation Safety Board, 1986.

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EMS. Aviation Safety Institute (ASI) data indicate that approximately half of all fatal EMS helicopter accidents and incidents in their data base occurred in daylight (see Figure 17). The ASI concluded (1986) that there was no difference between the number of accidents/incidents during daylight and darkness for cruising flight, yet there were twice as many occurring during takeoff and landing in daylight conditions versus darkness. Numbers of injuries and fatalities showed no significant differences for night or daytime events, respectively.

The ASI has assembled data on weather conditions that existed at the time of 40 of the 84 accidents and incidents that comprise their EMS data base. The ASI determined that "19 events took place in instrument meteorological conditions, eight in marginal visual meteorological conditions, and 13 in visual meteorological conditions" (Aviation Safety Institute, 1986).

Howard Collett's examination of aeromedical accidents indicates that, of the factors that can be measured in aeromedical helicopter accidents, "adverse weather appears to be the single largest common denominator in pilot error accidents" (Collett, 1986b). This is confirmed by NTSB's data and conclusions (see Table 12, above). According to Collett's analysis, adverse weather is a factor in the seriousness of the accidents, with weather being a factor in four times as many fatal accidents as non-fatal accidents. Collett determined that weather was a factor in two-thirds of the fatal accidents that occurred.

Accidents by Make and Model of Helicopter

There are no comprehensive summary statistics available from NTSB on the makes and models of helicopters involved in accidents. The Aviation Safety Institute's report on 84 aeromedical helicopter accidents and incidents occurring between 1975 and 1986 indicates that there are several helicopter makes that have been involved in a disproportionate number of events. Several of the aircraft makes that have been involved in disproportionate numbers of accidents have been replaced by more modern aircraft.

The Agusta 109 (the type of helicopter used by Airlift Northwest) has been involved in a total of three EMS-related accidents and four incidents. One accident occurred in Phoenix in 1983 and involved a blade slap against another helicopter while taxiing at an airport. The second accident occurred in New Orleans in 1984 and involved an Agusta striking a parked, night-camouflaged military helicopter, while performing a night landing at an airport. A third accident occurred in April 1986, when the main rotor of a taxiing aircraft struck a fence during the day (NTSB, 1988a). There were no fatalities or injuries associated with any of these accidents (NTSB, 1988a). One incident involved a near-miss of another aircraft. A second incident involved a driveshaft (bearing) failure and a third incident was a driveshaft shear during ground taxi operations (Ferreri, 1991). The fourth incident involved a tail rotor strike of a helistop perimeter fence (Childs, 1991a).

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Pilot Fatigue

In operating their aircraft, pilots are reacting to a combination of variables including the capabilities of the aircraft and its systems, weather, visibility, and geography. The pilot's ability to deal effectively with the aircraft is influenced by his/her training, experience with the aircraft, and state of alertness (Collett, 1986b). An additional factor is the inherent pressure in EMS service involving life-threatening emergencies. Pilot errors occur when a pilot reacts improperly to a given set of circumstances. Because pilot error is one of the leading factors involved in aeromedical accidents, the subject has received increasing attention from pilots and industry organizations, such as NEMSPA, and the NTSB. A key factor influencing the pilot's alertness is fatigue. Therefore, the work/rest schedule on which a pilot operates is critical to managing the pilot's performance (Collett, 1986c).

The NTSB determined that pilot fatigue was a factor in only one of the 59 accidents that the NTSB has investigated (NTSB, 1988a). However, the NTSB also concluded in their study that, ". . . commercial EMS helicopter pilots work in a high-stress environment with rotating shifts; this predisposes them to acute and chronic fatigue." (NTSB, 1988a).

As part of their recommendations, NEMSPA has issued guidelines that are specifically intended to allow the pilot an appropriate balance between work and rest (please refer to Appendix B).

Air Ambulance Competition

Competing aeromedical services has been identified as one of the factors that can adversely affect the safety of EMS programs (NTSB, 1988a). From 1982 to 1986, the number of competing services increased from 12% to 35%, with the increased competition resulting in greater utilization than would occur if there were a single program serving an area (Collett, 1986c).

At least two fatal accidents are attributed to programs accepting missions under marginal weather conditions after a competing program had declined the mission (Collett, 1986c).

Conclusions of the NTSB Study on Commercial EMS Helicopter Operations

Based on the results of their study of commercial EMS helicopter operations, the NTSB made a series of recommendations to the Federal Aviation Administrationincluding the following topic areas: pilot certification and training; Visual Flight Rules (VFR) Minimums; Instrument Flight Rules (IFR) Minimums; Alternate Airport Requirements; EMS pilot priority status for weather briefings; the safety of EMS helicopter interiors; crew clothing and equipment; conducting research to examine the effectiveness of existing regulations regarding flight time/duty time; and the training of medical personnel in aeromedical safety.

Recommendations to the Association of Air Medical Services (formerly ASHBEAMS) include the following: assisting programs in the development of safety committees; offering guidance on safety issues for EMS program

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administrators; offering guidance on safety issues for training of medical personnel who fly on EMS missions; and encouraging members to provide protective clothing and equipment for aeromedical personnel.

Recommendations to the Helicopter Association International include the following: encourage members to develop VFR weather minimums for their local terrain and weather patterns; in conjunction with NEMSPA, encourage the development of safety committees; in conjunction with the FAA and the Association of Air Medical Services, develop training guidelines for medical personnel.

The final recommendation is for the National Aeronautics and Space Administration in cooperation with the FAA to develop and conduct a research program on pilot workload, shift lengths, and circadian rhythms to determine their effects on EMS helicopter pilot performance.

Military Helicopter Safety

The military reports accidents in a different manner than the FAA does; therefore, a comparison of military and civilian accident rates is difficult to conduct. The military divides accidents into two categories. Class A accidents are characterized by property damage of $500,000 or more, destruction of the aircraft, and/or injuries resulting in a fatality or permanent total disability. Class B accidents involve property damage of $100,000 to $499,999 and/or a permanent partial disability injury or the hospitalization of five or more people. Generally speaking, Class A military accidents are comparable to fatal aeromedical accidents because all aeromedical accidents involving permanent disability have, according to available information, also involved fatalities. The military also calculates accident rates in terms of flight hours, whereas the aeromedical industry makes its calculations in terms of patient transports. However, an informal survey among five of the nation's leading aeromedical services has revealed that patient transports average approximately one hour each in duration (Collett, 1987). Thus, despite certain shortcomings, a comparison of military and aeromedical accident rates is legitimate. Howard Collett compared accident rates between the military and the aeromedical industry. The results are as follows (Collett, 1987):

Type	Rate (Accidents/ 100,000 Flight Hours)
Fiscal Year 1986 USAF Class A	1.53
FY 1986 Army Class A	1.98
FY 1986 Navy Class A	3.39
FY 1986 Marine Class A	4.19
Overall Military Accident Rate	2.23

These statistics suggest that in 1986 the military experienced a lower fatality rate than did the aeromedical industry.

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Affected Environment

The Seattle metropolitan area is served by two major airports (Sea-Tac International Airport and Boeing Field), and several smaller airports and airfields (including seaplane ports on Lake Union and Lake Washington, some of which are private docks along the lakefronts).

Sea-Tac and Boeing Field receive all of the jet traffic in the area; the nearest other jet ports are Paine Field in Everett and McChord Air Force Base, southeast of Tacoma. General aviation, fixed-wing traffic also is handled at Sea-Tac and Boeing, as well as at smaller airfields in the area. Several commercial helicopter organizations are headquartered at Boeing Field. In addition to the helicopters based at Boeing Field, the FAA has records for the following helistops and heliports in the City of Seattle:

Boeing Plant 2 Heliport
Park 90 (Airport Way)
201 Elliott Avenue
Lockheed Plant 2
KOMO TV (100 Fourth Avenue North)
Harborview Medical Center (325 Ninth Avenue)
Broadcast House Helistop (Third and Broad Streets)
Washington Building (Rainier Bank Tower)
Seattle First National Bank (1001 Fourth Avenue)
Seattle Private Number One (320 Aurora Avenue North)

Airlift Northwest, the organization that would be transporting nearly all patients to and from Children's, is headquartered at Harborview Medical Center. Its helicopters and medical transport teams are based at Harborview and Boeing Field.

As discussed in Chapter II, Airlift Northwest is a service to referring physicians who initiate the missions. Because the service is physician initiated, there is no competition for specific patient transports.

According to Robb Childs, Airlift Northwest's Associate Director, the aeromedical service has oriented its staff of administrators, pilots, mechanics, and medical personnel to the safety of its missions. The organization is committed to the safety of the crew, patients, public, and aircraft (Childs, 1989). To that end, Airlift Northwest endeavors to maintain the highest standards in its training of personnel, in its inspection and maintenance of equipment, and in aircraft operations (Childs, 1989).

Airlift Northwest has a safety committee, whose responsibility is to ensure that safe operations are integrated into the EMS program. At quarterly meetings, the safety committee discusses a variety of issues, such as dispatching procedures, EMS helicopter accidents that have occurred elsewhere in the U.S., mishaps, and any transports with unusual circumstances or outcomes (Childs, 1991a). Other operational procedures considered to be part of Airlift's safety procedures include:

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- Requiring vendors to operate according to AAMS weather minimums;
- Requiring Class I physicals for all Airlift Northwest pilots;
- Using aircraft (the Agusta 109) that can be operated by a single pilot under instrument conditions;
- Requiring pilots to be instrument-rated and instrument current; and
- Using a post accident/incident plan (PAIP) for non-reporting aircraft (Childs, 1991a).

As shown in Table 14, Airlift Northwest has more stringent standards for pilots than the FAA.

All Airlift Northwest pilots are instrument current as well as instrument-rated. Instrument currency means they are continually tested for their ability to fly with only an instrument orientation, and, therefore, are able to fly without the ground being visible. As identified in Appendix B, the Airlift Staffing Program of 12 hour days with five days on and five days off is not consistent with NEMSPA's guideline recommending no more than four daily shifts in a row. However, the staffing policy is consistent with the FAA requirements.

It is Airlift Northwest policy not to fly in winds in excess of 40 knots. Under marginal flying conditions, the company flies at the option of the pilot. Airlift does not pressure its crews to fly during marginal or unsafe weather conditions. The operations manual for Hospital Air Transport (HAT) provides that the pilot has the final authority to discontinue operations (Childs, 1989). In determining whether to fly or not, the pilot is required to use Airlift Northwest guidelines. The FAA standards call for the pilot not to operate under visual flight rules when the visibility is less than one-half mile; the Airlift Northwest guidelines are the same as AAMS minimums, which are as follows:

	Ceiling	Visibility
Day Local	500 ft	1 mile
Day Cross-Country	1,000 ft	1 mile
Night Local	800 ft	2 miles
Night Cross-Country	1,000 ft	3 miles

The weather minimum for Airlift Northwest differs from that in the Draft EIS, which stated a 500-foot ceiling or less than one mile visibility. The change reflects a revision to the HAT operations manual.

When Airlift Northwest flies under instrument flight rules, the helicopters land at Boeing Field, rather than at Children's, the Intramural Field or Harborview. During Airlift's five and one-half year history of flying helicopters, there have been several instances when the aircraft have faced adverse weather conditions and the pilots have elected to land at outlying locations. Gene Hill, a pilot with Airlift Northwest, noted that under bad weather conditions, such as the fog that enveloped Seattle in December 1985, the company does not fly at all. During that fog, Airlift Northwest refused to answer 20 calls over a two week period because the company did not believe it was safe to fly.

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Table 14

FAA AND AIRLIFT NORTHWEST
COMMERCIAL HELICOPTER PILOT CERTIFICATION REQUIREMENTS

	FAA	ALN[illegible]
Pilot in Command Under Visual Flight Rules	Commercial pilot certificate. 500 hours of flight time as a pilot including at least 100 hours of cross-country flight time, of which at least 25 hours were at night. 50 hours of the above must be in rotary-wing aircraft, the rest may be in fixed-wing.	Commercial pilot certificate wi[illegible]ent rating Minimum of 3,000 hours of helicopter flight time as a 1000 turbine-engine Pilot in Command, (PIC), including at least 100 hours of night flying time, 25 flight hours in aircraft type and 5 hours of local area orientation in aircraft type.
Pilot in Command Under Instrument Flight Rules	Commercial pilot certificate with instrument rating. 1,200 hours of flight time as a pilot including at least 500 hours of cross-country flight time, 100 hours of night flying time and 75 hours of actual or simulated instrument time of which 50 hours were in actual flight. 50 hours of the above must be in rotary-wing aircraft, the rest may be in fixed wing.	Commercial pilot certificate with instrument rating. Minimum of 3,000 hours of helicopter flight time as a 1000 turbine-engine Pilot in Command, (PIC), including at least 100 hours of night flying time, 25 flight hours in aircraft type and 5 hours of local area orientation in aircraft type. 250 hours of actual or simulated instrument flight.

Source: Airlift Northwest, 1991.

There have been no accidents in the eight year history of Airlift Northwest. There has been one incident, however, which occurred July 24, 1989 (Childs, 1991a). The incident involved a tail rotor strike of the helistop perimeter fence at Harborview. No injuries occurred, but there was damage to the helicopter (Childs, 1991a). The FAA was notified and the pilot suspended for a period of time. From April 1985, when Airlift Northwest began operation of the Agusta 109 helicopter, through the end of 1990, there have been 6,107 transports.

Airlift Northwest has been landing Children's-destined patients at Harborview, the Intramural Field, Boeing Field, and at the existing landing location immediately outside the Children's Emergency Room entrance. Only the most critical patients were landed at Children's, with the majority of the patients being transported to Children's by ambulance after being landed at an alternate location.

As shown in Figure 18, the distribution of these landing locations has evolved since the inception of the Airlift Northwest helicopter service in 1985. Through 1986, the majority of the patients landed at either Children's or at Harborview. Since 1987 there has been increasing use of the Intramural Field as a landing location, with a corresponding decrease in the use of Harborview. The number of patients landed at Children's has remained fairly constant during this period, with monthly fluctuations in use.

The existing helicopter landing location outside the entrance to the Children's Emergency Room does not meet the FAA's guidelines for heliport design. The landing area does not conform to the FAA's minimum size recommendation. The landing surface does not meet soil stabilization or pavement design recommendations. Other potential problems include lack of identification, poor drainage, insufficient lighting of the boiler stacks and landing area, and a lack of fencing to restrict unauthorized entry to the area.

Currently, there is no mechanism for Airlift Northwest pilots to practice approaches, landings and takeoffs, and departures to and from the landing area outside the Emergency Room entrance. This results in new pilots and pilots who have not flown frequently to Children's being unaccustomed to the specific characteristics of flying in and out of this particular landing location. This situation may add to the potential risk of an accident on actual patient transport missions. Training flights currently consist of flying the flight paths; no take-off and landings are conducted. Training flights occur, on average, three times a year (Childs, 1991a).

All of the alternatives to constructing a helistop at Children's Kitchen Garden site involve transport of patients and attending medical crew to Children's by ambulance. According to the Washington Department of Transportation, during an approximately 9.5-year period ending in 1986, there were 46 ambulance accidents in the City of Seattle, resulting in 34 injuries and no fatalities (Toohey, 1986).

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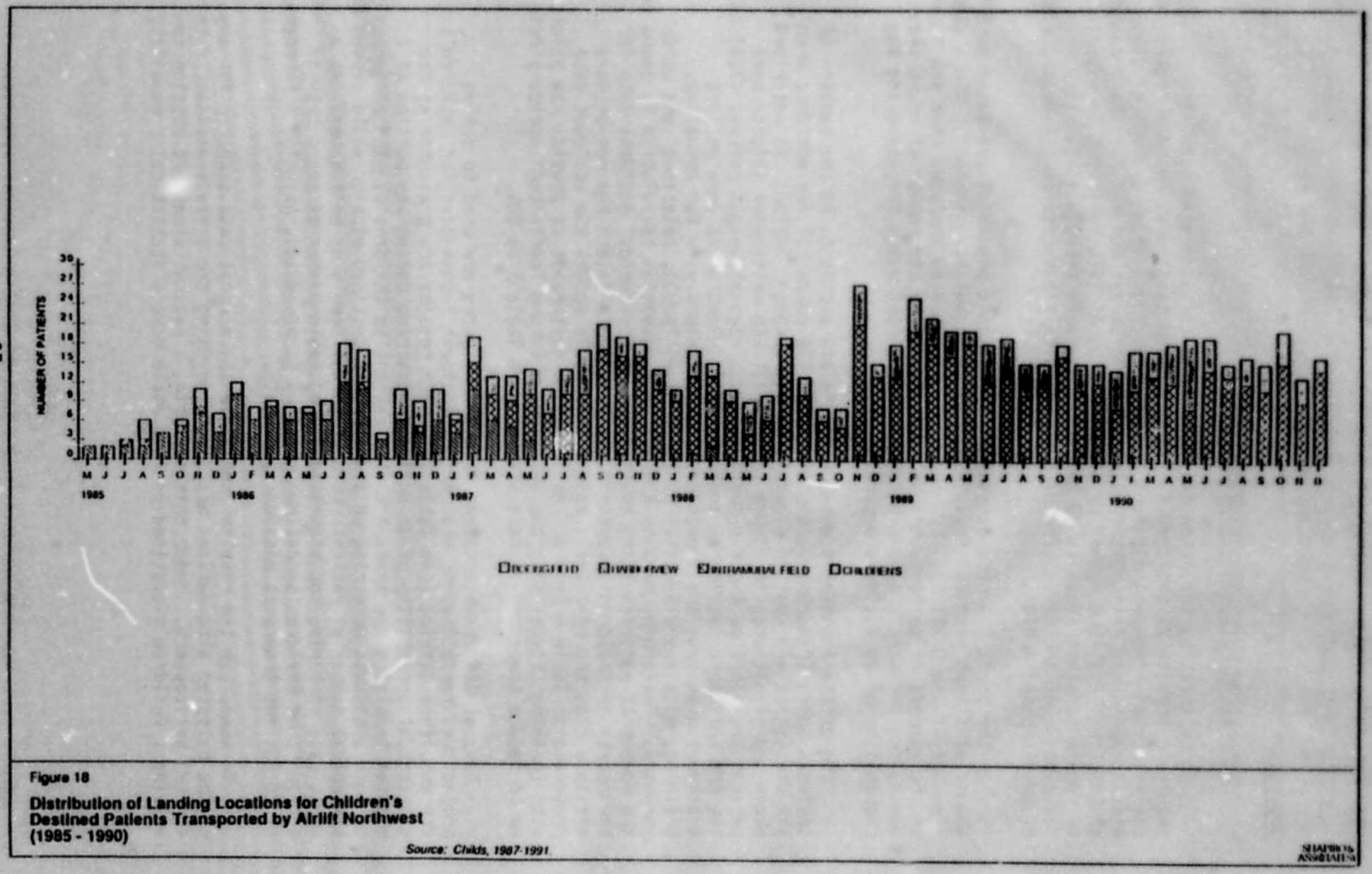

Figure 18

Distribution of Landing Locations for Children's Destined Patients Transported by Airlift Northwest (1985 - 1990)

Source: Childs, 1987-1991

Impacts

General Impacts - All Alternatives

In calculating the potential for accidents associated with air ambulance service to Children's, several assumptions must be made regarding the number of transport missions. Currently, there is an average of 17 Airlift Northwest helicopter patient transports per month. For the purpose of the Final EIS, the number of transports by Airlift Northwest is expected to remain constant at 15 to 20 patients per month through 1995. (See description of the derivation of the number of transports in the Description of the Proposed Action.)

In the Draft EIS, the assessment of accident potential was based on the amount of flight time for individual EMS air ambulance missions. Since the issuance of the Draft EIS, the industry has prepared analyses that are based on the numbers of patients transported and not on the number of hours flown. Use of the industry's data provides a more direct means for assessing the probability of an accident occurring.

Use of the industry's data, which relate accidents to the numbers of patients being transported, may overstate the potential for accident when the statistics are applied directly to the Proposed Action. As described above and illustrated in Figure 15, not all EMS helicopter flights have patient transport as their primary mission. Seventy-eight percent (78%) of the EMS helicopter accidents that the NTSB investigated were patient transport missions; the remainder of the missions were for refueling, training, missions classified by the NTSB as "public relations" and other purposes. Therefore, because the accident potential calculation is based on the number of patients being transported, a 'corrected' accident rate for transports of Children's-destined patients would delete the non-primary missions from the calculated rate. This would reduce the accident rate presented in Table 8 by 22%. As it may be desireable to provide new pilots with training flights into the helistop, a second "corrected" accident rate would reduce the accident rate presented in Table 8 by 20%.

Several different accident frequency figures are used to derive projections for different statistical accident frequencies for Children's air ambulance service (see Table 15). The results are presented as the statistical probability of an accident occurring during any portion of a mission involving the transport of a patient to Children's. The frequency of such accidents occurring on a Children's-destined mission would depend on the actual number of patients brought to Children's by helicopter. As a worst case scenario, the statistically probable number of years between accidents on Children's-destined missions is presented, assuming a forecast of 20 patient transport missions per month.

To summarize the results (see Table 15) a worst case scenario for any of the helistop alternatives was generated using the overall accident rate for EMS helicopters. Under this scenario, a patient transport mission involving a Children's-destined patient would have a statistical probability

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Table 15

EXPECTED FREQUENCY OF ACCIDENTS
FOR AIRLIFT NORTHWEST HELICOPTER TRANSPORTS OF PATIENTS TO
CHILDREN'S HOSPITAL AND MEDICAL CENTER

		ASSUMPTIONS			
	Accidents/ 100,000 Flight Hours	Transport Missions/ Month	Minutes/ Transport Missions*****	Probability of Accident for a Single Transport*	Statistical Frequency of Accidents (Expected Number of Years Between Accidents)
1) U.S. General Aviation, Turbine-Powered Craft, 1975-1986	8.26	20	50	1 in 14,529	60.5
2) Fatal Flights U.S. General Aviation, Turbine-Powered Craft, 1975-1986	1.6	20	50	1 in 75,003	312.5
3) Commercial EMS Related Accidents, 1980-1990	**	20	N/A	1 in 11,062	46.1
4) Corrected Commercial EMS Accidents, 1980-1990	***	20	N/A	1 in 14,184	59.1
5) Commercial EMS Related Fatal Accidents, 1980-1990	****	20	N/A	1 in 28,011	116.7

1) See Table 7
2) See Table 9
3) See Table 8. Note that the risk is based on the rate of 9.04 accidents/100,000 patient transports.
4) This calculation of Commercial EMS Accident Probability is based on the assumption that the probability of accident in Table 8 is reduced by 22% to reflect a correction for the primary purpose of the patient transport mission; this results in a rate of 7.05 accidents/100,000 patient transports. The 22% reduction reflects the deletion of training, refueling, maintenance and public relations accidents from the overall accident potential statistic. See text.
5) See "Fatal Accidents Involving Helicopters" section. Assumes 3.57 accidents/100,000 patient transports.

* On Children's-Destined transport, anywhere in transport mission either picking up medical transport team (if necessary); departing with transport team; delivering patient to Children's; or departing for return to base or next mission.
** Note that the risk is based on the rate of 9.04 accidents/100,000 patient transports.
*** Note that the risk is based on the (corrected) rate of 7.05 accidents/100,000 patient transports.
**** Note that the risk is based on the rate of 3.57 fatal accidents/100,000 patient transports.
***** Note that average transport time for all Children's-destined patients transported by Airlift Northwest helicopter through July 1987 was 49.8 minutes; it is assumed for the purpose of this analysis that 100,000 flight hours is equivalent to 100,000 patient transports.

Source: Compiled by Shapiro and Associates, Inc., from data sources indicated above; see text and tables from body of report.

of an accident in one of every 14,184 transports. The accident could occur at any point on the three or four segments of each flight. If one assumes 20 transport missions per month, then the first accident would be statistically expected to occur every 59.1 years.

An assessment of the specific factors affecting the acceptability of the alternative helistop locations from a safety perspective focus on the design specifications of the helistop, the properties that would be placed at risk, and the availability of acceptable alternate landing locations to be used in the event of the need to execute an emergency landing of the helicopter.

For all alternatives, motorists could be distracted by helicopters operating in the vicinity of their vehicles. The potential for distraction would be the greatest during aircraft approaches and departures.

Children's Kitchen Garden Helistop Alternative

The Federal Aviation Administration has developed a design guide to help in the construction or improvement of heliports. For a private use heliport, such as Children's, the FAA criteria are guidelines rather than regulations. The design guidelines consider takeoff and landing area, touchdown pad and surrounding area, and obstructions within the aircraft approach area.

The proposed Kitchen Garden Helistop would be consistent with the FAA guidelines for heliport design for the design aircraft, Agusta 109, as well as the MBB 105. The proposed takeoff and landing area would meet the requirements for horizontal clearance, and additional clear area of approximately 12 feet (to the next obstruction, i.e., the security fence) would be included to achieve consistency with the overall clear area recommended by FAA for the design aircraft. The concrete pad exceeds the requirement for size and weight limitations. The proposed Kitchen Garden Helistop would not be consistent with the design guidelines for MAST aircraft.

The FAA does not specify a minimum distance that buildings may be located from the helipad. They do, however, specify "heliport approach surfaces" and "heliport transitional surfaces" within which no obstructions should be located. This "approach surface" specifies a rising slope of 8:1 extending in a horizontal distance to 4,000 feet from the landing area. The "transitional surface" specifies a rising slope of 2:1 to a distance of 250 feet on either side of the landing area. Obstructions are allowed within these surfaces only when an aeronautical study concludes that the obstruction would have no adverse effect upon aeronautical operations. Neither existing nor future hospital expansion would penetrate these surfaces. Several trees and light poles to the north and northeast of the helipad would penetrate these surfaces and, therefore, have been identified for removal with the development of a helistop at the Kitchen Garden site. The primary and secondary approach and departure routes would be unobstructed, provided that several trees and light poles are either removed or relocated as proposed under this alternative.

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The heliport markings would be consistent with the FAA guidelines. Wind socks would be placed on the helistop as well as on the medical center rooftop. A glide slope indicator light would enable pilots of approaching helicopters to stay within designated final approach paths.

Regarding the proposed location of the Children's helistop, FAA Inspector Benedict believes that it is an extremely safe site (Benedict, 1986). He compared it to landing areas near the Seattle Center and downtown Seattle that are over busier streets and more congested conditions. He believes that the Children's site is far safer than such landing areas, which are already safe themselves.

A natural gas meter house is located approximately 38 feet northwest of the northern edge of the proposed pad at Children's helistop site. No other existing buildings are located within 100 feet. Communication with representatives of Washington Natural Gas discloses that the current protection of the meter with a fence and a concrete structure is considered reasonable and adequate to prevent a fire in the event of a helicopter accident (Jainga, 1985). In the event of a major accident that results in the breach of the gas supply line, the natural gas would flare until shut off at the main valve across from Children's on Sand Point Way N.E. Children's personnel have been trained and are supplied with the equipment necessary to shut off the main gas supply valve. This will allow any gas flare to be extinguished more quickly in an emergency situation.

Over time, the trees to the north of Penny Drive and northeast of the helistop could grow, intruding on the airspace for landing approaches from the secondary flight path.

Because the proposed flight path largely follows waterbodies and arterials (see Figures 7 and 8), the properties that primarily are at risk are those that adjoin or are close to the flight path. In the Children's approach and departure paths, the affected land uses are commercial and residential properties along Sand Point Way N.E. and, to a lesser extent, the residential properties along the secondary flight path that would be used infrequently. Other concerns in the area are the Laurelhurst Elementary School located three blocks to the east, Villa Academy located to the northeast, and Laurelon Terrace located adjacent to the western boundary of the Children's campus.

In the vicinity of Children's, there are a number of locations that potentially could be used for emergency landings. These emergency landing locations include: parking surfaces on and off campus, roadways, the University of Washington's East Campus athletic fields, and the Sand Point Naval Air Station.

Intramural Field Helistop Alternative

The Intramural Field Helistop would be consistent with the landing surface specifications recommended by the FAA. The approach and departure paths also would be free of obstructions per the guidelines. The FAA's Principal Aviation Safety Inspector has indicated that the Intramural Field site, similar to Children's, offers an extremely high level of safety (Benedict, 1987).

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The Airlift Northwest pilots have expressed some concern with respect to the large numbers of birds on the athletic fields at various times of the year (Davidson, 1987). This concern was one factor that influenced the realignment of the flight path that had been presented in the Draft EIS. The earlier path involved a route that would have taken aircraft closer to known roosting areas. The current flight path, as illustrated in Figure 9, reduces, but does not eliminate, the potential for a bird strike.

In addition, the proximity of a golf driving range, several light standards, and a baseball backstop pose minor obstructional problems. There is a lack of operational controls at the existing Intramural Field site.

The Intramural Field has a flight path into the general area that is comparable to that for the proposed helistop on the Children's campus. The approach and departure paths also follow waterbodies and arterials. The land uses along the approach and departure paths that are at risk are those commercial, residential, and institutional land uses that adjoin or are close to the flight paths illustrated in Figure 9. The approach and departure paths to the Intramural Field involve less overall overflight of residential areas than does the Children's campus helistop alternative. The area immediately surrounding this location involves less risk to property and persons than does the Kitchen Garden site.

The landing locations that could be used in the event of an aircraft emergency include the athletic fields in the University of Washington's East Campus area, the top of the Triangle Garage, and Husky Stadium field.

In addition to the risk associated with helicopter operations, there is the accident risk associated with the transport of the patient by ambulance for a distance of less than one mile.

University of Washington Medical Center Helistop Alternative

The University's rooftop helistop is able to accommodate helicopters that have a gross weight less than 6,000 pounds. Although some of the public may perceive the rooftop helistop to be less safe, Airlift's Lead Helicopter Pilot sees no operational problems with the site (Davidson, 1987). It is acknowledged, however, that the structure to the south of the rooftop landing area could constrain flight path options in the event of an aborted landing attempt. The FAA's Principal Aviation Safety Inspector has indicated that the University of Washington Medical Center Helistop site offers an extremely high level of safety (Benedict, 1987).

The approach paths into and departure paths from the University of Washington Medical Center Helistop are similar to those for the Intramural Field. The affected properties at risk also would be comparable. The landing locations that could be used in the event of an emergency are the same as those that could be used under the Intramural Field Alternative.

In addition to the risk associated with helicopter operations, there is the accident risk associated with the transport of the patient by ambulance for a distance of approximately two miles.

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Harborview Medical Center

The Harborview Medical Center helistop is fenced and includes pad lighting. The landing area's approach and departure paths are located primarily over commercial and institutional land uses. There are several landing locations in the area that could be used in the event of an emergency, including a variety of parking surfaces within a one-mile area.

In addition to the risk associated with helicopter operations, there is the accident risk associated with the transport of the patient by ambulance.

Boeing Field

Because the helistop locations are not equipped for refueling or maintenance, the Airlift Northwest helicopters regularly fly into the Seattle Jet Center, which is located at Boeing Field. Although there is a greater amount of air traffic at Boeing Field than at the alternative sites, this remains the only location where the aircraft can perform an instrument-controlled landing.

In addition to the risk associated with helicopter operations, there is the accident risk associated with the transport of the patient by ambulance.

Mitigation Measures

Children's could move the natural gas meter house to an alternative location (estimated cost $35,000).

Children's should continue to monitor Airlift Northwest's safety program to ensure that staffing, training, maintenance, and operations are conducted so that the highest commitment is to safety.

Children's would inspect the helistop regularly to ensure that there are no unsafe conditions.

New Airlift Northwest pilots could be allowed to practice landings and takeoffs to the helistop. Existing pilots could be allowed to practice to maintain familiarity with the helistop.

One light pole, three trees north of the site, and three trees to the northeast of the site would be removed or relocated. The height of other campus trees to the northeast of the Kitchen Garden site on the north side of Penny Drive could be monitored to ensure that they do not grow into the airspace for final approach.

Signs should be posted along affected roadways warning motorists of helicopters operating in the vicinity.

Obstruction lights could be placed upon the boiler stacks on the north hospital building.

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A mechanism could be established for the City to respond to non-emergency flight deviation complaints that compromise safety.

Any new development on the southside of the building should be reviewed by Airlift Northwest pilots for safety considerations.

The design of the helistop could be modified to bring the design closer to compliance with FAA guidelines for the MAST helicopter, the UH-1.

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NOISE AND VIBRATION

Introduction

This section discusses noise and vibration impacts of the proposed helistop. The section was prepared by Towne, Richards & Chaudiere, Inc.

The report Helipad Noise Evaluation Children's Orthopedic Hospital (Seton, Johnson & Odell [SJO], 1985), prepared as part of the environmental checklist for this proposal, is a partial basis for the noise and vibration analysis. Data from Federal Aviation Administration (FAA) documents, from Airlift Northwest, and from other sources also were used to evaluate and supplement the SJO analysis.

As discussed in the Executive Summary and the Descriptions of the Proposed Action and Alternatives earlier in this Final EIS, most transport missions for Children's-destined patients would involve three flight segments: departure from the helicopter base (Harborview or Boeing Field) to the location of the patient; transport of the patient to Children's Helistop; and return to the helicopter base for dispatch to the next mission. This description differs from that contained in the Draft EIS which indicated a total of four flight segments would be involved. Because it is now assumed that most transport teams would be based at Harborview or Boeing Field, it usually would not be necessary to pickup the medical crew at Children's or the Intramural Field and one flight segment would be eliminated. However, certain cases still could require pickup of a specialized medical crew at Children's or the Intramural Field prior to departure and flight to the location of the patient. Because a fourth flight segment could be necessary in some cases, the analysis in this section assumes a worst case scenario in which noise from two landings and two takeoffs would occur at the designated helistop for each patient transport mission.

Sound Level Descriptors and Criteria

Descriptors

Sound levels are measured in decibels, abbreviated dB. Environmental noise is measured as A-weighted sound level in decibels, often abbreviated dBA or dB(A) to denote the A-weighting. The A-weighting is a frequency-dependent level adjustment that is based on the sensitivity of human hearing at various sound frequencies and takes into account the human ear's lack of sensitivity to low frequencies. Table 16 shows A-weighted sound levels associated with various noise sources and conditions.

The dBA measurements scale is a logarithmic rather than a linear scale, and is, therefore, not directly proportional to the energy or loudness of the noise. The smallest noticeable increase in noise is usually considered to be about 3 dBA, which is a doubling of sound energy. A doubling of judged loudness occurs for each 10 dBA increase in level. For example, 80 dBA is judged to be twice as loud as 70 dBA and four times as loud as 60 dBA.

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The increase in loudness of various sound level changes is judged as follows:

Sound level increase, dBA	Judged loudness increase
0 to 2	Barely perceptible
3 to 5	Noticeable
10	Doubling of loudness
20	Quadrupling of loudness

TABLE 16

SOUND LEVELS OF VARIOUS NOISE SOURCES AND CONDITIONS

Sound Level, dBA	Source or Condition
140	Hearing damage risk for short exposure
130	Threshold of pain
120	Race car at 50 feet
115	Occupational noise limit for 15 minutes/day exposure
110	Orchestra fortissimo; rock concert
100	Occupational noise limit for 2 hours/day exposure ambulance siren at 50 feet
95	Occupational noise limit for 4 hours/day exposure
*90	Occupational noise limit for 8 hours/day exposure
*85	Accelerating truck or bus at 50 feet; power lawn mower
*80	Average downtown traffic noise; ambulance siren at 500 feet
*75	Inside auto, accelerating
*70	Inside auto, steady speed
*65	Urban residential average noise; typical auto measured at residential setback
60	Normal conversation
55	Suburban residential average noise
50	General office
45	Residential indoor
40	Quiet indoor
20	Whisper
0	Threshold of excellent hearing

* Approximate sound levels of intermittent aircraft flyovers in Seattle area.

Source: Towne, Richards and Chaudiere, 1986.

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For evaluating the effect of noise on people, one must consider both the level, time of day, and duration of the noise. Noise descriptors that are based on the average sound energy have in the past ten years been found to be the best indicators of noise impact and community response, regardless of whether the noise is steady (such as a freeway) or fluctuating (such as local traffic and aircraft). Community noise, therefore, is often measured as an equivalent or average sound level, Leq, which is the level of a steady sound that contains the same acoustical energy as the fluctuating noise over a given time period.

Noise over 24 hours is measured as day-night average sound level, Ldn, which is the Leq over 24 hours with a 10 dBA penalty included when averaging the Leq for nighttime hours of 10:00 p.m. to 7:00 a.m., because of the greater noise sensitivity during nighttime. For locations exposed to intermittent aircraft noise, it is common for governmental agencies to use the yearly Ldn. The Ldn based on a particular day or condition can also be used to evaluate short-term impact. Ldn is the most widely accepted noise descriptor in the U.S. The descriptor is used by the U.S. Environmental Protection Agency (USEPA), the U.S. Department of Housing and Urban Development (USHUD), and the FAA to evaluate noise impact and land use compatibility. Ldn noise criteria are based on studies of activity interference (speech and sleep), annoyance, and community reaction.

The highest instantaneous sound level occurring during a given time period is called maximum sound level, Lmax. The Lmax descriptor can provide information about intermittent sound levels from particular noise sources, and the amount of noise fluctuation. Although Lmax is not commonly used by regulatory agencies to evaluate noise impact and land use compatibility, it can be used to estimate the probability of sleep interference from single noise events.

Individual aircraft events are also measured as sound exposure level, SEL, which is the level of a steady one-second sound that would contain the same amount of sound energy as the entire event. The SELs of individual aircraft events are used to compute the overall Leq and Ldn.

Although the A-weighted sound level and the Leq and Ldn noise descriptors are currently considered the best overall measures of noise, there are other factors that may affect sensitivity to noise. Impulse noise associated with helicopter blade slap tends to distinguish the helicopter noise from other noise sources. (This blade slap noise is primarily a characteristic of helicopters with two-bladed rotors). Research to determine whether an adjustment should be made to the sound level based on the impulsivity of the helicopter sound has led to conflicting results. The current position of the FAA and the International Civil Aviation Organization (ICAO) is that an impulsivity adjustment is unnecessary to properly certify aircraft and to adequately assess human response.

Criteria

There are no local, state or federal noise regulations specifically for helistops. The following is a discussion of existing noise standards and guidelines, and of noise effects.

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Seattle Noise Ordinance. The Seattle Noise Ordinance (City of Seattle, 1977) exempts "sounds originating from aircraft in flight, and sounds which originate at airports and are directly related to flight operations." The ordinance also exempts "sounds created by emergency equipment and emergency work necessary in the interests of law enforcement or of the health, safety or welfare of the community." Exempt sound sources also cannot be considered a public nuisance noise or public disturbance noise. Based on these exemptions, noise from aeromedical helicopters and from ambulance sirens would not be considered subject to the Seattle Noise Ordinance.

United States Environmental Protection Agency (USEPA) Noise Guidelines. Day-night average sound levels, Ldn, affecting residential, hospital and educational activity can be evaluated using USEPA noise guidelines (USEPA Region 10, 1975). Significant impacts on these activities are considered to exist if exterior Ldn is 65 dBA or above. The guidelines consider overall noise increases due to a project of 0 to 5 dBA to cause slight impact, 5 to 10 dBA significant impact, and over 10 dBA very serious impact.

United States Housing and Urban Development (USHUD) Noise Standards. USHUD has established Ldn noise standards for USHUD-assisted projects and actions (USHUD, 1979). The USHUD standards are cited only as an additional reference, since this project is not USHUD-assisted. Ldn 65 dBA or less is "acceptable." Ldn exceeding 65 dBA but not exceeding 75 dBA is "normally unacceptable," and special approvals, environmental review and sound attenuation are required. Ldn exceeding 75 dBA is "unacceptable," and special approvals, environmental review and sound attenuation are required.

FAA Land Use Compatibility Criteria. The FAA (FAA, 1984) has developed land use compatibility criteria based on Ldn as shown in Table 17. The criteria basically consider residential or hospital land use to be not compatible where the yearly Ldn is 65 dBA or above, unless outdoor to indoor sound level reductions are 5, 10 or 15 dBA over standard construction sound level reductions of 20 dBA. All land uses are considered to be compatible where the yearly Ldn is below 65 dBA.

Sleep Interference. The probability of sleep disturbance from noise varies depending on the level and duration of the noise, stage of sleep, individual exposed, and adaptation. Intermittent indoor sound levels (up to a few minutes duration) above 70 dBA have a significant probability of causing sleep interference. Intermittent levels of 40 to 70 dBA are generally considered to have some potential for causing sleep interference. Continuous sound (for example, from air conditioners or fans) causes sleep interference above 35 to 45 dBA. Sleep interference can also occur at lower sound levels, although the probability of sleep disturbance diminishes significantly at the lower levels. Adaptation to a particular sound level or noise source is a factor in determining sleep interference. This factor generally cannot be simulated in laboratory studies. Age is also a factor, with the elderly and children in certain age groups being more susceptible to awakening. Intermittent indoor sound levels up to about 55 dBA are generally not considered to cause impact, based on collated data such as shown in Figure 19. More conservative data from studies conducted in schools and hospitals, as shown in Figure 20, indicate a sleep interference threshold of 40 dBA, with probabilities of awakening from maximum sound levels of 50 dBA as 10%, 60 dBA as 20%, and 70 dBA as 30%.

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TABLE 17

LAND USE COMPATIBILITY* WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS

Land Use	*Yearly Day-Night Average Sound Level (L_{dn}) in Decibels*					
	Below 65	*65-70*	*70-75*	*75-80*	*80-85*	*Over 85*
Residential						
Residential, other than mobile homes and transient lodgings	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
Public Use						
Schools, hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
Commercial Use						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
Manufacturing And Production						
Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
Recreational						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

(Numbers in parentheses refer to notes.)

* The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses remains with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

KEY TO TABLE

SLUCM	Standard Land Use Coding Manual.
Y (Yes)	Land Use and related structures compatible without restrictions.
N (No)	Land Use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30, or 35	Land used and related structures generally compatible; measures to achieve NLR or 25, 30, or 35 must be incorporated into design and construction of structure.

NOTES FOR TABLE

(1) Where the community determines that residential uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.

(2) Measures to achieve NLR of 25 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(3) Measures to achieve NLR of 30 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(4) Measures to achieve NLR of 35 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(5) Land use compatible provided special sound reinforcement systems are installed.

(6) Residential buildings require an NLR of 25.

(7) Residential buildings require an NLR of 30.

(8) Residential buildings not permitted.

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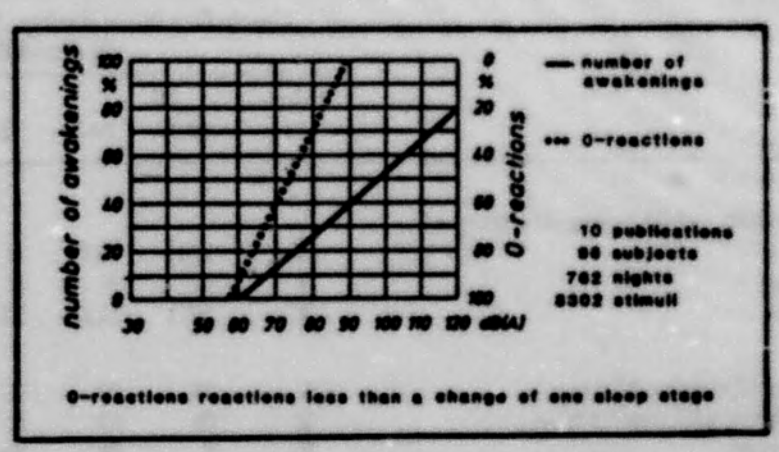

Figure 19 Sleep Disturbances by Noise - Number of Reactions and Noise Levels

Source: Griefahn, 1980

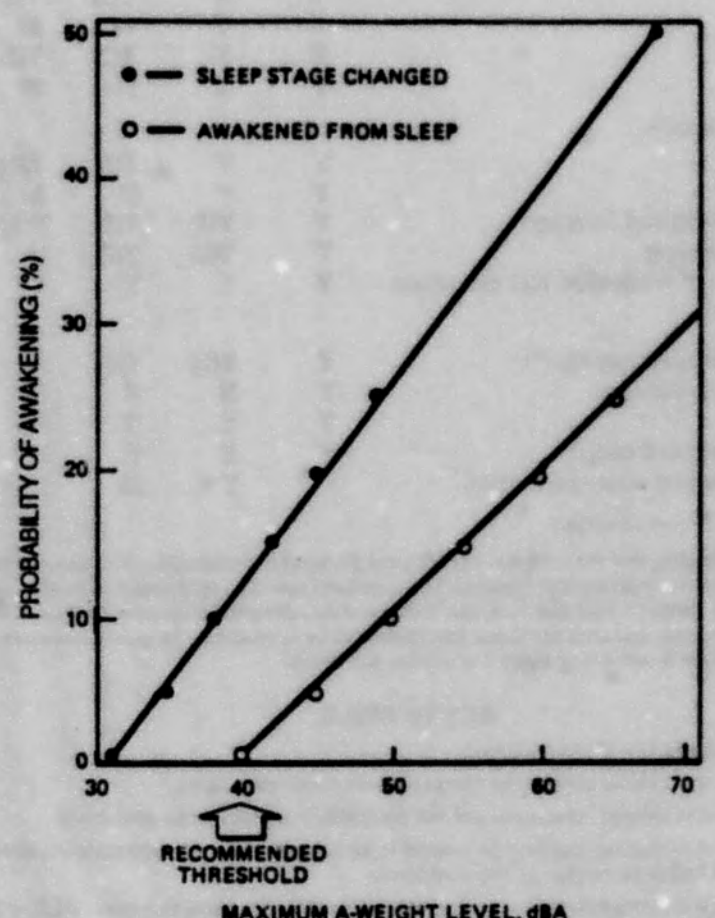

Figure 20 Composite of Laboratory Data for Sleep Interference Versus Maximum a-Weighted Noise Level

Source: Lyle Laboratories, 1977

Figures 19 and 20

Sleep Disturbance by Noise

N

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Motor vehicle noise is the primary cause of sleep interference in residential areas. In typical residential areas, there is a relatively steady background sound level from distant traffic. Higher sound levels from local traffic events are superimposed on this background. Typical intermittent sound levels at the 30- to 50-foot setback of a residence would be similar to those that have been identified in national surveys (USDOT, 1978). At 31 miles per hour (50 kph) and 49 feet (15 m), the "national energy mean emission levels" of various vehicle categories are as follows:

Vehicle Category	Sound Level, dBA
Heavy truck	80
Medium truck	74
Automobile	62

Noise emissions from buses are similar to medium or heavy trucks. Noise emissions are several dBA higher when vehicles are accelerating. Typical maximum sound levels in residential areas are, therefore, between about 75 and 85 dBA due to occasional noisy vehicles. Where there is a significant amount of traffic, such as at residences adjoining Sand Point Way N.E., maximum levels between 80 and 90 dBA are common (Towne, Richards and Chaudiere, 1982).

Outside to inside sound level reductions are about 25 dBA in the Northwest when the windows are closed. Residential interior maximum sound levels due to occasional motor vehicles are typically 50 to 60 dBA, which can cause occasional sleep interference. With windows partly open, interior sound levels are typically 10 dBA higher, or about 60 to 70 dBA, and there is greater probability of sleep interference.

Ambulance sirens are another noise source that is occasionally present near Children's. The sirens produce between 90 and 106 dBA at 50 feet, depending on their power rating and orientation (Federal Signal Corp., 1986). The sirens, therefore, are capable of causing interior sound levels significantly above the sleep interference thresholds.

In evaluating the sleep interference potential of the Children's helistop, it is important to consider those noise sources that are already present, and whether there would be a significant increase in intermittent and average sound levels.

Health Effects of Noise. The only clearly established health hazard of noise is hearing loss. State and federal occupational noise exposure limits based on hearing loss are 90 dBA for eight hours exposure, or higher levels up to 115 dBA for shorter exposure periods.

Based on animal studies involving prolonged exposure to high sound levels, health effects other than hearing loss have been postulated. Between 1977 and 1980, several studies to identify possible adverse health effects on residents in high noise environments, such as neighborhoods adjoining Los Angeles International Airport, however, have been inconclusive. There is little conclusive scientific basis for claiming direct health impacts from aviation noise. However, anxiety, high blood pressure and stress reactions are a potential effect for some individuals exposed to noise.

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Noise-Induced Structural Vibration. Detectable vibration of portions of building structures can occur if exterior sound pressure levels in the low frequencies below 100 Hz (100 cycles per second) are above 65 to 80 dB, as discussed in the SJO report. Short-duration sound pressure levels above approximately 120 dB are considered to cause annoying rattles and fright (U.S. Department of the Interior, 1980). Sound pressure levels from diesel truck drive-bys and general aviation aircraft flyovers are approximately in the 65 to 80 dB range, based on USEPA sound pressure level data (USEPA, 1971), but are well below 120 dB.

The vibration response of a particular structure depends on the construction type and the window size and type. Residence vibration studies have generally been based on structures in southern California and other parts of the southern United States. It is likely that residences in the Northwest, which typically provide about 5 to 7 dB more outside to inside sound level reduction than residences in Southern California (based on airport acoustic insulation studies), are also less susceptible to structural vibration.

Detectable buzzing or rattling of windows due to structural vibration can result in increased annoyance, but is not damaging to the structure unless the outside sound pressure levels are above approximately 134 dB (U.S. Department of the Interior, 1980). Studies of historic building structures near airports with high sound pressure levels from aircraft noise, including 104 dBA from the Concorde supersonic jet transport (Hershey, Kevala and Burns, 1975), have shown that exposure to normal weather (such as thunder or wind loads) produces a higher probability of breakage than vibration from the noisiest aircraft, the Concorde. The contribution of aircraft to structural damage was found to be insignificant. Since the helicopter sound levels received at residences near Children's would be significantly lower than those measured for the Concorde, there is not expected to be any likelihood of structural damage from the noise.

Residents in the area have reported in their comment letters on the Draft EIS that helicopter operations in the area have cause rattling and movement of dishes and other lightweight objects.

Helicopter Noise Sources

The Children's helistop would primarily be used by Airlift Northwest. Airlift Northwest uses the Agusta 109 Mark II helicopter, which is turbine-powered. The 109 represents near-current low-noise helicopter design. The helicopter has four blades per rotor instead of two, which results in less of the impulsive blade slap noise that is commonly associated with two-bladed helicopters. The Mark II has additional aerodynamic noise reduction features such as a cap on the rotor head, to reduce the air flow angle into the blades and thereby reduce blade noise, and a vortex generator to control blade slap noise. Sound level data for this helicopter were obtained from measurements made by SJO at Children's, from FAA test data, and from measurements made at Harborview Medical Center (King County, 1986).

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The MAST helicopters are two-bladed, turbine-powered Bell UH-1Vs and have a more impulsive noise than the Agusta because of blade slap. A-weighted sound levels of the two helicopters are comparable, although because of the blade slap, the MAST is perceived as being noisier. Sound level data for the MAST helicopter were obtained from measurements at Harborview Medical Center.

The loading of the helicopters (gross vehicular weight) has a negligible effect on their noise emission, because power settings, flight paths and blade speed are negligibly affected or unaffected (Hill, 1986).

Affected Environment

Helicopter flight paths are described in detail in Chapter III of this Final EIS. The primary approach to Children's would follow the N.E. 45th Street/Sand Point Way N.E. corridor east of Union Bay Place N.E., enter the Children's campus north of the main entrance, turn south approximately over the parking garage, and land at the helistop. Departures would follow a similar flight path, but at higher altitude.

The existing noise-sensitive land uses are single-family and multi-family residences near the N.E. 45th Street/Sand Point Way N.E. corridor, including Laurelon Terrace Apartments and Laurelhurst West; and single-family residences east of Children's, primarily along 44th Avenue N.E. between N.E. 47th and N.E. 50th Streets. Laurelhurst School, located 1,000 feet east of the helistop site, is also noise-sensitive.

Existing sound levels were described in the SJO report for five locations that had been selected in coordination with the Seattle/King County Department of Public Health and the City of Seattle Department of Construction and Land Use. The measurement locations (see Figure 5, Campus Map) and existing day-night average sound levels, Ldn, were as follows:

	Location	Ldn, dBA
1.	4720-4724 44th Avenue N.E. (N.E. of Children's)	52
2.	4530 45th Avenue N.E. (East of Children's)	53
3.	Laurelhurst West (near Sand Point Way N.E.)	68
4.	Laurelon Terrace (set back from Sand Point Way N.E., West of proposed helistop)	55
5.	4757 - 41st Avenue N.E. (near Sand Point Way N.E., near main entrance to Children's)	63

Existing maximum sound levels were not measured in the SJO study, due to the relatively small number of sound level readings taken at each location. As discussed previously, however, typical maximum levels in residential areas are between about 75 and 85 dBA due to occasional noisy vehicles. Near Sand Point Way N.E., maximum levels between 80 and 90 dBA occur from motor vehicle traffic. Along ambulance routes, sirens produce maximum levels between 90 and 106 dBA at 50 feet (Federal Signal Corp, 1986).

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A secondary flight path to Children's would be from the northeast over a single-family residential area. The Villa Academy is located several blocks east of the secondary flight path. This flight path would only have to be used during wind conditions that occur infrequently.

The primary helicopter approach and departure paths to the Intramural Field are from the east over water, from the southwest from the Montlake Cut, and from the north via I-5 and N.E. 45th Street. Noise-sensitive land uses include residences near the Montlake Cut.

The approaches to the proposed University of Washington Medical Center helistop are from the east and northeast, over the University of Washington sports facilities, from the south passing close to the Montlake area, and from the north via I-5, N.E. 45th Street and Montlake Boulevard N.E. The proposed helistop would be located across the Montlake Cut from a noise-sensitive residential area.

Impacts

Proposed Action - Children's Helistop

Noise impacts of the Children's helistop were described in the SJO report. The report assumed 20 patient transports or 40 "round-trip" flights per month, of which 29 would occur during daytime hours of 7:00 a.m. to 10:00 p.m., and 11 during nighttime hours of 10:00 p.m. to 7:00 a.m. Impacts could in fact be less than those described in the SJO report, because of fewer flights. For the noise analysis, it has been assumed that there would be two "round-trip" flights to Children's for each patient transport: the first to pick up the medical crew and the second to deliver the patient. This is a worst case scenario, because it is now assumed that, with the medical transport team based at Harborview or Boeing Field, three not four flight segments would be necessary for the majority of patient transports. Only in certain cases would a specialized medical crew be picked up at Children's or the Intramural Field. This worst case scenario would result in 80 over-flights per month. The assumed 20 patient transports/40 "round-trip" flights per month is, therefore, a "worst case" assumption.

The number of nighttime transports is expected to be less than the 28% assumed by SJO. Data for 103 transports that landed patients at the Children's campus indicate that approximately 18% of the transports occur during nighttime hours of 10:00 p.m. to 7:00 a.m. For the purpose of these environmental analyses, it is assumed that 25% of the transports would occur in nighttime hours.

The SJO report's comparison of monthly day-night average sound levels, Ldn, with and without the proposed helistop, based on noise tests of the Agusta helicopter at Children's, is shown in Table 18.

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Table 18

EXISTING AND PREDICTED Ldn

	Monthly Ldn, dBA			
Location	Existing	Helicopter (20 patient transports; 40 round-trip flights)	Combined	Increase
1. 4720-4724 44th Ave. N.E.	52	55	57	+5
2. 4530 45th Ave. N.E.	53	48	54	+1
3. Laurelhurst West	68	50	68	0
4. Laurelon Terrace	55	56	59	+4
5. Across from main entrance	63	52	63	0

Source: Seton, Johnson & Odell, 1985.

The projected worst case noise increase of 5 dBA in Ldn is considered a slight impact according to USEPA noise guidelines (USEPA, 1975).

The highest maximum sound level of the helicopter was measured by SJO to be 84 dBA at the closest receptor location, 4720-4724 44th Avenue N.E. Interior sound levels would depend upon whether the windows are opened or closed. Typical interior maximum sound levels from helicopters were estimated to be about 55 dBA, assuming typical outdoor maximum levels of 80 dBA and an outdoor to indoor sound level reduction of 25 dBA with windows closed. This level was estimated to awaken 15% of a normal population sample. As indicated previously, intermittent levels up to about 55 dBA are generally not considered to cause impact. At the closest receptors, the maximum sound levels would be about 84 dBA exterior and 59 dBA interior with windows closed. This 59 dBA level would cause about a 20% probability of awakening, based on Figure 19. With windows partly open, interior maximum levels would be about 10 dBA higher, or up to 69 dBA, causing a 30% probability of awakening according to Figure 19. This probability of awakening is about 5-10% higher than for the estimated existing condition without helicopters, which is maximum levels of 60 to 65 dBA interior with windows partly open.

Based on discussions with Airlift Northwest concerning noise considerations, the primary flight path for Children's has been modified to allow a more gradual and direct turn into Children's than was used in the SJO noise tests, instead of the sharp turn that was previously made north of the intersection of Sand Point Way N.E. and N.E. 50th Street. The portion of the new flight path near the helistop would also be farther east of the Laurelon Terrace apartments, resulting in about 7-9 dBA lower maximum levels from helicopters than for the current flight path.

Maximum and day-night average sound levels were calculated for the new flight path using FAA noise test data for the Agusta 109 Mark II (FAA, 1985). The FAA data provides Lmax and SEL readings at the centerline and

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several side distances for various approach, takeoff, level flyover and hover operations. In addition to an average monthly Ldn, a "worst one-day" Ldn was also calculated, assuming two daytime and two nighttime flights. Results of the calculations are shown in Table 19. The helicopter Ldns shown in Table 19 are considered to represent the "worst case" cumulative impact condition, as discussed previously.

The calculated monthly Ldn from helicopters are relatively close to those of SJO (see Table 18) at Locations 2, 4 and 5, but are lower at Locations 1 and 3, presumably because of differences in the flight path (affecting distance and exposure time) and possibly a difference in the helicopter altitude used to calculate levels at Location 3, Laurelhurst West. The helicopter Ldns shown in Table 19 are consistent with a current measured helicopter Ldn of 48 dBA 450 feet from the helistop at Harborview Medical Center (King County Department of Executive Administration, 1986).

The calculated highest Lmax of 84 dBA at the closest residences is identical to the level predicted by SJO.

The predicted sound levels are not expected to exceed the EPA's recommended significant impact criteria of a Ldn above 65 dBA or of an increase of more than 5 dBA in overall monthly and worst one-day noise. At all locations, the calculated monthly Ldn from helicopters would be less than the existing Ldn, resulting in a 3 dBA or less noise increase. There would, however, be increased sleep interference affecting Laurelon Terrace, residences west of the Children's main entrance that are not near Sand Point Way N.E., and the closest residences northeast of the proposed helistop site. At these locations, interior Lmax from helicopters are likely to be several dBA above the currently existing Lmax from motor vehicles (up to 59 dBA predicted versus 50 to 55 dBA estimated existing). Assuming about 25% of the flights occur at night, in 1995 there would be an average of approximately four to five nighttime patient transports per month.

Because the rise in noise would be gradual, startle effects associated with rapid noise increases from sources such as blasting or sonic booms would not occur. Nevertheless, it is acknowledged that there could be adverse responses to the noise, including stress.

There would be some noise impacts affecting Laurelhurst School. There would be approximately five minute-long noise impacts during approaches and landings and a similar duration of noise for takeoffs and departures. These events would result in exterior sound levels (FAA, 1985) of up to 72 dBA at the second story and 62 dBA at the first story and playgrounds, which are shielded by residential structures. The interior maximum sound levels would be about 47 dBA with windows closed and 57 dBA with windows open at the second story, and 37 dBA with windows closed and 47 dBA with windows open at the first story. These levels are approximately similar to sound levels currently caused by motor vehicle drivebys. The noise could disrupt classroom activity. The secondary approach/departure route would have a greater effect on the noise levels at the Laurelhurst School than would the primary flight path.

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Table 19

COMPARISON OF EXISTING AND PREDICTED EXTERIOR SOUND LEVELS
FOR THE PROPOSED FLIGHT PATH

	Receptor Locations*				
	1	2	3	4	5
Lmax:					
Existing estimated	75-80	75-80	90	80	85
Helicopters	84	75	75	84	82
Increase	4-9	0	0	4	0
Monthly Ldn:					
Existing	52	53	68	55	63
Helicopters	51	47	43	54	50
Combined	55	54	68	58	63
Increase	3	1	0	3	0
Worst one-day Ldn:					
Existing**	55	56	71	58	66
Helicopters	58	54	50	61	57
Combined	60	58	71	63	67
Increase	5	2	0	5	1

*Locations: 1 - 4720-24 44th N.E.
2 - 4530 45th N.E.
3 - Laurelhurst West
4 - Laurelon Terrace
5 - Across from main Hospital entrance

**The "existing worst one-day Ldn" is assumed to be the existing Ldn measured by SJO plus 3 dBA, since the existing Ldn varies from day to day depending on the traffic conditions and local activities.

Source: Towne, Richards and Chaudiere, Inc., 1986.

There would be sleep interference impacts several times per month affecting hospital patients whose rooms are exposed to helicopter noise. Maximum exterior sound levels at the portion of buildings closest to the helistop would be about 94 dBA. Interior maximum sound levels would be about 69 dBA with windows closed, which is considered to be the typical nighttime condition. These levels would cause about a 30% probability of awakening, based on Figure 19. Maximum sound levels, however, would be less than for the Limited Landings Alternative, since the helistop would be farther from the hospital building.

Low-frequency sound pressure levels from helicopters were estimated in the SJO report and found to be approximately similar to the levels at which perceptible structural vibrations are considered possible. The levels,

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however, are also similar to those that typically occur from diesel trucks and general aviation aircraft flyovers, as discussed previously. The estimated levels are significantly below levels that are considered to cause fright or structural damage.

The probability of structural vibration would be less than for the current flight path required by the Limited Landings Alternative.

Flights by the MAST helicopters would produce A-weighted sound levels almost identical to those of the Agusta, based on measurements at Harborview Medical Center (King County, 1986). The MAST helicopter noise would be more noticeable than that of the Agusta because of more blade slap, as discussed previously.

There are no known adverse health effects associated with the predicted helicopter sound levels for the neighborhood around Children's.

There would be temporary noise impacts from intermittent construction noise during the two-month construction period, primarily affecting hospital patients whose rooms face the construction site. The noise would occur from trucks delivering fill material, grading and compaction of the site, and construction of the concrete surface. These activities would be limited to daytime hours. The Seattle Noise Ordinance (City of Seattle, 1977) contains stringent limits on construction noise received in residential areas during nighttime hours of 10:00 p.m. to 7:00 a.m. on weekdays and 10:00 p.m. to 9:00 a.m. on weekends. The daytime construction noise is not expected to affect residential areas because of the distance to these areas.

The following is a summary of impacts. The summary is consistent with the findings of the SJO report:

- The helicopter noise would be infrequent and short-term in nature, and the increase in sound levels that would be received at residences would be moderate.

- Helicopter flights during sleeping periods could cause awakening probability of about 15-30% at the closest, line-of-sight residences and 30% at the closest hospital patient rooms.

- The impact of the helicopter noise exposures as measured by Ldn would increase by 3 to 5 dBA at residences closest to the helistop. Under EPA criteria, this is not considered a significant impact.

- Structural vibrations due to helicopter flights are not expected to be significant.

Intramural Field Helistop Alternative

Construction noise impacts could occur if the University of Washington made improvements to the existing helistop. When the primary approach and departure paths are used, the Intramural Field Alternative is not expected to result in significant noise impacts from helicopter operations, since it is an existing use and residential properties are a substantial distance

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from the helistop. There could, however, be impacts on student dormitory residents and possibly noise interference with class lectures on the few occasions when the secondary approach path over the University of Washington campus is used.

This alternative could result in ambulance sirens occasionally being used between the Intramural Field and Children's. The sirens are approximately as loud as the helicopters, producing about 90 to 106 dBA at 50 feet and 86 dBA at 500 feet. Residences along Sand Point Way N.E., including the Laurel Village University of Washington housing, Laurelhurst West, portions of Laurelon Terrace, and several other single- and multi-family residences, could experience higher maximum sound levels from ambulances than from the helicopters associated with the Proposed Action. The closest single-family residences to the east of Children's along 44th Avenue N.E., and patient rooms near the northern part of Children's, would experience lower maximum levels than under the Proposed Action, assuming that the ambulance sirens are not used within the hospital property.

University of Washington Medical Center Helistop Alternative

This alternative is not being considered by the University at this time. However, if the University of Washington Medical Center Alternative helistop were used, it would result in slight helicopter noise impacts affecting patients whose rooms were exposed to helicopter noise and residents south of the Montlake Cut. These impacts would be several dBA less than those described previously for residents closest to the Children's helistop, because of greater distance from the operating aircraft.

This alternative could also result in the occasional use of ambulance sirens during transport between the University of Washington Medical Center and Children's. As indicated above, the ambulance sirens could produce higher maximum sound levels at residences along Sand Point Way N.E. than would helicopters, but lower levels at single-family residences to the east of Children's and at the northern hospital rooms.

Limited Landings Alternative

Under the Limited Landings Alternative, helicopter flights to Children's are expected to continue as they currently do in response to the most critical emergencies, resulting in occasional noise impacts. Impacts from individual missions would be slightly greater than those events described for the Proposed Action, because the approach and departure paths and landing area would be somewhat closer to the hospital and patients' rooms. In 1995, nighttime missions would occur on the average of slightly less than one per month.

This alternative could also result in the occasional use of ambulance sirens during transport from Boeing Field or Harborview Medical Center.

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The Preferred Alternative

The Preferred Alternative involves the majority of the patients being transported to Harborview and/or the Intramural Field, with the most critical patients landed at the Children's campus. There would be construction noise that would be comparable to the construction noise impacts described under the Proposed Action. In addition, there could be construction noise associated with minor improvements that could occur at the University's existing helistop at the East Campus location.

Under this alternative, there would be no landings at Children's in order to pick up the medical crew. In 1995, there would be approximately four patients per month that would be landed at the Children's helistop. Impacts on monthly Ldn would be less than those identified in Table 18. The noise on a day with a single helicopter landing and departure event would be approximately the same as presented in Table 18. An estimated average of less than one landing per month could occur during the nighttime hours.

Under this alternative, the majority of the patients would land at either Harborview and/or at the Intramural Field. The noise impacts at the Intramural Field would be comparable, although less, than the impacts described under the Intramural Field Alternative, above. The noise impacts at Harborview would be comparable to what would be expected under the No Action Alternative, as described below.

No Action Alternative

Under the No Action Alternative, noise impacts associated with helicopter approaches and departures would be limited to the area around Harborview and Boeing Field. In addition, there could be occasional use of ambulance sirens during transport from Boeing Field or Harborview.

Mitigating Measures

The following are proposed mitigating measures that are incorporated into the Proposed Action:

- The helistop would be used primarily by a modern, multi-blade helicopter representing near-current low-noise technology.
- The proposed primary flight path would keep the helicopter at high altitude above Sand Point Way N.E.
- The helicopter would use a noise abatement approach and departure that reduces disturbances to residences.
- The Kitchen Garden Helistop location maximizes ground distances to residences, and is shielded on the south by the hospital structure.

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The following additional mitigating measure is possible:

. The medical crew could be picked up at a location other than Children's, resulting in a 50% reduction in the number of flights to Children's. (This practice has been implemented by basing the helicopter and transport teams at Harborview and Boeing Field.) The monthly and worst-day Ldn from helicopters as shown in Table 18 would then be reduced by 3 dBA, resulting in slightly lower noise increases.

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CUMULATIVE IMPACTS

The potential for Children's helistop approval establishing a precedent for the siting of helistops at other Seattle-area hospitals was determined to be an issue through the scoping process. The concern regarding the establishment of a precedent is important for two reasons. First, there is a concern that other medical institutions may seek permission to construct helistops on their respective campuses. This in turn could result in more dispersed EMS helicopter operations throughout the City, along with the environmental impacts associated with those operations. The second component of the precedent issue is the possibility that the construction of a helistop could be the first step in the establishment of a new air ambulance service that would compete with existing air ambulance services. As stated by the Puget Sound Health Systems Agency, ". . . individual institutions (could) establish helipads and eventually separate helicopter programs in an effort to meet particular patient care objectives which might be met satisfactorily under the current arrangement of emergency services" (Thompson, 1985).

While local and community hospitals in the region are capable of treating most life-threatening emergencies, some patients with particularly complex or severe presenting conditions will be referred to the more sophisticated level of services and capabilities offered only at certain tertiary care hospitals and medical centers.

In Seattle, many hospitals are involved in treating critically ill and injured patients who are facing life-threatening emergencies; however, only a few of these institutions are considered as tertiary care centers for these emergencies. In Seattle, these referral centers and their areas of particular medical expertise are:

Children's - Neonatal/Pediatric Medical and Surgical Emergencies
Harborview - Trauma, Burn Emergencies
Providence - Adult Cardiac Emergencies
University - Neonatal, Obstetrical, and Adult Medical (including Cardiac) Emergencies

Harborview and the University of Washington currently have approved helistops. Helicopters are landing at Children's and Harborview, with Children's having submitted an application for a helistop. No other Seattle hospitals are deemed likely candidates for helistops (Nicola, 1986).

Based on a survey of Seattle-area medical institutions, Ballard Community Hospital, St. Cabrini Hospital, Group Health Cooperative, Northgate General Hospital, Northwest Hospital, Pacific Medical Center, Providence Medical Center (a member of the Airlift Consortium that shares the Harborview Helistop), Swedish Hospital and Medical Center (an Associate Member of the Airlift Consortium), West Seattle Community Hospital, and Virginia Mason Medical Center (an Associate Member of the Airlift Consortium) do not currently plan a helistop. These medical institutions represent all the major hospitals in the City of Seattle.

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In order for a Seattle area medical institution to receive a conditional use approval, it must demonstrate that the helicopter is needed to save lives. Although it is conceivable that the non-centrally located hospitals (Ballard, Northgate, West Seattle) could have occasion for patients to be transported from the hospital due to extraordinary circumstances (such as severe traffic congestion), it is unlikely that a dedicated helistop would be warranted.

Approval of the Proposed Action is not expected to have an impact upon the number of helistops nor the number of helicopter services. Rather, the creation of Airlift Northwest by a consortium of specialty, regional referral medical institutions was designed to avoid the proliferation of air ambulance services and to provide critically ill and injured patients with an appropriate level of medical service. It is unlikely that new air ambulance programs in the Seattle area would be able to compete successfully with Airlift Northwest, whose membership is comprised of the principal tertiary care institutions to which emergency patients requiring helicopter transport are being taken. Because the Airlift Northwest medical transport crews provide an extension of the medical capabilities of the consortium members, a new air ambulance program would have difficulty offering the same type of service provided by Airlift Northwest.

An additional factor is the cost of establishing an air ambulance service, including the cost of permit approvals, purchasing and/or leasing the equipment, maintaining the aircraft, and the cost of maintaining a staff of qualified pilots, mechanics, medical transport teams and program administrators.

In the event a helistop application for air medical use is made in the future, it would be subject to the land use criteria used by the City of Seattle for evaluation of applications for institutional helistops. Those criteria limit the use of helistops to those situations involving life-threatening emergencies and those with a demonstrated medical need. The proposed major institution policies contain similar language to the existing code.

The Washington State Medical Association's draft air ambulance protocols (appended to Dr. Nicola's updated report in Appendix A) have been prepared and submitted to the State Department of Social and Health Services (DSHS) for their consideration (see discussion in Chapter II). These guidelines can be used by agencies to determine whether particular medical institutions are appropriately involved in the treatment of the types of patients that are identified in the draft protocols as warranting air ambulance transport.

The City's land use review process, the Washington State Medical Association's guidelines for patient transport, which have been recommended to the DSHS, and the (probable) development of guidelines for integrating the helicopter service into the regional EMS system are expected to prevent the inappropriate development of helistops and helicopter services.

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Although the above considerations and regulations may effectively limit the proliferation of helistops, it is possible that medical institutions in the Seattle area would allow helicopters to land patients at their campuses. Specifically, Children's has interpreted the WAC 248-18-285 (see Chapter II) to mean that a hospital is obligated to accept patients that are brought to their doors and, therefore, cannot deny helicopters the permission to land patients. The City of Seattle does not agree with Children's interpretation of this section of the WAC. Other Seattle area hospitals may interpret the Washington Administrative Code in the same way as Children's and may not prohibit helicopters from landing patients. However, in order to construct a helistop, these other institutions would need to receive a Council Conditional Use Permit.

Mitigating Measures

As part of the Proposed Action and Preferred Alternative, a Medical Review Committee, which is described in Appendix C, has been proposed. The Committee's responsibilities would include the examination of Airlift Northwest transports that land at Children's to ensure that use of the helistop conforms to the medical needs criteria of the conditional use approval. Such a review could be expanded to all Airlift Northwest helicopter transports to Children's and to transports by other programs, such as Med-Flight or Mast.

Children's could work with Med-Flight and other air ambulance services to ensure that protocols, including dispatching procedures, communications, flight paths, and guidelines for selecting landing locations, are understood and adhered to.

Children's and Airlift Northwest have committed to cooperating in any future program to integrate air ambulance services into County, regional and State Emergency Medical Services plans.

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UNAVOIDABLE ADVERSE IMPACTS

This section identifies, for each of the alternatives, the unavoidable adverse impacts that cannot be mitigated.

The Proposed Action

Noise

There would be noise generated during the two-month long construction of the helistop at the Kitchen Garden site on the Children's campus.

Noise and vibration would be generated by the helicopter during an estimated 15-21 patient transports per month by 1995. Assuming that there are no reduced flights due to medical transport team pickup at an alternate location, it is estimated that in 1995 there would be approximately 30-42 monthly landings and takeoffs that would generate noise and vibration.

Noise and vibration levels would cause disturbance to conversation and other noise-sensitive activities.

With an estimated 25% of the patient transport missions occurring during the nighttime hours (10:00 p.m. to 7:00 a.m.), it is estimated that by 1995 approximately once a week there would be noise and vibration levels sufficient to cause sleep disturbance to 15-30% of the closest receptors.

Safety

There is a statistical risk that there would be one accident in every 14,184 patient transport missions. (Refer to Table 15.)

Of all alternatives, the Proposed Action presents the greatest risk to people and property along the flight path and in the area around Children's.

Cumulative Impact

It is possible that the University could receive City approval to use the existing helistop on the roof of the expansion wing of the University of Washington Medical Center; although use of the helistop is not being considered by the University at this time. This would result in three helistops in close proximity to one another.

Intramural Field Helistop Alternative

Noise

There would be noise generated during the two-month long construction period, if improvements were made to the existing helistop at the Intramural Field.

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Noise and vibration would be generated by the helicopter during an estimated 15-21 patient transports per month in 1995. Assuming that there are no reduced flights due to medical transport team pickup at an alternate location, it is estimated tha. in 1995 there would be approximatelv 30-42 monthly landings and takeoffs that would generate noise and vibration.

Noise and vibration levels at the Intramural Field location would cause less disturbance to conversation and other noise-sensitive activities than the Proposed Action. However, there may be noise interference with class lectures and impacts on dormitory residents.

Under this alternative sleep disturbance would be less than the Proposed Action because noise reduction would occur over the increased distance to sensitive receptors.

There could be ambulance siren noise over a portion of the distance from the Intramural Field to Children's.

Safety

There is a statistical risk that there would be one accident in every 14,184 patient transport missions. This statistical risk is identical to the Proposed Action.

Although the risk of an accident at Children's is eliminated, there is an increased risk associated with the area along the flight path to and from the helistop at the Intramural Field. The risk of a bird strike is increased, compared to the Proposed Action.

There is some risk associated with the ground transport of patients via ambulance from the Intramural Field to Children's.

Cumulative Impact

No unavoidable adverse impacts have been identified.

University of Washington Medical Center Helistop Alternative

It should be noted that this alternative is not being considered by the University at this time.

Noise

Noise and vibration would be generated by the helicopter during an estimated 15-21 patient transports per month in 1995 if the helistop was being used. Assuming that there are no reduced flights due to medical transport team pickup at an alternate location, it is estimated that in 1995 there would be approximately 30-42 monthly landings and takeoffs that would generate noise and vibration.

Noise and vibration levels would cause some disturbance to conversation and other noise-sensitive activities, but would be less than the Proposed Action.

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Under this alternative sleep disturbance would be less than under the Proposed Action because noise reduction would occur over the increased distance to sensitive receptors.

There could be ambulance siren noise over a portion of the distance from the University of Washington Medical Center to Children's.

Safety

There is a statistical risk that there would be one accident in every 14,184 patient transport missions. This statistical risk is identical to the Proposed Action.

Although the risk of an accident at Children's is eliminated, there is an increased risk associated with the area along the flight path to and from the rooftop helistop at the University of Washington Medical Center.

There is some risk associated with the ground transport of patients via ambulance from the University of Washington Medical Center to Children's.

Cumulative Impact

This alternative would result in two helistops on the University of Washington campus being actively used.

Limited Landings Alternative

Noise

Noise and vibration would be generated by the helicopter delivery to the existing landing location outside the Children's Emergency Room entrance of a majority of the patients being transported by helicopter.

With an estimated 25% of the patient transport missions occurring during the nighttime hours (10:00 p.m. to 7:00 a.m.), it is estimated that by 1995 approximately less than once a month there would be noise and vibration levels sufficient to cause sleep disturbance to 15-30% of the receptors closest to Children's Kitchen Garden site. Noise and vibration levels would cause disturbance to conversation and other noise-sensitive activities in the area immediately surrounding Children's.

There would be additional noise generated in the vicinity of the helistop at Harborview or at the landing location at Boeing Field. This noise would be within regulated limits.

For patient transports landing at Harborview or Boeing Field, there could be ambulance siren noise over a portion of the distance from those landing locations to Children's.

Safety

There is a statistical risk that there would be one accident in every 14,184 patient transport missions. This statistical risk is identical to the Proposed Action.

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There is a greater risk in landing and taking off from the existing location at Children's than there would be from a constructed helistop at the Kitchen Garden location.

Risk of an accident at Children's is reduced compared to the Proposed Action; however, the risk for the area along the flight paths to and from Harborview and Boeing Field is increased.

There is some risk associated with the ground transport of patients via ambulance from the Harborview or Boeing Field to Children's.

Cumulative Impact

It is possible that the University could use the existing helistop on the roof of the expansion wing of the University of Washington Medical Center, although this is not being considered by the University at this time.

The Preferred Alternative

Noise

There would be noise generated during the two-month long construction of the helistop at the Kitchen Garden site on the Children's campus.

Noise and vibration would be generated by the helicopter takeoff and landing at the Kitchen Garden site during the transport of an estimated 3-5 patients per month in 1995.

With an estimated 25% of the patient transport missions occurring during the nighttime hours (10:00 p.m. to 7:00 a.m.), it is estimated that by 1995 approximately once a month there would be noise and vibration levels sufficient to cause sleep disturbance to 15-30% of the closest receptors. Noise impacts of individual events would be less than the Limited Landings Alternative.

During the 3-5 landings per month in 1995, noise and vibration levels would cause disturbance to conversation and other noise-sensitive activities in the area immediately surrounding Children's.

There would be additional noise generated in the vicinity of the helistop at Harborview or at the helistop at the Intramural Field. This noise would be within regulated limits.

For patient transports landing at Harborview or the Intramural Field, there could be ambulance siren noise over a portion of the distance from those landing locations to Children's.

Safety

There is a statistical risk that there would be one accident in every 14,184 patient transport missions. This statistical risk is identical to the Proposed Action.

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Risk of an accident at Children's is reduced compared to the Proposed Action; however, the risk for the area around Harborview and the Intramural Field is increased.

There is some risk associated with the ground transport of patients via ambulance from Harborview or the Intramural Field to Children's.

Cumulative Impact

It is possible that the University could use the existing helistop on the roof of the expansion wing of the University of Washington Medical Center; however, this is not being considered by the University at this time.

No Action Alternative

Noise

Noise and vibration would be generated by the helicopter during takeoffs and landings from Harborview or Boeing Field for an estimated 15-21 patient missions per month in 1995.

There could be ambulance siren noise over a portion of the distance from the landing locations to Children's.

Safety

There is a statistical risk that there would be one accident in every 14,184 patient transport missions. This statistical risk is identical to the Proposed Action.

Although the risk of an accident at Children's is eliminated, there is an increased risk associated with the area along the flight paths to and from the landing locations.

There is some risk associated with the ground transport of patients via ambulance from Harborview or Boeing Field to Children's.

Cumulative Impact

It is possible that the University could use the existing helistop on the roof of the expansion wing of the University of Washington Medical Center; however, use of the helistop is not being considered by the University at this time.

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RELATIONSHIP TO PLANS AND POLICIES

This section discusses both the original and revised Seattle's Major Institutions Policy Sets and Seattle's Residential Area Policies as they relate to the Proposed Action and the Intramural Field and Preferred Alternatives.

Original Major Institution Policies

As discussed in Chapter II of this Final EIS, the original major institutions policies were adopted on July 6, 1981 (Resolution 26579; SMC 23.16.010) and the Land Use Code on April 25, 1983 (Ordinance 111100 and 111101; SMC 23.48). The original major institutions framework policy (SMC 23.16.010) recognizes the "valuable and needed services, education, training and employment opportunities" provided by major institutions and states that "their reasonable growth in Seattle should be encouraged." However, the framework policy also acknowledges that when major institution activities and facilities are located in residential areas, they "can have negative impacts in terms of traffic generation, loss of housing and incompatible physical development." The purpose of the policy, therefore, "is to balance the need for institutional growth and change with the need to protect the livability of neighborhoods adjacent to institutions."

According to the framework policy, "development of a major institution within its established boundaries shall be guided by the development standards of the assigned institutional classification(s) and shall not require a master planning process." However, the master plan process is required in certain situations, including when "development is to occur outside of established boundaries," and when "development is planned which, when taken into account with other recent development within the boundaries, creates a significant cumulative impact on the surrounding area."

Comment: The proposed Kitchen Garden Helistop is considered an accessory use to Children's, which is a permitted use, and is allowed as a conditional use subject to the Council Conditional Use Permit process. This EIS addresses noise and safety impacts on the surrounding area and also examines cumulative environmental effects as they relate to the proliferation of helistops at other hospitals in the City. The EIS also addresses other conditional use issues, including restricted use, sensitive siting, and alternative locations for the helistop. The proposed helistop would not result in loss of housing, nor be incompatible with existing physical development on Children's campus.

Under the Proposed Action, development would not occur outside the established major institution boundary of Children's.

Under both the Intramural Field and Preferred Alternatives, the existing helistop at the Intramural Field could be improved, with Children's destined-patients landing at the facility. Thus, the patients would land outside Children's major institution boundary. Off-campus noise impacts from the Proposed Action and the Intramural Field and Preferred Alternatives would be within regulatory guidelines. However, noise impacts on

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residential areas would be greatest under the Proposed Action and least under the Intramural Field Alternative. There would be an increase in the risk of an aircraft accident in the surrounding area. The risk to residential areas would be greatest under the Proposed Action and least under the Intramural Field Alternative.

Ten implementation guidelines, including one specific to the University of Washington, identify major institutions and guide development within their boundaries. Implementation Guideline 1, Definition and Identification of Major Institutions, identifies Children's as a major institution. Four other implementation guidelines also apply to the proposal.

Implementation Guideline 3, Development Not Requiring a Master Plan, establishes institutional zoning within major institution boundaries and states: "the institution shall be allowed to expand or redevelop within its boundaries following the development standards of the assigned institutional classification(s), except that... development which creates negative impacts due to cumulative development shall require a master plan." The Guideline requires assignment of the institutional classification(s) be made "so as to mitigate the adverse impacts of institutional development on the surrounding community, while recognizing that by limiting the area of institutional expansion, more intensive growth within the institutional boundaries may be necessary."

Comment: The proposed helistop would not create negative impacts due to cumulative development and therefore a Master Plan would not be required. The approval of the Proposed Action would intensify use within Children's institutional boundary. The Intramural Field Alternative would intensify development on the University campus. The Preferred Alternative would intensify development on both the Children's and University campuses but to a degree less than that which would occur under either the Proposed Action or the Intramural Field Alternative.

Implementation Guideline 4, Institutional Classifications, establishes six institutional classifications in the Land Use Code and requires development standards within the classifications be developed with several policy objectives in mind including:

"f. Mitigate adverse impacts associated with the use of the proposed facility so that the location of parking and the routing of traffic do not create serious noise, safety problems or blighting influences on the surrounding area;...

i. Promote safety for those living, working and visiting the area."

Comment: The Proposed Action would not require parking nor create vehicular traffic. The Intramural Field Alternative would generate negligible vehicular traffic associated with the ground transport of patients to Children's. Vehicular traffic under the Preferred Alternative would be less than that associated with the Preferred Alternative.

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Safety and noise are issues that are discussed in Chapter IV. Under the Proposed Action, noise and safety impacts would be greater than the impacts under the Preferred Alternative, which, in turn, would be greater than the Intramural Field Alternative.

Implementation Guideline 5, Development Requiring a Master Plan (Alternative B), repeats the recommendation in Implementation Guideline 3 that requires preparation of a master plan when "development is planned which, when taken into account with other recent development within the boundaries, creates a significant cumulative impact on the surrounding area." Master plans are required if development is planned outside of the established boundary.

Comment: As stated under Implementation Guideline 3, above, the Proposed Action would not create negative impacts due to cumulative development nor would development occur outside the established institutional boundary and, therefore, a Master Plan would not be required. Under the Preferred and Intramural Field Alternatives, development would occur outside (but within one mile of) the major institution boundary and a Master Plan would be required.

Implementation Guideline 7 Decentralization, encourages "decentralization of major institutions..., where appropriate." In particular, it requires "alternative locations for uses which may not be necessary on the main campus, such as laundry facilities and computer services,... be considered."

Comment: Alternative landing locations for Children's destined patients have been analyzed in this EIS. These locations include the University of Washington Medical Center Rooftop, the University of Washington Intramural Field, Harborview and Boeing Field. In addition, two alternatives, the Limited Landings and Preferred Alternatives, consider landing only the most critically ill and injured patients at Children's while landing the remainder at an alternative location. The medical necessity of locating the proposed helistop at the Kitchen Garden site also is evaluated, as part of the Council Conditional Use Permit process, described earlier in this EIS.

According to Dr. Nicola, "4 or 5 of the [15-20 patients being transported to Children's each month] may have a medical need for helicopter transport to the doors of the hospital" (see Appendix A). Thus, according to Dr. Nicola not all patient transports must land at the Children's campus. Under the Proposed Action all patients being transported by helicopter would land at the hospital, with not all of the landings at Children's being necessary from a medical need perspective. Under the Intramural Field Alternative, all Children's-destined patients would land off-campus, which may be inappropriate to their medical treatment requirements. The Preferred Alternative would have the most critical patients land at Children's, with the remainder being transported to the Intramural Field, where landings would not inordinately sacrifice patient care.

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Under the Major Institutions Land Use Code adopted in 1983 (SMC 23.48), Children's is designated a major institution (23.48.002). Within major institutions, helistops are allowed as a Council conditional use, if the Council finds that (SMC 23.48.005):

"a. The helistop is needed to save lives;
b. The helistop is located so as to minimize impacts upon surrounding residential property;
c. Use of the helistop will be restricted to occurrences involving life threatening emergencies."

Comment: This EIS is designed to fulfill the SEPA requirements of the Conditional Use Permit. With respect to findings of medical need necessary to secure a Conditional Use Permit, DCLU requested that Dr. Nicola, the former Director of the Seattle-King County Department of Public Health, assist DCLU in the medical need determination. The other conditional use issues, including restricted use, sensitive siting and alternative locations also are addressed in this EIS.

Further, this section of the Land Use Code states: "The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas."

Comment: As discussed under Implementation Guideline 7, above, alternative locations for the proposed helistop are identified and evaluated in this EIS.

Revised Major Institution Policies

As new development occurred and master plans were prepared under the original major institutions policies (1981) and Land Use Code (1983), concerns with the implementation of the policies and code were raised by the major institutions and citizen groups in neighboring areas. In response to these concerns, the major institutions policies were revised via Resolution 28081, adopted March 26, 1990, as amended by Resolution 28191, adopted June 25, 1990. Application for construction of the Children's Kitchen Garden Helistop was filed with the Department of Construction and Land Use and the Draft EIS on the Children's helistop proposal was issued prior to adoption of the revised major institutions policies. Therefore, the proposal is vested under the original policies and Land Use Code and the revised policies do not apply. However, for the purposes of full disclosure, revisions to the major institutions policies are discussed in this section.

The Major Institutions Land Use Code and list of major institutions (SMC 23.48) is repealed under Policy 6, Transition Provisions, of the revised major institutions policies. This policy establishes a major institution overlay district for each institution that meets the definition of a major institution as established in Policy 1, Definition. However, the policy states: "Major institution master plans and other major institution development agreements adopted prior to these policies shall remain in effect under the conditions of adoption or until such time as they are amended or superseded under the provisions of these policies."

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Comment: Because the application for construction of the Children's helistop was filed with the Department of Construction and Land Use and the Draft EIS on the Children's helistop proposal was issued prior to adoption of the revised major institutions policies, the proposal is vested under the original policies and Land Use Code and the revised policies do not apply.

The intent of the major institution overlay district, as established in Policy 2, Overlay District, is "to permit appropriate institutional development within boundaries while minimizing the adverse impacts associated with development and geographic expansion" and "to balance the public benefits of growth and change for major institutions with the need to maintain livability and vitality of adjacent neighborhoods." Within the overlay district, "all functionally integrated major institution uses shall be allowed, provided the development standards of the underlying zone are met." Through a master plan process, "development standards specifically tailored for the major institution and its surrounding area may be permitted within the overlay district." "Functionally integrated major institution uses" are further defined in Implementation Guideline 2, Overlay Provisions, of this policy as "all uses that are functionally integrated with the central mission of the major institution or that primarily and directly serve the users of the institution." Characteristics to be used to determine whether or not a use is functionally integrated with the central mission of the institution include:

"a. Functional contractual association
b. Programmatic integration
c. Direct physical circulation/access connections
d. Shared facilities or staff
e. Degree of interdependence."

Comment: The proposed Kitchen Garden Helistop is an appropriate use as it contributes to Children's ability to provide appropriate care for its critically ill and injured patients whose medical conditions warrant immediate transport to the hospital. However, environmental impacts are greater relative to the Intramural Field and Preferred Alternatives. The Intramural Field Alternative minimizes environmental impacts on neighborhoods adjacent to Children's Hospital, however, it does not provide for institutional development that would support the care of the most critically ill and injured patients whose medical conditions would warrant transport directly to the Children's campus. The Preferred Alternative strives to balance institutional development needs with the need to maintain the livability of the neighborhood adjacent to Children's.

The helistop is considered a functionally integrated major institution use as it serves users of the institution who require immediate transport to the hospital. The Kitchen Garden Helistop provides for direct patient access. Under the Intramural Field Alternative direct access is limited compared to the Proposed Action, while under the Preferred Alternative direct access is provided to those patients for whom minimal transport time may be crucial. Under tne Proposed Action and Intramural Field and Preferred Alternatives the patient transport service is integrated with other hospital-based patient care capabilities.

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The institution's underlying zone is a single-family zone. Please refer to the discussion below regarding the relationship of the project to single-family policies.

The revision to the major institution policies defines more specifically when a master plan is required. Policy 4, Master Plan, states: "A master plan shall be required for each major institution proposing development which could affect the livability of adjacent neighborhoods or has the potential for significant adverse impacts on the surrounding areas." The policy goes on to specify the threshold requirement for master plan preparation, and the required components and contents of the master plan.

Comment: The effect of the Proposed Action and Alternatives on the adjacent neighborhood and potential for significant adverse impacts are addressed in this EIS. The Proposed Action and Intramural Field and Preferred Alternatives do not fall within threshold requirements, which include: development which exceeds development standards of the underlying zone; an increase in the major institution overlay (MIO) district height limit; a boundary expansion; cumulative development exceeding 40,000 square feet within 2,500 feet outside the MIO boundaries; or demolition or change of use of a residential structure.

The Seattle Municipal Code (SMC) provides certain amplification of policy intent.

SMC 23.69.002 - Purpose and Intent. The purpose of this chapter is to implement the Major Institution Policies, Resolution 28081, by regulating Seattle's major educational and medical institutions in order to:

A. Permit appropriate institutional growth within boundaries while minimizing the adverse impacts associated with development and geographic expansion;

B. Balance a major institution's ability to change and the public benefit derived from change with the need to protect the livability and vitality of adjacent neighborhoods; and

C. Encourage the concentration of major institution development on existing campuses, or alternatively, the decentralization of such uses to locations more than two thousand five hundred feet (2,500') from campus boundaries.

The first two elements are addressed in the comments on policies, above. The third element provides for dualistic objectives: encouraging institutional concentration while at the same time providing for decentralization. The established intent provides a basis for concentrating on the campus those uses that are in need of proximity to other campus uses, while simultaneously enabling uses that are not functionally related to central institutional uses to be developed more than 2,500 feet from the campus.

Comment: The Proposed Action would centralize development and use of the Kitchen Garden Helistop. The Intramural Field Alternative decentralizes the institutional development to a location greater than 2,500 feet from the

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campus. The Preferred Alternative provides for both centralization and decentralization of air medical transport services. Those uses that are most appropriate for campus location (the most critical patients being landed at the Kitchen Garden Helistop) are centralized, while other uses not dependent on a Children's campus location (all other patients being transported by helicopter), are decentralized and concentrated with existing facilities at the University of Washington.

Residential Area Policies

Children's is a major institution located in a single-family residential area. It, therefore, is subject to Seattle's Residential Area Policies contained in Chapter 23.16 of the Seattle Municipal Code. Specifically, the proposal is subject to Single-Family Residential Use, and Institutions and Facilities in Single-Family Residential Areas policies and implementation guidelines.

The purpose of the Single-Family Residential Use Policy is "to preserve the character of Single-Family Residential Areas, and discourage the demolition of single-family residences and displacement of residents." The policy states that "in order to protect single-family residential areas from the negative impacts of incompatible uses, the city shall limit the number and types of nonresidential uses permitted in these areas." Two implementation guidelines provide the basis for weighing the preservation and protection of single-family residential areas against the desirability of other uses.

> Implementation Guideline 1 - Residential use by one household (see Definitions) is affirmed and encouraged as the principal use in Single-Family Residential Areas, and is the primary use permitted outright. Many of the principal uses which were permitted under previous zoning provisions are no longer allowed, or shall be allowed only under the conditions stated in these land use policies.

Comment: As a Major Institution located in a residential area, Children's is a permitted use. The helistop is an accessory use to this principal use and is allowed as a conditional use subject to the Council Conditional Use Permit process. This EIS is designed to fulfill the SEPA requirements of the Council Conditional Use Permit. By addressing impacts and alternative helistop locations, the EIS provides background on the Council Conditional Use issues.

> Implementation Guideline 2 - In order to allow residents of Single-Family Residential Areas maximum flexibility in the use and enjoyment of their homes, the types of use and activities associated with single household residential living shall be regulated primarily by performance standards and City ordinances protecting privacy, health, safety and rights of neighbors.

Comment: The proposed use is associated with a Major Institution, not with "single household residential living." The helistop would be regulated, however, by Seattle's Major Institutions Policy and the Council Conditional Use Permit process. This EIS addresses health, safety and rights of neigh-

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bors through discussion of specific findings of medical need for the helistop, and other conditional use issues, including restricted use, sensitive siting, and alternative locations for the helistop.

With respect to institutions and facilities in single-family residential areas, the policy intent states the following:

> "The City recognizes the positive contributions many institutions have made to the neighborhood in which they are located, respecting community needs and providing appropriate services. However, location, scale, access and development standards of institutions and activities shall be controlled in order to reduce negative impacts such as noise, traffic and parking problems, and to protect Seattle's single-family housing stock."

Two implementation guidelines and standards related to concentration of institutions or facilities, traffic and parking, demolition of residential structures, and bulk and siting provide the basis for implementing this policy. Applicable guidelines and standards include:

> Implementation Guideline 1 - Institutions and facilities may be established or expanded within Single-Family Residential Areas through a Hearing Examiner (see Definitions) conditional use authorization process. Siting of major public facilities (see Definitions) shall be appealable to the City Council (Council Conditional Use). Petitions for new facilities or significant expansions shall be accompanied by a transportation plan. The following standards and requirements shall be met in order to grant a conditional use authorization for establishment or expansion of an institution or facility within a Single-Family Residential Area.

Comment: The proposed helistop is permitted as a conditional use associated with Children's, a Major Institution. This EIS is designed to fulfill the SEPA requirements of the Council Conditional Use Permit. No transportation plan is included in the EIS, because the Proposed Action (the Kitchen Garden Helistop) would not create vehicular traffic. The Intramural Field and, to a lesser extent, the Preferred Alternatives would generate negligible traffic associated with the general transport of patients. Transportation concerns are addressed, however, from the perspective of air medical transport safety.

> Concentration of Institutions or Facilities - The establishment or expansion of an institution or facility shall not result in a concentration of institutions or facilities which would create or appreciably aggravate parking shortage, traffic congestion and noise, or physical scale and bulk incompatible with single-family residences.

Comment: The Proposed Action and alternatives would not create or aggravate parking shortage, traffic congestion, or result in physical scale and bulk incompatible with single-family residences. Operation of the helistop under the Proposed Action and alternatives would create noise, however, which is addressed in this EIS. Under the Intramural Field and, to a lesser extent,

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Preferred Alternatives there would be a consolidation of facilities (University and Children's) that would reduce the number of residential properties exposed to noise and safety risks, compared to the Proposed Action.

Demolition of Residential Structures - Residential structures, including those modified for non-residential use, shall not be demolished for facility or institution establishment, expansion or parking unless a need has been demonstrated for the services of the institution or facility in the surrounding community and no other practical alternative site is available. It is the intent through this standard to preserve housing in single-family residential areas and permit conversion or demolition of housing only as a last resort when the public benefits clearly outweigh the loss of housing.

Comment: No residential structures would be demolished to construct the proposed helistop under the Proposed Action or Intramural Field or Preferred Alternatives.

Bulk and Siting - The bulk of institutions and facilities shall be compatible with the surrounding community. Specific bulk and siting requirements are to be included in the Zoning Code and shall be at least as restrictive as those applied to single-family residences. Screening and landscaping shall be required.

Comment: The proposed helistop would be located at the Kitchen Garden site on Children's campus. The helistop design, however, includes screening and landscaping to reduce its visibility, while satisfying applicable guidelines for helistop construction and operation. It is unknown whether any future improvements to the existing helistop at the Intramural Field would incorporate landscaping or screening.

Implementation Guideline 2 - Public facilities that do not meet the standards and requirements in Implementation Guideline 1 may be located in single-family residential areas if there is a public necessity for their location there. If a City facility and site has been approved by ordinance through a public process, then a conditional use authorization is not required in order to locate the City facility on the site.

Comment: The proposed helistop would meet the standards and requirements of Implementation Guideline 1. The issue of necessity also is addressed in EIS.

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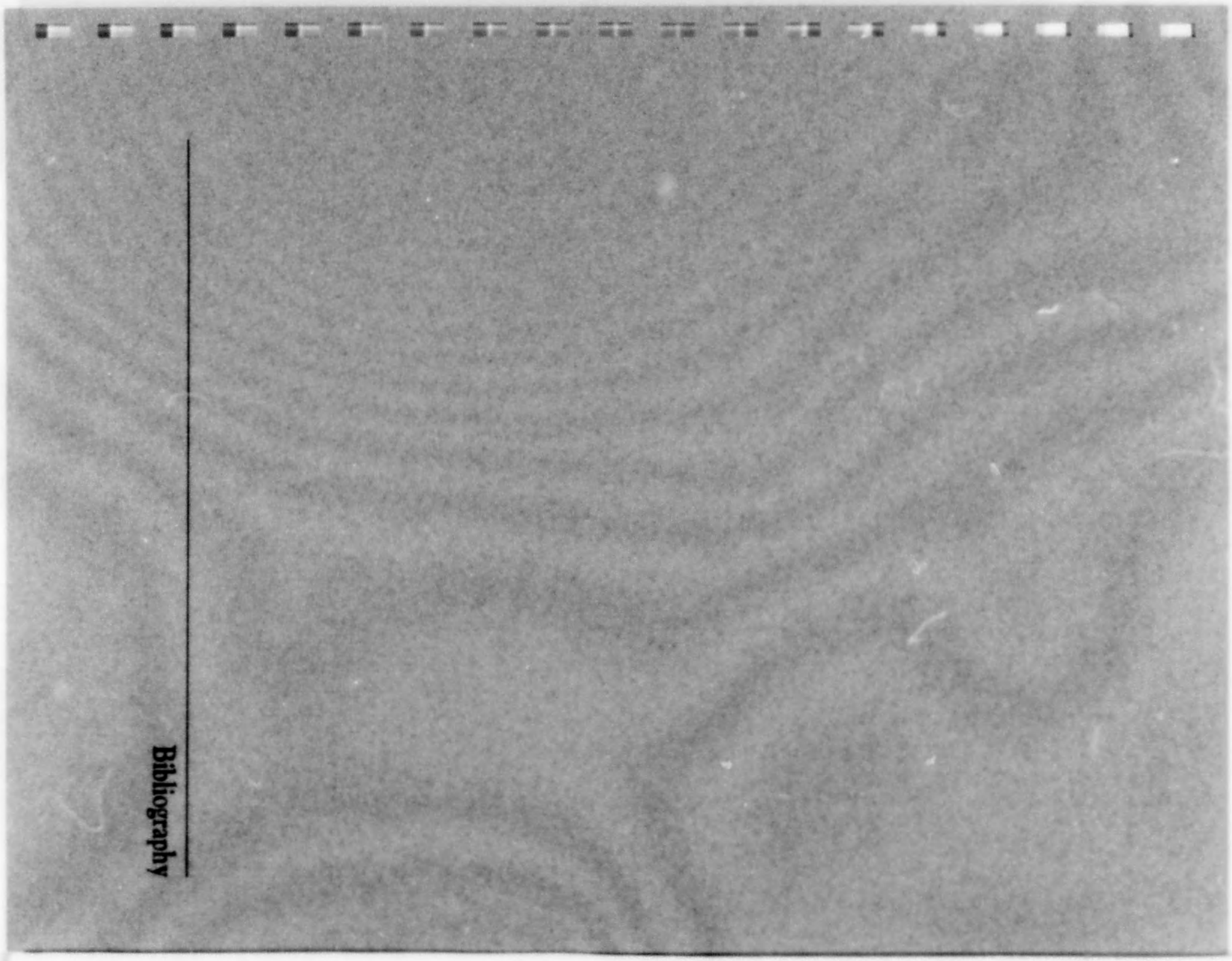

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FILE COPY

Children's Hospital & Medical Center Helistop

Final Environmental Impact Statement

Volume II
Responses to Clients

Department of Construction
and Land Use

April 1991

The intent and purpose of this final environmental impact statement is to satisfy the procedural requirements of the State Environmental Policy Act (RCW 43.21c) and City Ordinance 114057 as amended. This document is not an authorization for an action, nor does it constitute a decision or a recommendation for an action: in its final form it will accompany recommended actions and will be considered in making the final decision on the proposal.

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FINAL
ENVIRONMENTAL IMPACT STATEMENT
FOR CONSTRUCTION
OF A HELISTOP
AT CHILDREN'S HOSPITAL AND MEDICAL CENTER

VOLUME II

RESPONSES TO COMMENTS

City of Seattle
Department of Construction and Land Use

Prepared in Compliance with

The State Environmental Policy Act of 1984
Chapter 43.21C, Revised Code of Washington

SEPA Rules, Effective April 4, 1984
Chapter 197-11, Washington Administrative Code

Seattle SEPA Ordinance,
Ordinance 114057, effective August 14, 1988, as amended
by Ordinance 114090, effective August 16, 1988.
Chapter 25.05 Seattle Municipal Code

Date of Issue: April 25, 1991

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ANDREA BEATTY RIDLER
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

September 30, 1986

RECEIVED
SEP 30 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb
City of Seattle
Department of Construction
and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

Thank you for the opportunity to comment on the draft environmental impact statement (EIS) for the Children's Hospital and Medical Center Helistop. From the information supplied in the draft EIS, it appears that no permits/approvals are required from the Department of Ecology for this proposal and, therefore, we have no jurisdiction. 1

If you have any questions, please call me at (206) 459-6025.

Sincerely,

Barbara J. Ritchie

Barbara J. Ritchie
Environmental Review Section

BJR:bjw

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WASHINGTON DEPARTMENT OF ECOLOGY

1. Comment acknowledged. Thank you for your comment.

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COB THOMAS
Director

STATE OF WASHINGTON

OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION

111 West Twenty-first Avenue, KL-11 • Olympia, Washington 98504 • (206) 753-4011

September 9, 1986

RECEIVED
SEP 10 1986
DEPT OF CONSTRUCTION & LAND USE

Ms. Julia Gibb
Construction and Land Use
Room 408, Municipal Building
Seattle, WA 98104

Log Reference: 821-C-KI-09
Re: Children's Hospital and
Medical Center Helistop

Dear Ms. Gibb:

A staff review has been completed of your draft environmental impact statement. Based on the information provided for our review, in our opinion the proposed project will have no effect on presently known archaeological or historic resources included in or eligible for inclusion in the National Register of Historic Places. 1

Thank you for this opportunity to comment.

Sincerely,

Robert G. Whitlam, Ph.D.
State Archaeologist
(206) 753-4405

dw

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WASHINGTON OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION

1. Comment acknowledged. Thank you for your comment.

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METRO
Municipality of Metropolitan Seattle
Exchange Bldg. • 821 Second Ave., Seattle, Washington 98104

September 8, 1986

RECEIVED
SEP 09 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Draft Environmental Impact Statement
Children's Hospital Helistop

Dear Ms. Miller:

Metro staff has reviewed this proposal and anticipates no significant adverse impacts to its wastewater facilities. 1

Thank you for the opportunity to review and comment.

Very truly yours,

Gregory Bush

Gregory M. Bush, Manager
Environmental Planning Division

GMB:law

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METRO

1. Comment acknowledged. Thank you for your comment.

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To: Katy

Your
Seattle
Community Development

David Moseley, Director
Charles Royer, Mayor

RECEIVED
OCT 9 - 1986
DEPT. OF CONST. & LAND USE

October 7, 1986

To: Holly Miller, Director
Construction and Land Use

From: David Moseley

Subject: Comments on the Draft Environmental Impact Statement
for Children's Hospital and Medical Center Helistop

Thank you for the opportunity to comment on the Draft EIS for the Children's Hospital and Medical Center helistop. The department has the following comments.

Certificate of Need Process

The EIS states that a proliferation of helistop requests will not occur due to the rigidity of the Certificate of Need process from which the Children's Hospital helistop has been exempted. The Final EIS should state why this helistop is exempt from that process and why other hospital facilities would not have many of the same reasons for a helistop as Children's Hospital and Medical Center. 1

Flight Path

The Draft EIS uses the flight path for the helistop as a mitigating measure for the on-site location. That flight path is subject to FAA approval. What assurances does Children's Hospital have that the flight paths used within the SEPA process will be approved, as stated, by the FAA. 2

Cumulative Projects

It is the department's understanding that University Hospital is also in the process of studying the potential of a helistop. Due to the close proximity of these institutions, it would make sense to look at a common site for both. The University Hospital site may not be the most desirable site due to potential traffic impacts; therefore, the Graves field site may be the best for both. Perhaps this decision should be combined with the University's need in order to reduce the possible duplication of a helistop. 3

DM:cdm

An equal employment opportunity - affirmative action employer

Municipal Bldg., 4th Floor, 600 4th Ave., Seattle, Washington 98104-1876, 206 625-4537

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1. The Certificate of Need Program is a process for reviewing certain specified health care services or facilities. Air ambulance programs established by hospitals were subject to review on new tertiary health care services under a regulation issued by the Department of Health that was repealed in 1986. This description of the Certificate of Need Program differs from that described in the Draft EIS. Helistops no longer are subject to Certificate of Need review.

2. The FAA has not made a final determination regarding the proposed flight paths for the Proposed Action or alternatives; however, Frank Benedict, the Principal Aviation Safety Inspector of the Seattle District Office of the FAA, was consulted during the development of the flight paths. Children's will request that Airlift Northwest pilots and other air ambulance pilots use the path that is approved by the FAA. If the FAA recommends flight paths that are substantially different than those in the EIS, further SEPA review may be required.

3. The Draft EIS examined the environmental impacts of sharing the use of the rooftop helistop on the University of Washington Medical Center's East Wing, use of this helistop is not under consideration by the University at this time. The Final EIS considers that alternative, as well as the Intramural Field Alternative and the Preferred Alternative, which also involve the shared use of a helistop on the University of Washington campus.

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Seattle
Engineering Department

RECEIVED
OCT 3 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

MEMORANDUM

Date October 2, 1986

To Julia Gibb, Land Use Specialist, DCLU

From Mark Clemmens, Sr. Civil Engineering Specialist, OFP

Subject Draft Environmental Impact Statement Children's Hospital Helistop

We have reviewed the Draft Environmental Impact Statement for the Children's Orthopedic Hospital Helistop and have determined that the proposal should not significantly affect Engineering Department operations or areas of concern. We have no comments on the proposal. 1

MC:vc

cc: James M. Bourey, Director, Office for Planning
Eugene V. Avery, Manager, Property & Court Services, OFP

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SEATTLE ENGINEERING DEPARTMENT

1. Comment acknowledged. Thank you for your comment.

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Your
Seattle
Fire Department

Claude Harris, Chief
Charles Royer, Mayor

RECEIVED
OCT 3 1986
DEPT. OF CONSTRUCTION & LAND USE

October 1, 1986

Holly Miller, Director
Department of Construction & Land Use
400 Municipal Building
Seattle, Washington 98104

RE: Children's Hospital Helistop - Application #8405870

Dear Ms. Miller:

We have reviewed the environmental impact statement and the effects it would have on the fire protection of the property and on the Fire Department. 1

We feel that the impact statement sufficiently covers the Fire Department position on fire protection.

Very truly yours,

Claude Harris, Chief
Seattle Fire Department

CH:sh
BLH:GWC

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SEATTLE FIRE DEPARTMENT

1. Comment acknowledged. Thank you for your comment.

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Seattle Police Department

Patrick S. Fitzsimons, Chief of Police
Charles Royer, Mayor

October 2, 1986

RECEIVED
OCT 3 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Attention: Julia Gibb

Dear Ms. Miller:

Reference: Draft EIS for Children's Hospital and Medical Center Helistop dated September 1986; our EI 86-306

The Seattle Police Department has reviewed the Draft Environmental Impact Statement for the Children's Hospital and Medical Center Helistop.

We support the location proposed for the following reasons:

1. Transporting critical patients from either of the alternate locations could delay the arrival of the patient due to traffic congestion. If either alternate location is used during football games, the route may, in fact, be impossible. |1

2. The University Hospital is isolated from Children's Hospital during football and basketball games. |2

3. A severe impact on travel time must be considered during rush hours. |3

4. The athletic field complex is situated just south of businesses and a well-traveled road. We would expect an impact on the Seattle Police Department if this location is selected because of on-lookers, sightseers, and people slowing or stopping their vehicles to see what is happening. |4

For the reasons stated above, the Seattle Police Department favors location of the Helistop at Children's Hospital. |5

Very truly yours,

PATRICK S. FITZSIMONS
Chief of Police

By N. Fedan

Major M. D. Brasfield
Inspectional Services Division

MDB:PMM:gt

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SEATTLE POLICE DEPARTMENT

1. Use of the Harborview Hospital helistop, University of Washington Medical Center rooftop helistop or Intramural Field helistop would increase the amount of time before the patient could be treated at Children's Hospital. (Please review description of transfers in Chapter II, and Figure 11 in Chapter III of the Final EIS, which compares transfer times). Ground transport time could be greater than usual during University of Washington athletic events, Montlake Bridge openings, or heavy commute times. For those transports that could be adversely affected by ground delays, landing directly at the Children's campus could be warranted for patients who otherwise would have been flown to an alternate (non-campus) location. For patients not requiring a landing at the Children's campus, landing at the Intramural Field would involve less potential for delay than landing at Harborview or the University rooftop helistop.

2. See response to Comment #1, above.

3. See response to Comment #1, above.

4. Distraction of motorists could occur at any of the identified locations for a helistop.

5. Comment acknowledged. Thank you for your comments.

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City of Seattle
Charles Royer, Mayor

King County
Tim Hill, Executive

Seattle-King County Department of Public Health
Bud Nicola, M.D., M.H.S.A., *Director*

RECEIVED
OCT 2 1986
DEPT. OF CONST. & LAND USE

October 1, 1986

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Re: Draft Environmental Impact Statement
for Children's Hospital Helistop

Dear Ms. Miller:

The Noise Section of the Draft Environmental Impact Statement (DEIS) is adequate and well done, however, I do have concerns about the adequacy of the DEIS in other areas that may relate to noise concerns. Specifically, one of the alternative Helistop locations is the proposed University of Washington Helistop noted on page 39 where it indicates that there is an already-constructed Helistop on the roof of an expansion wing. I visited the University of Washington and examined the so-called Helistop there. This area would be, for several reasons, very inappropriate to be used as a Helistop. First, the Helistop would cause an extremely disruptive noise impact for the patients at the University Hospital. Secondly, the safety of the proposed Helistop is in question. This is mainly because of the additional structure to the south of the proposed Helistop which would prevent any aborted landing attempts and also, if the winds were coming out of the south, cause downdrafts which would make it very difficult to land the aircraft at the proposed Helistop. This and other safety considerations have been discussed with helicopter pilots and they concur that the area would not be an ideal Helistop. When inspecting this site I also noted that there is a very substantial steel rail around the area which could pose another very significant safety problem for approaching and departing aircraft. 1 2

One of the few logical Helistop areas near the University Hospital would be the roof of an existing garage just north of the proposed University Helistop. Using the roof of this garage which has been stressed to handle the weight of the newer, heavier helicopters, one could take patients from the arriving helicopter, transport them either to the University through the existing system of elevators and tunnels or transport them to Children's Hospital via ground transport. I will have a complete analysis of the proposed University Helistop at a later date, however, several things such as the strength of the existing roof and its capability of holding the newer, heavier aircraft, is in question at this time, and I feel that using it as an alternative would be unwise. 3

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There are other anomalies in this DEIS, one of which is Table 5. It indicates that there were no rotary-winged aircraft transports to Children's Hospital between the years of 1981 through 1984. It was my understanding that Graves Field had been used prior to 1984 for transporting patients to Children's Hospital, and if this is not the case it should be made more clear than Table 5 indicates. Other areas of concern include the reference to the Washington Administrative Code 248-18-285, indicating that a helicopter cannot be prohibited from landing without violating that code. The applicable federal law should also be referenced. In addition, approach and departure routes other than those indicated should be noted since, during certain weather conditions, the indicated approach and departure routes may not be the safest. Different approach and departure routes would also bear on the noise impact suffered by the community. 4 5 6

In conclusion, I feel that the DEIS as it now stands should have a supplement that would be more detailed to satisfy the various noise concerns that would be caused by other procedures such as landing at the University of Washington, landing at Graves Field, and alternate approach and departure routes. 7

Sincerely,

Curt Horner

Curt Horner, Coordinator
Noise Program

CH:mw

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1. It should be noted that use of the rooftop helistop at the University Medical Center is not under consideration by the University at this time. It is acknowledged that the helistop location on the rooftop of the University Medical Center would result in noise that could be disruptive to Medical Center patients. The noise section in the Final EIS has incorporated this comment.

2. It is acknowledged that the structure to the south could constrain flight path options in the event of an aborted landing attempt. The structure also could create downdrafts. The magnitude of the downdrafts would be dependent upon specific meteorological conditions. Airlift pilots have stated that the weather conditions that would create significant downdrafts would correspond to periods when they would likely not be flying. Although the University of Washington Medical Center helistop is not ideal, it is judged by the Airlift Northwest pilots to be safe. Frank Benedict, the FAA Principal Aviation Safety Inspector, has inspected the University of Washington Medical Center Helistop; he expressed no concerns regarding the helistop or flight paths to or from the helistop (Benedict, 1987). A copy of Mr. Benedict's letter is on file at the Department of Construction and Land Use.

3. Comment acknowledged. The Triangle Garage option has been examined as a potential site for helicopter landings; however, the location was judged to be less suitable than other alternatives. For University of Washington Medical Center-destined patients, the principal factor affecting the suitability is the awkward and time-consuming transport route via elevator and underground tunnel to the University of Washington Medical Center emergency room. In addition, it is not possible to use the existing elevator system to accommodate hospital gurneys. Transport of patients to Children's could be affected by traffic conditions. See response to Comment #1 of the Seattle Police Department, above.

4. The transports listed in Table 5 of the Draft EIS were Airlift Northwest transports that involved the landing of the patient at Children's campus. The table does not include Airlift Northwest transports that landed elsewhere nor does it include transports by MAST or transports by other vendors that occurred prior to 1984. MAST has used the Intramural Field to land critical patients since the 1970s. Table 5 of the Draft EIS has been updated and included as Table 3 in the Final EIS.

5. Section 135.19 of the Federal Aviation Administration Regulations relating to Air Taxi Operators and Commercial Operators states the following:

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(a) In an emergency involving the safety of persons or property, the certificate holder may deviate from the rules of this Part relating to aircraft and equipment and weather minimums to the extent required to meet that emergency.

6. For each action alternative, there would be a primary and secondary flight path; the primary to be used under most weather conditions, the secondary to be used during specific wind-related weather conditions. These flight paths are discussed in Chapter III of the Final EIS. At the pilot's discretion, there could be deviations from the primary or secondary flight paths due to weather. If weather conditions warranted a deviation from the designated flight path(s), then the pilots would strive to seek the safest path in terms of aircraft operations. It is Children's and Airlift Northwest's intention to use the designated and FAA-approved flight paths. The noise section in the Final EIS addresses noise impacts of alternate flight paths.

7. It is the position of the Department of Construction and Land Use that a Supplemental EIS is not necessary.

Thank you for your comments.

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Snohomish County Fire District No. 4

1525 Avenue "D", P.O. Box 820
Snohomish, WA 98290
(206) 568-1022

COMMISSIONERS:
Ray L. Brown
Eldon Harvey
Gerald Peacor

Secretary - Leona Snyder
Fire Chief - Robert Merritt

October 28, 1986

City of Seattle Hearing Examiner
c/o Children's Orthopedic Hospital
P.O. Box C-5371
Seattle, WA 98105

Dear Sir:

On behalf of the children and parents of our City and Fire District, we would like to express our utmost support of the proposed conditional use of Children's Orthopedic Hospital and Medical Center as a heliport site for emergency transport of the critically injured or ill children and infants.

Often it is easy to focus our views and needs on a more local latitude and somehow forget the vast, rural areas with their infants and children--which do desperately need the critical care provided by such facilities at COHMC. More often than not, our children have greater potential for, or illness, requiring the type of treatment available only by COHMC where time is <u>THE MOST CRITICAL FACTOR.</u> With the availability of air ambulance service to our area, we can actually bring specialists to the scene and turn around and transport them back to their facility in less than 40 minutes. This is truly a matter of life or death in some situations. Therefore, we are asking that you rule favorably to allow this use of COHMC facilities.

For many, many parent's sake in Western Washington, this is a cry for the children...

Sincerely,

Robert Merritt
Fire Chief

Simon Whitney,M.D.
Coordinating Physician

Anne Averill, Mayor
City of Snohomish

Ray Brown, Chairman
Snohomish County,
Fire District #4

RM/dl

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SNOHOMISH COUNTY FIRE DISTRICT NO. 4

1. Comment acknowledged. Thank you for your comment.

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CENTRAL SEATTLE COMMUNITY COUNCIL FEDERATION
309 10TH E.
SEATTLE, WA 98112
328-9481

October 15, 1986

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

OCT 17 1986

Dear Ms. Miller:

RE: Helipad Proposal for Children's Hospital of Seattle

The Federation members ask that the following topics be covered in the Final Environmental Impact Statement prepared by Children's Hospital.

-The cumulative impact of the University Hospital proposed helipad and the Children's Hospital helipad should be examined jointly and simultaneously. Combined, they will have a greater impact on the adjacent communities than either helipad does alone. They are only one mile from each other. Logic dictates that they should be examined together. The combined impact of their proposed actions will strongly influence actions by other hospitals in the city and region and will largely determine the type and amount of hospital helicopter service Seattle ends up with. 1 2

-A regional plan for integrating helicopter and other emergency medial services must be in place before any permits are granted. Once major actors in any plan have their service, it will be impossible to establish a coordinated and effective regional emergency medical services system. 3

-No permits of any kind should be granted until and unless demonstrably enforceable rules are in place for restricting flights to life-threatening emergencies, as called for in the city code. The history of Children's Hospital does not provide any reason for optimism that they will meet permit conditions. The great difficulty and 4-years of time spent by DCD to obtain compliance by Children's Hospital on the conditions attached to their 1981 permit to build a large parking garage, and the repeated helicopter landings on their campus without a permit are two recent examples which give us reason to be very concerned about compliance and enforcement issues. 4

Please keep us informed as to your schedule and actions on this matter.

Sincerely,

Beth Means

Beth Means
President

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1. It is DCLU's position that the Intramural Field landing area is an established existing use for helicopters transporting patients to the University Medical Center. The Department of Construction and Land Use (DCLU) recognizes the relationship between the impacts that would result from the construction of and operations at the proposed Children's Hospital and Medical Center helistop and the continued use of the University of Washington helistop at the Intramural Field. The cumulative impacts of both projects have been examined in the EIS and will be considered in rendering a decision on the proposal.

2. Based on the survey of Seattle hospitals that was conducted for consideration of cumulative impacts in the Draft EIS on the Children's Helistop, it does not appear that other Seattle medical institutions are planning to seek permission to construct a helistop. Any medical institution that wishes to develop a new helistop would need to secure Seattle Council Conditional Use Permit approval. See also the response to Seattle Department of Community Development's Comment #1, above.

3. Dr. Nicola has recommended that "the emergency transport of patients by helicopter be a planned part of a complete EMS (emergency medical services) transportation system, with guidelines for use, rather than a hospital-by-hospital provided service. The proposed WAC guidelines for air ambulance use appear to support this approach. A consortium of hospitals providing helicopter services, such as the one in Airlift Northwest, is certainly a most sensible approach and will make it easier to establish a systematic approach to the provision of these services. [King County is] just beginning to integrate helicopter transport into [its] EMS system. The proposed WAC guidelines are a first step in this direction. They condition licensure of air ambulance services on meeting standards for equipment, personnel, community need, and use, and place air ambulance services under the medical control of local medical program directors" (Nicola, March 25, 1987).

   Both Children's and Airlift Northwest have indicated their willingness to participate in a future regional EMS Plan. Such a regional plan would help ensure that only appropriate medical facilities have helistops, that services are not unnecessarily duplicative, that competition is prevented, and that medical costs are managed. The City has the authority to condition the project so that it would comply with the applicable provisions of a future regional EMS plan.

4. The sponsor's revised description of the Proposed Action in Chapter III of this document, as well as Appendix C, indicates that all transports landing at the permitted helistop outside the entrance to the Children's Emergency Room could be the subject of a medical review committee. The purpose of the committee would be to review compliance

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of the helistop use with the Council Conditional Use Permit criterion that states that the use of the helistop will be restricted to occurences involving life-threatening emergencies. Additional review criteria could be added by the City as conditions for approval to any permit issued for the helistop.

Thank you for your comments.

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Law Offices
Peter J. Eglick
Suite 1130
1411 Fourth Avenue Building
Seattle, Washington 98101
(206) 464-1435

To: Katy
copy back
to me

RECEIVED
SEP 22 1986
DEPT. OF CONST. & LAND USE

September 19, 1986

Holly Miller
Director, Seattle Department of Construction and Land Use
408 Municipal Building
Seattle, WA 98104

Re: Comments on Draft Environmental Impact Statement
for Childrens Hospital Helistop

Dear Director Miller:

This letter is submitted on behalf of the Laurelhurst Community Club, a Washington non-profit corporation whose membership is comprised of Laurelhurst community residents, to comment upon the Draft Environmental Impact Statement (DEIS) in the above matter. These comments should be considered as supplemental to comments submitted by other members of the Community Club.

In general, the DEIS presents only a superficial view of the issues raised by the proposal. Specific inadequacies are noted below:

Land Use, Page 28: The DEIS assumes that consistency of the proposal with specific land use criteria is not a topic appropriate for discussion in the DEIS, at least to the extent of reviewing the criterion of medical need. This is incorrect. Such a criterion is part of the City's Land Use Code. The DEIS should consider consistency with the Land Use Code, including this criterion as part of the EIS process. 1

Further, the DEIS discussion of land use impact is wholly insufficient in its focus solely upon the policies applicable to the major institution zone. The City's conditional use criteria require review of impacts upon surrounding residential property. In reviewing such impacts, the DEIS should also examine policies applicable to the surrounding residential zones to determine whether the proposed use is consistent with those policies in its impacts, which clearly spill over beyond the campus where the helistop will be located. 2

Alternatives, Page 49: The discussion of alternatives appears to accept the judgment that the proponent's objectives are synonomous with "the purpose of the Helistop" as that term is used in Seattle Municipal Code, Section 23.48.05. Thus, the discussion of alternatives does not analyze their consistency with the conditional 3

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use criteria, but merely dismisses them as inconsistent with "the proponent's objectives." While it may be relevant to discuss whether or not the alternatives fit into the proponent's tailor-made objectives, the DEIS should also discuss whether or not the alternatives are consistent with the standard established by the City for the conditional use permit. 3

Weather, p. 67: Although weather is considered in the context of safety, the DEIS does not contain a similarly detailed discussion of weather as a factor in preventing airlift operations in the context of the proposal and its alternatives. Clearly, weather conditions may affect the viability of the proposal and its various alternatives and the extent to which they accomplish their announced purposes. 4

Noise Impacts, Page 80: The suggestion that "there is little valid scientific basis for claiming direct health impacts from aviation noise " is unsupported in the DEIS and is suspect. While it may be true that noise cannot be correlated with direct impacts (e.g. tumors), there is a substantial body of evidence that noise may be associated with, for example, pyschological and physiological changes relating to health. This should be addressed in the DEIS. 5

Page 90, Cumulative Impacts: The discussion of cumulative impacts is singularly one-sided and perfunctory. It ignores the very justifications used by the proponent for its application, dismissing the possibility that other institutions will use the same justifications, regardless of whether they are currently considered tertiary care referral centers. Further, although the possibility of further helistops is discounted in the discussion of cumulative impact, based on the alleged restraints by various governmental reviews necessary for their establishment, no mitigating measures are explored which would turn this speculative restraint into a reality or which would affect the COH permit in any substantial way (e.g. through automatic revocation) if other helistop approvals by other institutions were sougnt. 6 7

Because of the deficiencies in the EIS, a new DEIS should be prepared and recirculated for comment prior to issuance of a Final Environmental Impact Statement to ensure that the public has an opportunity to comment on missing information and analysis which must be included if the EIS is ultimately to be found adequate. 8

Thank you for this opportunity to comment on the DEIS.

Sincerely,

Peter J. Eglick

PJE:rr

cc: Liz Anderson, Laurelhurst Community Club

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LAURELHURST COMMUNITY CLUB (PETER EGLICK)

1. A determination of the medical need of the proposed project warranted an independent analysis by Dr. Nicola, the former Director of the Seattle-King County Department of Public Health. By virtue of Dr. Nicola's report having been appended to the Draft EIS, commented upon, and revised in response to those comments, it is a criterion that has been examined through the EIS process.

   The restriction of the use of the helistop is addressed through the definition of the Proposed Action and alternatives, and also is examined in Dr. Nicola's report. The topic of the proposal's compatability with affected land uses is examined through the environmental analysis of noise, air transport safety and cumulative impacts. The Final EIS also includes comments on the relationship of the Proposed Action to Single Family and Major Institution policies.

2. The scoping process determined that the elements of Noise, Aircraft Safety and Cumulative Impacts would possibly generate significant impact. Therefore, only those elements were examined in the Draft EIS. Because the Council Conditional Use Permit allows helistops within institutional boundaries, subject to specific criteria including the requirement that "the helistop is [to be] located so as to minimize impacts upon surrounding residential property," the EIS has addressed the issue of noise and safety impact upon residential areas. In addition, a discussion of Seattle's Major Institutions Policies and Residential Area Policies, specifically those policies dealing with Single-Family Residential Use, and Institutions and Facilities in Single-Family Residential Areas, has been added to the Final EIS. This section includes comments on the relationship of the Proposed Action, as well as the Intramural Field and Preferred Alternative with policies and implementation guidelines. (See Chapter IV of the Final EIS.)

3. The issue of whether alternatives meet the proponent's objectives is crucial to their reasonableness. Children's has indicated that they will not develop an alternative that compromises its objective with respect to appropriate patient care. As part of their findings and recommendation report DCLU will identify their conclusions with respect to each of the EIS project alternatives and their consistency with the Council Conditional Use Permit criteria.

4. A discussion of how weather conditions affect flights is included in the Draft EIS on pages 66-68 and in Chapter IV of the Final EIS. The meteorological conditions at the alternative sites are not sufficiently different to significantly alter helicopter operations at the sites. At any given time, however, the weather conditions at a particular site may influence operations.

5. It is acknowledged that noise from the helicopter can have an effect on residents, workers, and others in the affected area. Effects could include physical reactions, such as stress. Chapter IV of the Final EIS has been revised accordingly.

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6. Other institutions will be bound by the Conditional Use Permit regulations and other applicable regulations. It is acknowledged that other institutions may believe that they are required by Section 248-18-285 of the Washington Administrative Code to permit helicopters to land at their hospita . The cumulative impact section has been revised accordingly. It should be noted that Children's offers certain specialists, equipment and capabilities that are not currently available at other Seattle-area hospitals; therefore, it would be unlikely that Airlift Northwest would transport pediatric patients to other non-consortium hospitals in the Seattle area.

7. Any new medical institution helistop applications received by the City of Seattle must be reviewed individually. The Cumulative Impacts section of the EIS has been revised.

8. It is the position of the Department of Construction and Land Use that a new Draft EIS is not necessary based on the provisions of Section 25.05.405 of the Seattle Municipal Code.

Thank you for your comments.

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LAW OFFICES
FRANKLIN & WATKINS
A PROFESSIONAL SERVICE CORPORATION
SUITE 2300
FOURTH & BLANCHARD BUILDING
2101 FOURTH AVENUE
SEATTLE, WASHINGTON 98121

TELEPHONE (206) 728-1511

H. JOEL WATKINS
RICHARD J. WATKINS
JOEL WATKINS JR.

RALPH E. FRANKLIN (1906-
MICHAEL KEITH COPNER (1937-

REPLY TO FRANKLIN & WATKINS

REFERENCE NO

4775-001

October 2, 1986

RECEIVED

OCT 2 1986

DEPT OF CONSTRUCTION & LAND USE

Ms. Holly Miller
Director
Department of Construction & Land Use
408 Municipal Building
Seattle, WA 98104

28

Re: Children's Orthopedic Hospital and Medical Center
Helistop/Draft Environmental Impact Statement
File No. 8405870

Dear Ms. Miller:

We represent the Laurelhurst Condominium Association. That association is composed of the owners of 55 condominiums located at 4545 Sand Point Way N.E., approximately 1/4 mile from Children's Orthopedic Hospital. Substantively, the Association opposes absolutely the construction of the helistop. However, we realize that your department seeks input on the adequacy of the Statement. Gauging from the level of public interest shown at the recent hearing at the Laurelhurst Elementary School last month, your department will have received a great many comments. We wish to add, briefly, our input.

We direct your attention to page 92 of the draft Environmental Impact Statement. The section is entitled, "Significant Impacts that Cannot be Mitigated." The risk of helicopter accidents is stated to be "a potentially significant impact that cannot be entirely mitigated." A helicopter flying in and out of the hospital will be traveling a corridor up Sandpoint Way and 45th N.E. (This is the primary approach, p. 45 of the draft Environmental Impact Statement). We are less sanguine about that conclusion than the proponents of the statement. This area is densely occupied and heavily traveled during certain hours of the day. The draft Environmental Impact Statement contains little information regarding EMS helicopter flights. Certainly, the NTSB does not compile such statistics (p. 61, draft Environmental Impact Statement). The comparisons with St. Anthony's Hospital in Denver is demonstrateably unsound. ("... actual figures on

the total number of six ambulance flight hours have not been kept.") Also, is "accident" defined by the Denver study (p. 61, draft Environmental Impact Statement), in the same fashion as the National Transportation Safety Board? (p. 65, draft Environmental Impact Statement). Are the physical conditions of arrival and departure comparable between the two hospitals? Under what conditions did the accident occur? What was the distance of the accident from the hospital? At p. 64, the draft Environmental Impact Statement recites 57 EMS helicopter accidents occurring in 1985. The hearsay statements of Nina Merrill of ASHBEAMS and Tim Einhorn of NEMPSA should be supported by a writing from those parties regarding the distance of those accident occurrences from the hospital. The observations in the helicopter safety section at p. 60 of the draft Environmental Impact Statement is replete with hearsay quotations from Gene Hill, Frank Benedict and Thomas Poulton. What questions were put to these individuals? Are the responses complete and in context? There would be a total of sixty to eighty overflights per month. These overflights will pass directly over our client's eight story condominium at a height of 1,000 feet. Our client is not satisfied that complete and accurate information is set forth in the draft Environmental Impact Statement. Frankly, the risk of accident does not appear to be "a potentially significant impact," but rather, a significant impact that cannot be mitigated." (p. 92, draft Environmental Impact Statement).

In the next paragraph, at p. 92, the proponent states that noise and vibration is not a significant impact based on regulatory criteria; however, it is recognized that helicopter noise could and probably would be disruptive of some adjacent residents' lives. SMC 23.48.05(A)(1)(b) sets forth the following criterion that "the helistop is located as to minimize impacts upon surrounding residential property." Helicopter noise is an "impact" that a number of the residents of the Laurelhurst Condominium have brought to our attention. The residents have not previously been concerned about noise from helicopter landings at the Graves Field. However, the Condominium Association informs us that a serious noise problem exists when helicopters fly to Children's. We note that the proponents of the draft Environmental Impact Statement are willing to quote conclusory hearsay statements from "experts" on helicopter safety. While there is a significant effort devoted to the noise issues, no resident of the area has had a chance to give his or her impressions on the subject of noise. "Regulatory criteria" aside. There is a dearth of evidence regarding the nature of the disruption of the adjacent residents' lives. As stated at page 28 of

the draft Environmental Impact Statement, the purpose of Seattle's Major Institutions Policy, SMC 23.16.10, "is to balance the need for institutional growth and change with the need to protect the livability of neighborhoods adjacent to institutions." It does not appear that the proponent of the draft Environmental Impact Statement put all that much thought into the statement set forth st page 92 of that document. We suggest that additional information be obtained and included in this final chapter and that an additional effort me made to verify the reliability of the comparison with St. Anthony's Hospital in Denver and the self-serving quotations which are sprinkled through the draft Environmental Impact Statement. 11

29

Very truly yours,

FRANKLIN & WATKINS, INC., P.S.

By Joel Watkins
Joel Watkins, Jr.

JW:mbd
L05400

cc: Board of Directors
Ron McPhee

LAURELHURST CONDOMINIUM ASSOCIATION (JOEL WATKINS)

1. The risk of a helicopter accident cannot be fully eliminated. Additional recent information on EMS air ambulance safety has been incorporated into Chapter IV of the Final EIS.

2. Comment acknowledged. The NTSB does not compile flight hour statistics for EMS helicopters. See response to your Comment #3, below.

3. There is no comparison with St. Anthony's Hospital in Denver in the Draft EIS. The Denver program is referred to as the first hospital-based helicopter ambulance service in the U.S. The accidents that had occurred since that time ocurred at various locations nationwide, not in connection with the Denver program.

   Total number of EMS helicopter flight hours may or may not have been kept by the individual EMS vendors; however, there is no reliable compilation of data on flight hours. There is, however, a record of helicopter accidents and numbers of transported patients. The numbers used for flight times in the Draft EIS are approximations based on available data on the total number of EMS helicopter flights and average flight times. These estimates were provided by the National EMS Pilots Association (NEMSPA) and Howard Collett, publisher of Hospital Aviation magazine (now called the Journal of Air Medical Transport). These were the only identified sources that had current published data on EMS flight safety.

   Chapter IV of the Final EIS contains updated information on EMS air ambulance safety, including information obtained from a study conducted by the National Transportation Safety Board (NTSB).

4. All "accidents" discussed in the Draft EIS were so designated by NTSB investigators. Since that time, the NTSB has redesignated some accidents. See Chapter IV of the Final EIS for a discussion of the differences between helicopter "accidents" and "incidents" as well as updated information on accidents.

5. The proposed Children's Hospital helistop is not compared to St. Anthony's Hospital in Denver. See response to Comment #3 above.

6. Comment acknowledged. These statements have been deleted from the Final EIS.

7. Due to the relative paucity of available data on EMS helicopter safety, the statistical analysis in the Draft EIS was supplemented with a qualitative discussion of safety trends in the helicopter field. The responses are all used in context. Gene Hill and the other Airlift Northwest staff received advance copies of relevant Draft EIS sections to comment on the accuracy of data presented in the document. Frank

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Benedict of the Federal Aviation Administration was sent a copy of the issued Draft EIS. No comments were received from Mr. Benedict. Thomas Poulton was sent a copy of the section of the Draft EIS that included his observations. His letter of reply, which is on file with DCLU, agreed with the findings that were presented in the Draft EIS.

Since the time of the issuance of the Draft EIS, a substantial amount of data have been developed that provides a better understanding of accident potential. These data have been incorporated into the Final EIS. The observations have been deleted from the text.

8. Comment acknowledged. The information presented in the EIS is factual. The risk of accident is significant. The impact on property or public safety from an accident may or may not be significant. The sentence has been revised accordingly.

9. Helicopters landing outside the Children's Emergency Room entrance previously followed a flight path that brought the aircraft closer to the Laurelhurst Condominiums than the current flight path does, since a more direct flight path to the Emergency Room entrance is made possible through the removal of some obstructive trees. Noise impacts on condominium residents may be less than before (and certainly would be for Laurelon Terrace residents). Noise impacts associated with use of the Kitchen Garden Helistop would continue to be greater than would occur if all the aircraft were to land at the Intramural Field site.

10. The Noise section of the Final EIS includes statements regarding the potentially disruptive impact of helicopter noise on the lives of area residents.

11. Children's Hospital is not compared to St. Anthony s Hospital in Denver. See response to Comment #3, above. See Chapters II, III and IV of this Final EIS for updates and revisions to the Draft EIS.

Thank you for your comments.

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Suzanne McQuary

To: City of Seattle, Department of Construction and Land Use

From: Laurelhurst School P.T.A. Board

Re: Hearing on Draft Environmental Impact Statement of Children's Hospital and Medical Center Helistop

Date: September 23, 1986

We, the Laurelhurst School P.T.A. Board, come before you this evening primarily in the interest of the children who attend this public school. Our interest does extend beyond the school as well. We represent the board only, not the whole Laurelhurst School Parent-Teacher Association. At this time, we are merely familiar with the major arguments for and against the proposed helistop. We wish to express in brief our concerns, and we wish to ask some questions for which we could not find answers in the Draft E. I. S.

While the school is normally occupied between 9:00 A.M. and 3:00 P.M. five days a week, children and staff arrive on foot, by car and by bus as early as 7:30 A.M. (some for day care). Children leave at 3:00 P.M. to walk or ride home, but some stay as late as 6:00 P.M. (until picked up by parents). Staff leave at differing times in the afternoon. Outdoor playtimes include A.M. and P.M. recesses, post-lunch recesses and some physical education classes. Many children play and participate in activities at the adjacent Laurelhurst Park. On several occasions there are evening events sponsored by the P.T.A. which draw students, their families and staff. In addition, some Laurelhurst Park Department classes are taught in the school. It is safe to say that the school is unoccupied between 10:00 P.M. and 7:00 A.M.

We are concerned, therefore, about the impact of noise and vibration on Laurelhurst School. It is noted in the Draft E. I. S. that "helicopter noise could and probably would be disruptive of some adjacent residents' lives." (pg. 92) Would the impact be greater for the secondary approach-departure path, which covers the area over Laurelhurst School? What would the impact of noise and vibration mean to daily instruction in the classroom, study in the library, instrumental music lessons in the auditorium, individualized teaching on the second floor or programs in the gymnasium? We are concerned about the frequency of flights, given that every instance requires two approaches and departures each. 1 2 3

In regard to the flight path, the Draft E. I. S. says, "a secondary approach-departure path would be used during northwesterly winds that are in excess of approximately 17 knots. Based on surface wind data for Sand Point this latter situation is expected approximately 0.2% of the time, and would be most likely to occur during the winter months (U.S. National Climatic Center, 1982)." (pg. 45) We are concerned about these statistics, since the school and hospital are sited in a more hilly location than Sand Point, 17 knots indicates a moderate breeze and 0.2% of the time may only amount to once a year. 4

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It would seem that there would be a frequent use of the secondary approach-departure path. Who determines the weather conditions and their suitability to flight paths? Who is responsible for these decisions? Who can elect to make flight path deviations? Who takes responsibility for them? 5

In consideration of the possibility of helicopter accidents, we notefrom the Draft E. I. S. that "a worst case scenario was generated using the overall accident rate for E.M.S. helicopters. Under this scenario, a flight involving a Children's-destined patient would have a statistical probability of an accident one in 5,459 transports. The accident could occur at any point on the four segments of each flight." (pg. 72) While this is a favorable statistic for the projections of flight frequency given, any accident is of concern to us. Who is responsible in the event of an accident? What if an accident occurred on or near the school grounds, during recess when many children are playing out of doors or after school hours when children are walking home? If the City of Seattle issues a use permit, will the city provide all of the necessary services in the event of bodily harm and/or property damage? 6 7 8

Laurelhurst School has been considered for closure by the Seattle School Board on more than one occasion. Parents from the surrounding neighborhood as well as those from many other Seattle neighborhoods whose children attend this school consider it imperative that this school stay open. We are concerned that the installation of the proposed helistop, whose siting raises serious questions, could jeopardize the future of Laurelhurst School. The alternative possibility of a helistop at the Intramural Field bordering N. E. 45th Street is not ruled out as a satisfactory site in the Draft E. I. S. Will the final E. I. S. contain an evaluation of the impacts regarding the public school which is only two blocks away? We hope it does. 9

Thank you.

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LAURELHURST SCHOOL PTA BOARD

1. Noise impacts from the secondary approach probably would be greater on the Laurelhurst School under the secondary approach-departure flight path, compared with the primary flight path.

2. Impacts on daily instruction, library study, music lessons, individualized teaching on the second floor or athletic programs would be dependent on the alternative and its flight paths, on flight timing, on classroom orientation relative to the flight path and on whether windows are open in the classroom. Actual noise duration would be relatively brief (approximately five minutes for an approach and landing; and five minutes for a takeoff and departure). However, the activity may excite some students for a period longer than the actual duration of the noise impact.

3. The basing of the medical transport team at Harborview or Boeing Field reduces the number of flights by one-half. Only on rare occasions when the appropriate medical flight team is at Children's would it be necessary to fly to pick up the team at the hospital (or at the Intramural Field). It also should be noted that a new alternative presented in the Final EIS, the Preferred Alternative, would further reduce the number of patient transports that would land at the hospital. These two factors reduce the number of flights into the Children's helistop.

4. The source of wind data in the Draft EIS is in error. The source is the U.S. Air Force Air Weather Service, 1970 and the data were for Seattle-Tacoma International Airport. In addition, since the Draft EIS was published, surface wind data for Naval Air Station Sandpoint has been obtained. Based on these data, winds in excess of 17 knots from the northwest quadrant are expected about 0.6% of the time (Fulton, 1990). The ground layer is a source of friction that slows winds, creates turbulence, and interferes with wind direction and speed. Any differences between winds at Sand Point and winds at Children's and the Intramural Field are not expected to be significantly great.

5. The pilot monitors weather conditions both from broadcast weather reports and from personal observations while in flight. Based on this available weather information, the pilot determines the safest flight path. The pilot is responsible for in-flight decisions on flight paths, including decisions to deviate from designated flight paths. Please refer to the response to the Seattle-King County Department of Public Health Comment #6.

6. See Chapter IV of the Final EIS for a revised analysis of accident risk.

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7. In the event of an accident, the party causing the accident would be responsible.

8. When called upon, the City of Seattle would provide the necessary services for emergencies (such as police and fire) within its jurisdictional boundaries. Please refer to the response to Liz Anderson Comment #17, below.

9. The continuing viability of Laurelhurst School is an issue decided by the Seattle School Board based on neighborhood population projections, the physical conditions of school facilities, and other factors. Whether the risk associated with helicopter operations will be considered in any closure decision is not known. Chapter IV of the Final EIS has incorporated additional statements on noise and aircraft safety with respect to the neighboring schools.

Thank you for your comments.

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MONTLAKE COMMUNITY CLUB

"Cooperating to maintain a fine Montlake Residential District"

2511 West Montlake Place East
Seattle, Washington 98112

October 14, 1986

RECEIVED
OCT 16 1986
DEPT. OF CONST. & LAND USE

Holly Miller, Director
Department of Construction and Land Use
408 Municipal Building
Seattle, Washington 98104

Comments on the Childre..'s Hospital and Medical Center Heliatop
Draft Environmental Impact Statement

36

Dear Ms Miller,

Our preliminary comments were made at the Public Hearing on September 23, 1986 and concerned the failure to involve any of the community groups which will be impacted by the numerous helicopter flights and the failure to consider the cumulative impact of such flights to/from both Children's and University Hospitals. A copy of the testimony is appended for your convenience.

Environmental Impacts
Why is no attempt made to assess noise and vibration impacts along the entire flight path? Montlake residents are well aware of helicopters over our community. We hear them overhead when we are inside well-built homes and feel the vibration they cause. This is hardly the reaction to a truck going by. You predict 15-20 flights a month which must be doubled due to the medical team pick-up. This means an additional 360 to 480 flights per year to Children's which has only 17% of the flights. How many helicopter flights will have as their destination University Hospital? How will the constant barrage of helicopter noise affect the emotional well-being of Montlake residents and the livibility of our community? 1 2 3

Role of Helicopters
Table 2 lists 21 patients who were transported by helicopter with a mortality rate of 48% and brain damage in other cases. What is the mortality rate for all patients transported by helicopter since May, 1985? Charges have been made that helicopter transport is more traumatic and can cause cerebral hemorrhage in neonatals. Could damage to the patient be caused by helicopter flight? 4 5

Table 3 is a purely hypothetical case. Use a real case and take into consideration the time involved when the community doctor calls the medical director for advice, the medical director calls Boeing Field, the helicopter pilot takes off and lands at Children's, the medical team is loaded and the helicopter departs and lands at the community hospital. This time interval was completely absent from Table 3. 6

Is the increase in use of medical helicopters forcing community-based physicians to send patients who cannot be helped to tertiary care facilities because of the fear of malpractice charges? 7

Why has Children's Hospital failed to file an updated form 7480 with the FAA? 8

Is it more than a little premature to plan a relatively massive assault on densely populated areas with medical emergency helicopters before the proposed guidelines and standards are formulated by Puget Sound Health Systems Agency, the Subcommittee on Air Ambulance Medical Standards of the Washington State Medical Association and American Society of Hospital Based Emergency Air Medical Services and National Emergency Medical Services Pilots Association? It appears that a Supplemental Draft Environmental Impact Statement should be completed and offered for additional comments by the public after the reports by the associations are finished and a part of the document. 9

Will the expanded service of Airlift Northwest and other helicopter services force the curtailment of MAST operations in western Washington? MAST is not allowed to compete with private enterprise. 10

Helicopter Safety
According to aeromedical experts, hospital-based helicopters crash far more frequently than other helicopters or civil fixed wing aircraft. Therefore it is necessary to examine closely the predicted increase in emergency flights by helicopters which have such abysmal accident records. How many helicopter pilots does Airlift Northwest employ? How many helicopter pilots are on duty at one time? How many hours per day is each helicopter pilot on duty? How many days per week does each helicopter pilot work? Is a helicopter pilot ever required to work extra hours per day, per week, per month? 11

Part of the arguement for building a secured, lighted pad is the safety factor. Is there any concern for safety when the helicopter lands at a community hospital with no landing pad or at an accident scene on a freeway or in a field? 12

What kind of insurance does Airlift Northwest carry in case the helicopter crashes in a densely populated area? 13

Is enough information available to make a convincing case for allowing 80-90 emergency helicopter flights per month in Seattle? In the American Medical News of September 5, 1986, preliminary evidence suggests that helicopter transport may be detrimental to patients' outcomes. 14

Sincerely,

Doris Baxter Burns

Doris Baxter Burns
President

MONTLAKE COMMUNITY CLUB

1. It is acknowledged that noise levels along the entire flight path would increase. Some properties along the flight path would be more affected than others; however, the noise levels at the ground would be within regulatory thresholds, based on calculated impacts at the Children's property line where the off-site noise levels would be greatest. Consequently, it was determined that it would not be necessary to examine noise along the entire flight path.

2. The Proposed Action projects an average of 15-21 patient transports by helicopter to Children's each month in 1995. As described in Chapter III of this Final EIS, these numbers reflect an increase from the number of transports projected in the Draft EIS. An average of approximately six patients would be transported by helicopter to University of Washington Medical Center each month. See revised description of alternatives in Chapter III of this Final EIS.

3. Some residents of the community may be affected by impacts from helicopter operations. Other residents may not be affected by the operations. Please refer to the response to Laurelhurst Community Club's (Peter Eglick) Comment #5.

4. An analysis of the mortality rate of all patient transports is outside the scope of this document. Please refer to Appendix D, which identifies patient outcomes for all Children's-destined helicopter transports through March 26, 1989.

5. There has been some concern regarding the potential for helicopter transports to cause physical damage to patients (e.g. Mattox, 1986), according to Karen Kilian, Assistant Chief Flight Nurse with Airlift Northwest, the severity of patient conditions require immediate transport and the transport of neonatals is no more traumatic than ground transfers. The transport teams are experienced in and equipped to deal with the patient needs as dictated by altitude physiology.

6. Table 3 has been revised and is included as Table 2 in the Final EIS. The time involved when the community doctor calls the medical director for advice would occur in either a ground or air transport. The Airlift helicopters are stationed at Boeing Field and Harborview; only the Boeing Field-based helicopter crew is called (by Airlift Northwest) to initiate a transport.

   Under the new Preferred Alternative, the medical team would be stationed with the aircraft at the base (either Boeing Field or Harborview), as is currently the case. If a specialized transport team located at Children's is necessary, they would be picked up at Children's or the Intramural Field.

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7. Community-based physicians refer patients to tertiary care centers so that their patients can receive the appropriate treatment from medical specialists who have at their disposal equipment that may not necessarily be available at community hospitals. It is not known whether fear of malpractice is a factor in any referrals that involve helicopter transports.

8. Children's submitted a Form 7480 to the FAA on February 14, 1985 with a revised submission on August 9, 1989. The request was approved with an expiration date of December 31, 1990. A request for extension was submitted November 12, 1990 and an extension to December 31, 1991 was approved November 19, 1990. An updated FAA Form 7480 will be submitted at the conclusion of the Council Conditional Use Permit process. The FAA, a reviewer of the Draft EIS, has not indicated that a revised Form 7480 should be submitted any earlier.

9. Refer to Central Seattle Community Council Comment #3.

   The Puget Sound Health Systems Agency (PSHSA) is no longer an active entity. Consequently, it would not be appropriate to delay consideration of this proposal until such time as the PSHSA study is completed.

   Preliminary guidelines from the Subcommittee on Air Ambulance Medical Standards of the State Medical Association, NEMSPA and AAMS are presented in the revised Chapter II and Appendix B of the Final EIS. It does not appear as though there are any significant differences between existing Airlift Northwest organization or operation/medical practices and the preliminary materials. DCLU has determined that a Supplemental Draft EIS is not warranted.

10. The availability of Airlift Northwest helicopters could replace MAST for some patient transport missions. At the discretion of the Army, MAST would continue rescue missions and the transport of military personnel and their dependents. Some military neonatal and pediatric patients may be transported by Airlift because of the available equipment, attending medical personnel, and reduced vibration on Airlift Northwest's Agusta helicopter compared with the MAST aircraft.

11. Airlift Northwest currently employs 6 full-time and 1 part-time pilots. Additional pilots will be employed before the second Agusta helicopter goes full-time. At any one time, one pilot per aircraft is on duty. Each pilot is on duty 12 hours per day for five days, then has five days off. It is possible that a pilot could be required to work extra hours to cover a shift that is empty due to vacation or sick leave, as long as the extra hours do not violate FAA regulations.

12. Community hospitals receive instructions on preparing landing areas for helicopters and may have their own approved helistop facilities or designated landing zones. Accident scenes are inherently less safe

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unless proper ground preparations are made to effectively designate and secure the landing area. If in the pilot's judgment a landing area is not safe, then alternate landing plans must be made.

13. Hospital AirTransport, which contracts with the Airlift Northwest consortium via Seattle Jet Center to provide the helicopter aircraft, pilots and mechanics, is required by its contract with Airlift Northwest to carry a $20 million liability insurance policy.

14. Please review response to Comment #5, above. Also, please review Dr. Nicola's updated report (Appendix A), which indicates that the air ambulance transports to Children's appear warranted based on the Washington State Medical Association's Draft Guidelines.

Thank you for your comments.

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ravenna-bryant
community association

6559 ravenna n.e., seattle, wa 98115 527-0718

October 8, 1986

RECEIVED
OCT 10 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb, Land Use Specialist
Department of Construction and Land Use
600 4th Avenue
Seattle, Washington 98104

Subject: Helipad at Children's Orthopedic Hospital

At the October meeting of the Ravenna Bryant Community Association (10/7/86) concern was expressed for the proposed helicopter landing site at Children's Orthopedic Hospital. Our board has examined the current status of the proposals placed before your agency and we hope to see the strictest review of the proposal by all concerned city, state or federal agencies before approval is considered for the proposal. 1

A motion was placed before the board and was adopted unanimously. Please enter the motion in your file of testimony and hearings. 2

RBCA Motion A/10-7-86/Unanimous

Moved: That RBCA support the position of the Laurelhurst Community Club concerning the helicopter landing site proposal of Children's Orthopedic Hospital, in that the Laurelhurst Community Club poll of local residents demonstrates near unanimous concern for the proposed site, in that it is the conviction of RBCA that a statement of need and demonstration of need for air transportation must be provided and approved before our community association would consider approval of the site proposal, and in that RBCA sees the need for a statement of justification and demonstration of why the existing joint use of the University of Washington landing site (shared by the UW and COH for emergency cases) is not a superior and safer alternative for a site location for helicopters.

Please place our association on your mailing list for subsequent matters concerning the COH proposal.

Sincerely yours,

David W. Rigby
President

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RAVENNA-BRYANT COMMUNITY ASSOCIATION

1. Comment acknowledged.

2. Comment acknowledged.

Thank you for your comments.

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Seattle Area Hospital Council

Third Floor
190 Queen Anne Avenue North
Seattle, Washington 98109
(206) 281-8989

October 21, 1986

RECEIVED
OCT 22 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Katy Chaney
Director, Land Use Division
Seattle Department of Construction & Land Use
400 Municipal Building
Seattle, WA 98104

Dear Katy,

I have received your letter of October 10 regarding Children's Hospital Helistop Draft Environmental Impact statement. The Hospital Council, as a matter of policy, does not get involved in individual institution's Certificate of Need applications or zoning applications with the City of Seattle. The current competitive environment in which hospitals operate, prohibits such involvement by the Hospital Council. The Council is involved in emergency medical services matters, particularly in terms of involvement with the King County Emergency Medical Services Division, but we would only review general matters of policy and procedure, not specific matters related to only one institution. We appreciate your invitation to submit comment, and hopefully this letter will clarify our position. Should you have any questions, please let me know. 1

Sincerely,

James L. Nell
President

JLN/mjd

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SEATTLE AREA HOSPITAL COUNCIL

1. Comment acknowledged. Thank you for your response.

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Seattle Women's Clinic
Obstetrics and Gynecology

BOYD C. QUINT, M.D.
JACK R. LAMEY, M.D.
LAWRENCE R. DONOHUE, M.D.
ROBERT E. LIEPPMAN, M.D.

DIPLOMATES OF THE AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

RECEIVED
OCT 15 1986
DEPT. OF CONST. & LAND USE

801 BROADWAY, SUITE 911
SEATTLE, WASHINGTON 98122
[illegible]
BOOKKEEPING [illegible]

[illegible] - 112th N.E.
BELLEVUE, WASHINGTON [illegible]
454-7122

14 October 1986

Holly Miller, Director
Department of Construction & Land Use
400 Municipal Building
Seattle, WA., 98104

Re: COH Helicopter Landings

Dear Ms. Miller:

I wish to be on record as opposing the COH application to have helicopter landings at the hospital rather than at the soccer field or the intramural field at U.W. 1

I am unconvinced of the medical necessity of such a program and fear that it is predominantly a marketing ploy for COH that would put the transported patient, and the surrounding community at an unacceptably high risk for accident. 2

I urge denial of permits for the on site helicopter pad as unnecessary and dangerous. 3

Sincerely,

Lawrence R Donohue

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SEATTLE WOMEN'S CLINIC

1. Comment acknowledged. Under the new alternative presented in the Final EIS (referred to as the Preferred Alternative) only helicopters with the most critically ill and injured patients would land at the Kitchen Garden Helistop on the Children's campus. All other patients being transported by helicopter to Children's would land at either the University of Washington Intramural Field, if allowed, or at Harborview. Patients then would be transferred to Children's by ground ambulance.

2. As determined by Dr. Nicola, the ability to land patients at the Children's campus may be a life-saving benefit to some patients.

3. Comment acknowledged.

Thank you for your comments.

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Comments on Draft Environmental Impact Statement of Children's Hospital of Seattle. 10/16/86

RECEIVED
OCT 2, 1986

Liz Anderson
4746 45th N.E.
Seattle, Washington 98105

1. Air quality and odor - were not revieved because proposal would not have significant effect. Each time there has been a landing I have been aware of a terrible odor associated with the emissions of the helicopter. This will most likely effect those residents closest to the proposed site. Please include a discussion of what is causing the odor, how toxic this emission; is, what, if any, will be the long term and cumulative effect on adjacent residents, with particular attention to pregnent women. |1

iii. Climate - should have been included and not determined non-significant. While the construction of the helipad does not effect the climate, the climate will effect the operation of a helicopter service in this area. There is not an adequate discussion of weather in this document. Please include a specific discussion of what conditions allow Airlift Northwest to fly or not fly, how frequently (in days, not percentages) will there be winds from specific direction (i.e., out of northwest quadrant requiring the use of secondary flight path.) |2

1. How often can predict rain, fog, sun |3
2. How often is visibility less than 500 ft. |4
3. What will visibility have to be in order to fly? |5
4. How will pilot be appraised of area condition at COH? |6
5. How does climate at COH differ from Boeing field? |7

C. Water iv. page xi. No discussion is included. Thes people living adjacent to Laurelon Terrace are very aware of the underground springs that run through the hillside that includes COH Campus. With each phase of building on the campus cases disruption to the springs and consequent flooding in the Laurelon Terrace condominiums. Please address this issue in the next document by answering these questions:

1. What is the potential for flooding in Laurelon Terrace as a direct result of the disruption and paving over of the hillside? |8

2. Who will be responsible and liable party in the event of flooding or continued flooding and inevitable damage? |9

3. What conditions might DCLU impose on permit to build helistop that may mitigate this potential impact on nearby residences? |10

2. Built Environment pg. xii.
iii Release of toxic or hazardous materials. This is not revieved and is deemed non-significant. There is a liquid oxygen tank (5000 gal. drum) located on COH campus. Please discuss the potential effects on residents in the event of a helicopter crash that ignites this highly combustible material. |11

b. Land and Shoreline Use.
iv. Aesthetics -- not revieved, non-significant. This proposal will greatly change the aesthetics of the surrounding neighborhood. What is a quiet residential neighborhood is transformed to a "war zone" each time one of those helicopters land. Many people who have witnessed landings by Airlift Northwest and MAST (Military Assistance to Safety and Traffic) have remarked that they felt as if they were in the middle of Viet Nam. The sound of the incoming helicopter frequently "blankets" the entire neighborhood from some distance away as it is approaching the hospital. Please discuss the potential psychological effects on neighboring residents who must experience the anxiety and fear each time a landing occurs, and the anxiety of "anticipation" that is associated with this proposal. Please include in your discussion the potential effects on the patient population at COH--with specific attention; to the fact that this population is obviously physically debilitated to start with. |12 |13

pg. iii. Light and Glare--not revieved, not significant. How will the lighting on the helipad effect the nearby residences? Will there be lights only when the hospital is notified of incoming flights or will there be lights on 24 hours a day? How will light projected from the helipad effect the sleep patterns of neighboring residents? |14

pg. xii. ii. Vehicular Traffic. Not revieved--not significant. Will an ambulance have to meet each patient transported directly to the ER door of COH as is done at Harborview currently? If not, please discuss why not. On Page 2, para. 1, DEIS it is stated that "upon arriving at the helistop, the engine would be shut down, a ground crew would assist the on-board medical team for transporting the patient to the emergency room." Please define what is meant by a "ground crew". |15 |16

pg. xiii. d. Public Services --Fire. Please include in the next document, a detailed discussion of what would be done in |17

the event of a crash and/or fire on or near the Campus of COH. What unit would respond to the site? What special training if any would be required of the personnel involved? How much time would it take to respond to the COH Campus? What emergency procedures would be followed in the event of a crash on the elementary school playground or the nearby park? What special program if any could the fire dept. conduct at the schools (Villa Academy as well as Laurelhurst Elementary School) so as to educate the population on how to respond in the event of an emergency landing or a crash. 17

Please include in this discussion the identification of any special fire fighting equipment that will be stored at the helipad and how CO personnel will be trained to respond.

iii. Schools - because there was no increase in population, a discussion of the impacts on the two elementary schools in the Laurelhurst neighborhood was deemed non-significant. I find this hard to believe in light of the fact that one of the major safety points that has been repeatedly raised as a result of this proposal was the close proximity of the proposed helipad to the school and the fear of a crash there. Include in the next document a complete discussion of the potential impacts on both elementary schools. Key points addressed should be: 18

1. Noise impact on classroom instruction
   A. How often will classes be disrupted?
   B. What will be the noise level experienced by the school?
   C. How can impacts be mitigated?

2. How often can the school expect direct overflights?

pg. xiii. Parks and Recreation
1. Please discuss how often the Laurelhurst Park will be overflown. 19

2. Who will respond in the event of a crash? 20

3. What will noise impact be on people using the park? How will that effect the use of the park? 21

pg. xv. Distribution List

Why were the community clubs surrounding COH not sent a DEIS? Not even the Laurelhurst Community Club was sent one. Please see to it that the next document is sent to the following community organizations: 22

Laurelhurst C.C. Bob Klug Pres.
View Ridge C.C. Bob Di Julio
Hawthorne Hills C.C. May Kemp

Belvedere Terrace C.C.
Windermere C.C. Becky Weed
Montlake C.C. Doris Burns
City-University Citizens Advisory Committee (CUCAC)
University District C.C. Linda Doupe
Ravenna Bryant C.C. David Rigby
Central Seattle Community Council Federation Beth Means 22

Page 1, para 2. There is an inadequate discussion of what the objective of the COH proposal are. Please include a discussion of what role "marketing" plays in this proposal, as it is well documented that marketing plays as much of a role in the instigation of these services throughout the nation as does the delivery of medical care. It is not sufficient to say that the COH insignia is knot painted on the side of the aircraft. What steps has COH taken or anticipates taking to market such a service? Brochures? Physician contact? Advertising in newspapers, magazines, T.V.? And in what states will they advertise? 23

Page 1, para 4. It is stated that 3 trees will be removed from the site. On FAA form 7480-1, COH submits that one 50 ft. cypress is an obstruction to the flight path. Please rectify this descrepancy. Please submit as part of the final document, a copy of the current FAA Form 7480-1 that COH has submitted. 24 25

Please explain why the original prediction of 3-4 landings per month has now jumped to 10 per month. What is the basis from which either of these predictions are made? Airlift Northwest is described as "a Seattle vendor based at Boeing Field." Yet, on the aircraft operated by Airlift Northwest is clearly stated "operated by Hospital Air Transport, Inc.." Who is Hospital Air Transport, Inc.? What role do they play in this proposal? Do they have guidelines or standards to which pilots must adhere? Do they carry liability insurance? If so, how much? How has the liability insurance figure in the Airlift Northwest contract been determined and who is the provider/vendor? Who is their contract with Seattle Jet or the four hospitals involved in the proposal? 26 27 28 29 30

Dr. Nicola's report predicts that over time COH could expect 15-20 flights per mention. (Mentioned on Page 1, DEIS.) Yet, Airlift Northwest records will show that for the month of August, 1986, COH recieved 17 patients via Airlift Northwest. Three or four came directly to the door of the E.R. at COH and the remainder were delivered to Harborview, transferred to an ambulance and then transported to COH by ground ambulance. Why were these patients delivered to Harborview at all? Was the helicopter ride necessary? Where did the patients come from? Whaty was their presenting condition? If this helipad is permitted will these patients who are obviously stabilized come directly to COH via Airlift Northwest in the future? If 15-20 flights per month was Dr. 31 32 33 34

Nicola's predicted use for future then those figures need to be reassessed. If COH had 17 ANW transports in Aug '86 then 15-20 per month is a future prediction that is grossly underestimated. Please address this in FEIS. 34

Pg.1.DEIS. "The majority of these flights would be performed by Airlift Northwest (ALNW), a Seattle vendor based at Boeing Field; although flights could occur by other ambulance services, U.S. Army MAST helicopters, or private helicopters." It is not sufficient to merely predict that landings will occur other than ALNW. The impacts on the neighborhood of these potential landings must be weighed just as those of ALNW. What other ambulance services in the area exist that might use this helipad? What types of aircraft do they fly? Will the helipad physically be capable of servicing these aircraft? What types of liability insurance do they carry? What will be the predicted frequency of MAST landings at COH as well as others providing this service? 35 36

Page 2 - sixth paragraph. "Impacts on patient outcome are expected to be more favorable under the proposed action....." This is an entirely subjective statement by the proponent. There is no scientific basis for this claim. All evidence to date supports the fact that in the eleven years of landings at the soccer field there were never any problems with patient transfer other than one occasion on which the ambulance became stuck in the mud. This is a problem which is easily remedied by improving the landing site or building the proper facilities at some point on the east campus of UW. The proponents further claim that anything "other than the proposed action would result in suffering, the need for prolonged treatment, or even death." Again there is no scientific basis for this claim, please remove from DEIS. Any of these could result from the patient manipulation that will be involved in landing on COH campus and pushing the patient 120 ft. on a gurney to the ER. There will be less patient manipulation involved and less exposure to the elements if the current landing situation (Graves field) remains status quo. 37 38

Page 3. 2nd para. It is stated that 3/4 of patient transports are expected to occur during daytime hourvs. How was this prediction determined? This entire paragraph should be omitted from DEIS as it is based on an inadequate noise study. See remarks from noise consultant. 39

Page 3 (2nd para cont.)The concluding remarks of paragraph two are ridiculous. The ambulances that approach COH turn off their sirens and lights as traffic permits, but once they turn onto the COH Campus the sirens are always turned off (Shephard Ambulance, Oct.,1986) It is not sufficient to say that sirens are approximately as loud as a helicopter. Please provide specific comparisons. 40

Page 3. The expected statistical frequency of a helicopter accident one in every 5,459 flights or 1 every 23 years is an estimate that is based on inappropriate figures. To determine the accident probability; the proponent should have used worst case scenario which Dr. Nicola predicts to be 40 cases per month. The accuracy of this prediction is supported by the fact that COH had seventeen patients transported by ANW Aug. '86. Further the average length of flight of 48 minutes which is used in this calculation is not representative of what is reported in the ALNW actual flight logs, according to the logs. 41 42

Page 4. 1st para. If the grassy area outside of ER door does pose public risks because the site is not secured etc. why is COH currently landing there? Since the City has not ordered them to cease and desist landing will the city of Seattle share in the liability in the event of an accident? Please discuss in final EIS what current landing proceedure on campus is--what are problems associated with this proceedure. Why this proceedure will not be adequate in future as well. 43 44 45

Page 4 paragraph 2.
In the event of a crash and fire on COH campus in vicinity of natural gas meter, could there be an explosion? I find it hard to believe that the natural gas would simply flare until shut off. Please have remarks verified by local gas authority as well as fire department. 46

Page 4 para.2 --
It is mentioned that there is possibility of traffic accidents associated with ground ambulance. There is also the potential for traffic accidents caused by the helicopter flying overhead along Sand Point Way. Further, when people get in their cars and drive there is an associated risk that drivers accept. I t is entirely different though to sit in your own home and have the risk of a helicopter crashing on your roof because the helipad is located too close to residences. O ne situation involves a voluntary participation in action that could result in an accident and the other situation involves a risk that is totally involuntary! These kinds ofi remarks should be eliminated from this draft, because argus ents such as these can be presented to the point of absurdity. 47

Page 4 Paragraph 2
I object to the three point rationale used in maintaining that there will be no proliferation of helicopter services in Seattle. 48

1. The point is made that the land-use criteria used by DCLU to evaluate helistop applications limit the use of helistops to those facilities that can demonstrate that it is needed to save lives. The argument is that COH is a tertiary care facility offering specialized services to the region, and thus demonstrates the need and offers unique medical 49

capabilities that no other hospital offers in; this region. There are two problems with this logic. First the land use criteria states only that the hospital must need a helipad in order to save lives. Every hospital in the state of Washington faces life threatening emergencies probably every day. COH is not unique from that standpoint. There is no mention in the land use criteria about those hospitals having to be tertiary care facilities or having to offer unique medical services. They must only show that the helipad is needed to save lives. Secondly, Mary Bridge Hospital in Tacoma offers the same medical services that COH does with the exception of cardiac surgery. Yet in many instances already ALNW has flown right over the roof of Mary Bridge in order to supposedly save someone's life at COH. If those people involved in transporting these patients feel that the pt. can afford the time involved to be selective about what hospital they are sent to then why is landing site at Graves Field or the East Campus not an adequate site for a helipad? Further, COH has no permit and no pad and is landing anyway, directly violating the land use code, why wouldn't other hospitals do the same? 49 50 51

The 2nd argument is that the PSHSA has written two proposals to develop guidelines for the siting of helistops and policies having to do with the integration of such services with the statewide EMS system. The claim is made in the DEIS that these guidelines along with those being written by the Wa. State Medical Association will deter proliferation & the improper use of such services. 52

The problem with this argument is again twofold: 1. Currently, there is nothing be done to promote the development of regional plan. So far many people have given lip service to the idea but there has been no financial backing of such a proposal. Accordin gto my conversations with Dr. Lothar Pinkers, there is not even consensus on what criteria should be evaluated in a regional plan. The last information that I received on this issue was that the "meat" of the plan had sbeen gutted and as it stood now the plan called only for an inventory statewide to be taken of such services. By DCLU's own admission (a conversation with Katy Chaney) a regional plan would take years to develop.

According to a recent conversation with Dr. Lothar Pinkers the guidelines being developed will be thought of as "suggested buidelines." The Wa. State Medical Association does not have the authority to force compliance with such guidelines, and by COH's own admission in this document, they will also view these recommendations as suggestions, not standards with which to comply.

Why would these guidelines carry any more weight with any other hospital than COH?

Finally, COH cites the CON as being another protection against proliferation. One only has to review the history of events resulting in COH's exemption from this process to realize how ridiculous this statement is. DSHS asked COH 3 53

different times to go through this process and their responses included filing a lawsuit against the State. Currently, the UW is in the process of preparing a DEIS on a similar proposal and they have not obtained a Certificate of Need either. St. Luke's Hospital in Bellingham recently (this spring) went through the C.O.N. process. The CON committee voted unanimously to deny the application but the ultimate action taken by DSHS was quite contrary. They recommended that St. Luke's make a few changes in their proposal and the Certificate would be granted. What kind of protection does a process like this offer the public? DCLU has only to contact legislator Ken Jacobsen or1 any other for that matter to verify that there is a big push; by lobbyists in Olympia to get rid of the C.O.N. process altogether. Which leaves absolutely no protection for the public from the proliferation of helipads and helicopter services. 53

Please eliminate these arguments from the final EIS and state that there is no effective way to guard against proliferation and improper use of such services, and that DCLU will,1 be forced to deal with these permits on an application by application basis, which does not allow for the development of a regional plan for such services that is so desperately needed. 54

Please include in final document a detailed description of what the actual problem is that generated this proposal for a helipad at COH Campus. Please document all statements regarding problems that have been experienced under the past landing situation (MAST, Graves Field.) 55

Page 7 para 3 --Please include in next document--a discussion of*who* has classified COH as a tertiary care facility? Was this through a self designation process? 56
They may be the largest pediatric facility; in the area but they are not the only pediatric facility. Because Blue Cross designated 64% of a summary of cases '84-85 as unique cases, does not mean that COH was the only hospital that could administer this care. Please include a detailed very specific discussion in next document of COH's particular medical capabilities that no other hospital has. Please include a comparison of the capabilities and services available at COH and Mary Bridge Hospital in Tacoma. What other children's facilities or pediatric services are available in Idaho, Alaska, & Montana? 57 58 59

On page 8 para 4. Statement is made that "Childrens is not a trauma center, as it does not meet all criteria necessary to be so designated." Yet all supportive data in Dr. Nicola's report examines the transport of trauma victims. If there is no data avilable that suggests that neonates or other nontrauma patients benefit from helicopter transport this document should state that clearly. Please include in next publication. I request that the medical need matter be remanded to Dr. Nicola for further scrutiny. Dr. Nicola's 60 61

next report should focus solely on the type of patients that COH transports. 61

Please discuss whether COH has plans to upgrade their capabilities so as to self designate themselves a regional pediatric trauma facility? Does COH plan to administer care in the future to pediatric trauma or burn victim? Does COH have a written or verbal agreement with Harborview as to who receives this type of patient now or who will in the future? Please include in next document. What sort of agreement has been signed between the involved hospitals (UW, COH, Harborview and Providence) as to the division of patients transported by ALNW? 62

What would COH have to do to become classified (self or otherwise) a trauma center? 63

Is there any provision in ALNW proceedure for their medical team to stabilize patient at community hospital and then transport patient by ground? If so, how do they handle billing? Will patients always be transported to another hospital? And always by ALNW? Is there any provision for team to administer care at community or outlying hospital resulting in stabilization of patient and the option of leaving patient at referring hospital? Please discuss in next document. If answers are "no" please include explanation. Please refer to Dr. Nicola's report (Pg. 3) "Once stable, a baby can be transported much more safely; some pediatricians prefer ground transport to helicopter because it is possible to stop an ambulance by the side of the road and listen to baby's heart and lungs and check the stability of its condition." 64 65

Page 10--5th para.
There is a minimal description of the training required by paramedics. Please include in next document a complete discussion of training required for paramedics--This is pertinent to this proposal and important to include because it will be the paramedics that will be calling for ALNW in many instances. What training do they have that will enable them to decide when to call ANW? How will they be able to distinguish what patients can be transported by ground and which require air transport? How is dispatch handled--how is site determined for ALNW to land--at what risk to surrounding community? 66 67

Please expand this discussion to include the background, training and experience of flight physicians associated with ALNW. Some speciiics to address: 68
1. Are they residents?
2. Are they intensivists?
3. Are they board certified?
4. What has been their experience in pediatric medicine?
5. Are they neonatologists?

Dr. Nicola's report suggests (Pg. 3) that "One of the most important aspects in the case of the critically ill neonate is the transport of a specially trained medical team, the neonatologist/pediatrician and neonatal nurse to the community hospitals to stabilize a deteriorating baby." 69

Page 10. para 3. There is a reference to the guidelines being proposed by the Wa. State Medical Association. The proponent suggests that "It is the opinion of the Seattle King County Dept. of Public Health that any recommendations be used as guidelines and not standards." This is quite contrary to what is mentioned in Dr. Nicola's report; "I would also recommend that the emergency transport of patients by helicopter be a planned part of a complete EMS transportation system, with specific criteria for use."(Pg. 4) 70

Please resolve this discrepancy, and include a discussion of how any guidelines proposed will be implemented by this program (ALNW). Who will monitor adherence to these guidelines? Please include in next document a copy of the Patient Distribution Guide (pg.11--2nd para) that is used by hospital medical staff in determining appropriate medical center for treating patients. When was the last time this was updated? 71

It is mentioned that COH & UW only offer neonatal services (pg. 11. para 6) and that critically ill or injured pts. are generally referred to COH but HARBORVIEW is the only hospital with an operating room staffed twenty four hours a day. How long does it take for COH to become "operating room ready"? How is the ER staffed at COH? How is the ICU or NICU staffed at COH? 72

Page 12--1st para -- According to DEIS in 1985 there were 2 helicopter transports to COH out of 141 patients that were served by the County's EMS systems. How does this figure compare with the number of total transports thus far in 1986? How do you account for the difference? 73

Page 12 --2nd para. Discussion of guidelines that paramedics use for determining mode of transport. Under item #1. examples are listed of presenting medical problems that would MOST likely require helicopter transport. What specific areas of South King County would transport these patients by helicopter rather than ground? 74

Page 12--last para. "Under no circumstances shoul d there be a delay at the scene waiting for a ride from the helicopter." Please examine flight record of near drowning patient transported from Auburn. Did the paramedics in fact wait for ALNW to arrive at a Park and Ride lot that they had transported the patient to in order to be picked up? What was the reason for this action. What was the delay in time? What effect did this have on patient's condition? 75

Page 13 --item #4 "Permission to use any helicopter by a paramedic must be obtained from the medic unit's base hospital physician." Please include a discussion which details the dispatch system of ALNW. What has been used to date, and what might be contracted in the future. Please verify that the paramedic must call into the unit's base hospital physician, who then must in turn call the dispatch person for ALNW who must in turn contact dispatch doctor on call, who must then return call to unit's base hospital physician, who must then return call to paramedic unit giving o.k. How much time on the average does this dispatch system require? 76 77 76 77

Page 13 --item #6--Please explain the rationale used in determining that paramedics should not call to get estimated arrival times for MAST and ALNW. 78

Page 13 - last para. COH describes "critically ill or injured patients as those patients who might die or become seriously damaged unless appropriate treatment is received immediately."(Neff,1986). Please explain in next document why some patients have been flown over the roofs of h ospitals that could have provided the same treatment sooner that COH administered. 79

Page 14, 15 & 16. Please explain how these patients were selected for this list. Does this list represent all patients transported to COH for this time frame or have these patients been selected over others to be represented in this document. If so how have these patients been selected? Are these consecutive cases that were transported to COH? What is the relationship between this list and Attachment "A"? 80

Page 13 last para. Dr. Neff suggests that critically ill patients who have been brought to COH include (1) near drowning --shouldn't these go to nearest hospital?
(2)premature children --may go to UW as well
(3)severe injuries --is categorized as trauma and would go to Harborview
(4)overwhelming infection--COH or closest hospital?
(5)ingestion of toxic substance--Shouldn't this go to nearest hospital? 81
Please include more specific discussion of what type of patient will be transported to COH and provide explanation of how and why decision would be made? The explanation that is provided in this paragraph does not make sense. If patients (trauma) are transported to Harborview then that is where the surgery would be done.

Page 17 para 5. Dr. Neff suggests that if the patient is jostled in transfer there is a risk that a child will become hypothermic due to the opening of the isolette. Is it not true that the isolette would not be opened until it was placed in the ambulance?--which would consequently have little effect on the patient? 82

Page 18 --Table 3.
This table should be eliminated from the draft. No one is suggesting that critical patients be transported by ambulance from Enumclaw -- only that the helicopter transporting them land at the soccer field, in which case the difference in travel time would be ten minutes or less. In addition, almost all patients from Enumclaw could be served at Mary Bridge Hospital Tacoma which is a lot closer to Enumclaw than COH/Seattle. 83

Please include a table that shows the difference in transport time when comparing the transport of a patient from Enumclaw to Mary Bridge and Enumclaw to COH! 84

Page 19 para 2 -- Please include a list of physicians that Dr. Nicola spoke with both in and out of the region in gathering information for his recommendation. 85

Page 19. Dr. Nicola's analysis and report are seriously flawed and should b.e re-examined. The data he uses to support his findings have to do with studies dealing with trauma patients. COH does not receive trauma patients. There is current data that has been released that relates to helicopter transports that should be included in an analysis, as some are now saying it may be detrimental to certain patient populations. From what bases does Dr. Nicola determine that COH may require three patient transports per month? 86 87 88

Pg. 20 para 2
Dr. Nicola suggests that some patients may be adversely affected by 3-5 min. delay in receiving treatment. Please have Dr. Nicola address in next medical need analysis, the issue of whether or not some of these patients are being adversely affected by the delay in treatment which is a direct result of patients not being sent to the nearest medical facility that can provide the appropriate care. 89

Page 20 para 5-- PL ease clarify and expand the statement about the phase-in of Blackhawks by MAST being altered. The reference is listed as Greenavalt, 1986. Please include in next document a detailed description which includes the physical characteristics of the Blackhawks (i.e. weight, dimensions, etc.) This is important information and pertinent to this proposal as these helicopters will land at COH once the helipad is built according to Nancy Greenavalt. 90 91

Page 21 para 4 --Proponents mention that from 1983 to date MAST transported 29 patients to COH. 92
--Please compare the use of MAST for transporting patients with the current use of ALNW (May '85 --present). Please explain why there has been dramatic change in number of transports.
--Please have MAST document whether or not there were ever any problems with transfer at soccer field. 93

--Please explain in next document how MAST will continue to operate in region with ALNW when they are restricted from competing with private transport services. 94

--Please include a copy of any agreement which exists between MAST and ALNW for the division and transport of patients. 95

Page 22 para 2 --Please include in next document a copy of current contract or proposed contract under which ALNW is or will operate in future. This information is critical in terms of analyzing this proposal as it (contract) "characterizes the airlift program and organizational structure, the roles of support, distrribution of revenues, indemnification, record-keeping, services extended to non-participating hospitals, and provisions for amendment and termination of contract." It is well documented that in many locations across the nation, the improper use and abuse of such helicopter services have been the direct result of the contract signed for such services. 96

Further, since this consortium was formed in 1984, there have been at l east two different contracts, possibly three. I have been given conflicting information about who it is that contracts with Seattle Jet, what function or role Hospital Air T ransport, Inc. serves and who carries liability insurance related to a helicopter accident. The contract which defines this structure should be made public information. 97 98

PLage 22 --There is no mention of what type of helicopter is used for back-up in ALNW service. There are times when Agusta will be serviced or inspected by FAA which will preclude the aircraft from being used for transport. What type of aircraft will be flown in this situation? What are specific features of this aircrait (i.e., dimensions, weight, engines, fuel, range, speed, seating)? How is it maintained? How does it compare to Agusta in terms of noise gnerated and what is the standard medical equipment on board? Is this aircraft capable of carrying a 160 lb. isolette unit with ventilator? 99

What is 147 gallons equivalent to in terms of measured weight? This is important information to include in next document as the helicopter that was used in noise test did not carry an isolette (weighing 160 lbs.) nor did it carry a full crew (only a flight nurse and pilot). It is my understanding that the heavier the aircrait the more noise it generates. At the time of the test the pilot told me that the full tank of fuel made up for the weight that would be added with the isolette and full crew. Please verify in next document. If this is not accurate information then noise studies are not valid. 100

Page 24 para 4 --Table two describes ALNW helicopter transports through mid June 1986, yet ALNW began services in May '85--Please include total number of transports to COH May, June and July '85. If there were none during this time please specify. Does Table 2 represent consecutive transports 101

to COH--were these all the transports to COH via ALNW during the time. What other patients did COH receive via other helicopter services during this time and what were the specifics of each case as listed in Table 2. If this is not a complete list of consecutive flights how were these selected? 101

Page 25--Table 5
Item #4 --What is basis for forecasted figures in Table 5? Please include in next document method used for these projections. The prediction is that COH's transports will grow steadily over ten year period but as a per cent of the total ALNW roter transports, there is a steady decline. Please explain basis for this prediction in next document. 102

It should be noted that this table also does not reflect any "return flights" as represented in Attachment "A." 103

Please include in next document a table that does include numbers that are reflective of all flight segments involved in the transport of patients as proposed by COH in this DEIS. This would include the pickup of medical team at COH, the pickup and delivery of patient, and the return of the helicopter to the base. Please include predictions that allow for "return flights" as well since this is also being done and involves 2 flight segments over the community. 104

Accurate numbers and method for projecting these figures are critical to any analysis of this proposal, as the risk to the community must be properly assessed and weighed in relation to the benefit that patients might receive from this transport and the location of the landing site. A final EIS lacking this information would be inadequate. 105

Page 26 para 1. Please include an explanation in next document of why dimensions of helipad are less than what is suggested by HEMSPA. And please describe how dimensions of COH's proposed pad compares with those suggested in FAA guidelines for construction of helipad. 106 107

Page 26 para 2.
What is meant by "generally helicopters are given more latitude in their operations than fixed wing?" Please explain. 108

Page 26 para 3 --Please include in next document a copy of current FAA Form 7480-1 filed with FA in regard to COH's proposal for helipad. 109

Please note that because there is little or no monitoring of this type of flight activity once approved by FAA --the burden of dealing with pilot negligence and deviation from approved flight path rests with the citizen as FAA states quite clearly that unless complaintant can prove negligence or operation of aircrait in unsafe manner, the FAA will generally not take any action on complaints. Is the City ready to share in the responsibility of monitoring these 110

flight paths? What role might the City play in enforcing adherence to these flight paths? What authority will City have over aeromedical pilots if this permit is granted? 110

Regulations: 111

While the Wa. State Medical Association is developing "user guidelines" that may be applicable to these services as proposed in the DEIS, the proponent makes it quite clear that these will be viewed as guidelines, not standards. If there are no specific criteria to which the operators of such services must adjere, only guidelines, from what basis will a peer review committee operate? The use of guidelines rather than standards diminishes the possibility of any group or agency having any authority over such services. WHat would characterize inappropriate use of such services if there are no standards with which to comply, and what legal support would exist for the revocation of a permit in the event of inappropriate usage? Who will assess the appropriateness of patient transfers, how often and who will empower this committee? How would this committee be selected? How can the community be assured that such a group would report inappropriate usage? How would this committee deal with the patient's right to privacy and how would committee view transports that were inappropriate but initiated by patient request? Dr. Copass has stated clearly that he is in the business of providing a service and will not deny this service to anyone. Will ALNW be held accountable for such flights if this permit is granted and conditioned with peer review? Who will be accountable COH, ALNW, Seattle Jet, Hospital Air T ransport, Harborview, the referring physician? WHat will be the consequences of violations of the permits issued? 112 113

Will there be any formal or informal public review of the guidelines proposed by Wa. St. Med. Assoc. subcommittee before they are adopted? What can the City do to insure some citizen input to the process? 114

Please disclose in next document whether ALNW, Sea. Jet or Hospital Air Transport, Inc. are members of ASHBEAMS. If not, please explain why. If they have enrolled please include in final EIS the criteria to which they have agreed to comply. Does the City have the authority to enforce compliance with such guidelines? 115 116

Are ALNW pilots members of the NEMSPA? 117

Please include in next publication of this document an interpretation of WAC 248.18.285 as proposed by the City Of Seattle legal department. Please state whether or not the City is in agreement with proponent's interpretation of ordinance. If the City is not in agreement with proponent in this regard how might the use of this helipad be regulated by COH and how would City persuade COH to do so. What consequences would COH face if they did not comply? 118

If DCLU issued permit to COH for construction of helipad on their campus, what possible conditions could be placed on the permit? How would these conditions be enforced and such service monitored over time? Who would be responsible for determining such conditions? Please provide a detailed discussion of possible conditions and potential for enforcement. Please suggest who would be charged with responsibility of reporting violations other than the appropriateness of transport (i.e., noncompliance with noise abatement proceedures?) A complete discussion of this topic must be included so as to determine whether or not the adverse impacts of such a proposal on surrounding neighborhoods might be mitigated in the event of a permit being issued. 119

The conclusion that should be drawn and stated in next publication with regard to regulation of such services is that this proposed service as well as any other of like nature are and will be totally unregulated once flight paths are approved by FAA and that no agency, whether federal, state, or city has the authority to modify, revoke, or even condition such services. Please state so. 120
It would be irrational, irresponsible, and certainly worthy of challenge in a court of law for the city to grant a permit for this proposal cognizant of these facts.

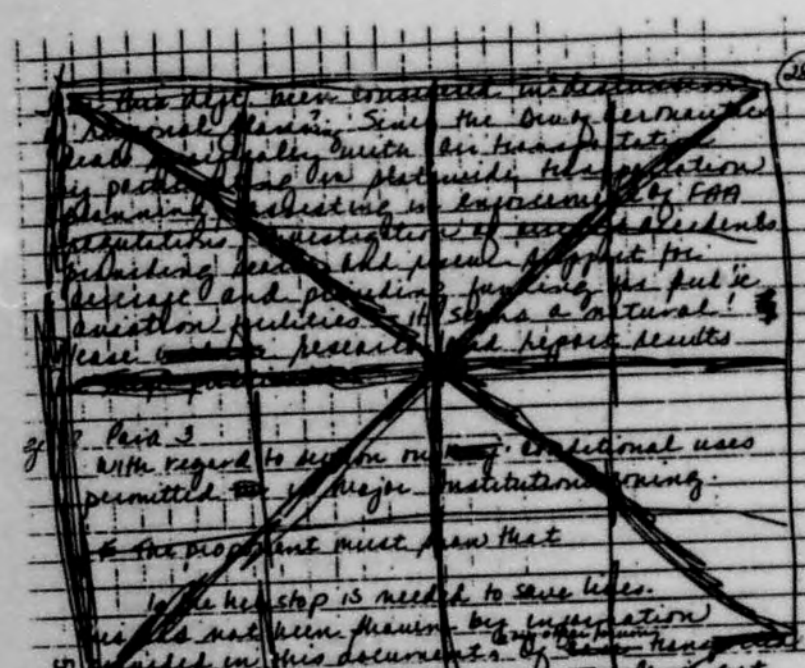
Pg. 29 para. 5
Please include in next document a discussion of the role the Wa. State Dept. of Transportation might be encouraged to play in this issue. In other states (i.e., Louisiana) it was this department that orchestrated and carried out formal studies of aeromedical helicopters for such transport within their states and produced an overall plan. Does this Dept. have the capability of conducting such a statewide study and plan in this state? 121

Has this (Dept. of Transportation) been considered in a discussion of regional planning? Since the Div. of Aeronautics "deals specifically with air transportation by participating in statewide transportation planning, assisting in enforcement of FAA regulations, investigation of aircraft accidents, providing search and rescue support for aircraft, and providing funding for public aviation facilities--it seems a natural! Please research and report results in next publication. 122

Page 28 para 3
With regard to section on conditional uses permitted in Major Institutions zoning.

The proponent must show that 123

is. The helistop is needed to save lives. This has not been shown by information provided in this document or any other forum. OF transported patients 50% died anyway. It is 124



Para 3
With regard to [illegible] additional uses permitted [illegible] major institutional zoning.
The proponent must show that
a. the helistop is needed to save lives.
[illegible] not been shown by information provided in this documents. [illegible] does not clear & even addressed whether the other remaining patients lives must saved do the helistop being located at CotH. — Please discuss how CotH plans to document that they are in compliance with this first criteria. Does the city believe that CotH has provided adequate information from which they will be able to determine whether or not this proposal meets this criteria? Please discuss how city views report issued by Dr. Nicola as well.

b. the helistop is located so as to minimize impacts upon surrounding residential property
— Have city personnel who will be responsible for making this decision visited the CotH campus and witnessed a helicopter landing? Without doing so I don't believe that they can adequately assess whether proposed site mitigates the impact upon surrounding

residences. The city should conduct an independent survey of residences within a 3 block radius of heliport helipad to determine what their experiences have been to date with the helicopter landings. With particular attention to how it has changed their lives (i.e. some residents feel they must sell property and move, some have experienced personal damage due to vibration, some have experienced physical changes, & psychological changes (ie elevated blood pressure, sleeplessness, anxiety, fear, stress).

What type of homeowners insurance will be required of residents closest to heliport and how will premiums be effected?

A study by EIS seeking this information which is available due to the fact that CotH has been leading only just from proposed site since May '85 — would not provide sufficient information from which to be determined whether or not there is a conditional use — Helistops had been met. Please conduct survey and include results in final EIS.

c. Use of the helistop will be restricted to occurrences involving life threatening emergencies.
— Since this service has been operating illegally at proposed site since May '85 it seems appropriate to review all flight records to determine whether or not CotH has been using helistop for only life threatening emergencies. Please form a "citizens" Review panel that includes objective people, lay people as well as physicians to determine whether flights to date have been justified. Please include

(12)

Criteria for evaluation and results in final EIS. Please see Attachment "A" as this reflects that use of helistop is not being used for life threatening cases, i.e., return flights etc. | 130

2. "The directors report shall examine alternative locations for the helistop, including sites outside the institutions boundaries which would accomplish the purpose of the helistop with a lesser impact upon residential areas."

The purpose of the helistop according to COH is two fold; critical time saved and decrease in patient manipulation. Locating the helipad at an alternate site located on the UW east campus saves the same amount of time in transport, less a few minutes. These few minutes that might elapse because of an additional transfer can be made up on some other leg of the transfer with minimal modifications. I'm sure ALNW can do something which would allow them to take off sooner. The COH pediatric team might respond quicker for pick up - a possible change in the flight path might make arrival at the destination sooner. Better preparations at referring hospitals may expedite the transfer. Improvement in the overall dispatching systems which Robb Child, administrator of ALNW describes as "archaic" could easily make up for the minutes lost doing a field transfer. Most peole involved in search and rescue and emergency transport will agree that it is a very small percentage of cases in which minutes are critical anyway (Dr. Nicola). In most cases transport of patients take hours (flight time, stabilization time, transfer time) In view of this, an alternate site at the UW campus would meet COH's first objective. | 131

The second objective is to decrease patient manipulation. In talking to people involved in doing emergency transport, I have discovered that some people think one is really splitting hairs" in discussing whether or not there is more patient manipulation due to an additional transfer at the east campus. The reasoning is that if a site is permitted at the COH campus in the Kitchen Grade area the helicopter will land, unload a patient on to a gurney (same procedure as field) or stretcher and they will be pushed, 120 ft. (all the while exposed to the elements) into the Emergency room at COH. All the while exposed to the risk of tubes and I.V. becoming tangled, jostled, disconnected. At the field, the ambulance pulls up to the aircraft the patient is moved into the ambulance (is not exposed to elements anywhere near as long as in case of proposed action) and then is transported to emergency room directly and unloaded. He is not subjected to the jostling associated with a 120 ft ride on a gurney. The point is that neither procedure is perfect, they both have their disadvenleges and one is not inherently better than the other. | 132

The alternate site offers better safeguards against hypothermia than the proposed COH site. When one weighs these facts with the ever present risks to community associated with landing at COH, the prudent site selection is an alternative at UW east campus, and this alternative meets COH's criteria for decrease in patient manipulation. (Windchill factor from blades ? and 120 ft trip) | 133

Please keep in mind that the purpose of the Major Institution Policy is to balance the need for institutional growth and change with the need to protect the livability of neighborhoods. | 134

Locating the helipad at the UW east campus area is not an idyllic situation. At best it is a compromise that the Laurelhurst and Montlake Communities are willing to live with. Much of our Communities will still suffer adverse impacts from the use of this alternative site. The noise will still be of concern although to a lesser degree. The flight paths may be modified but I doubt seriously altered and the number of flights COH receives via ALNW may even escalate as a result of the use of the east campus area. The burden of reporting violations will still be on the surrounding communities. What sort of compormise has COH offered to live with? They have dismissed the possibility of an alternate site saying that it does not meet their objectives. Please include in final EIS a serious consideration of alternate sites which included a realistic assessment of the proposed transfer at COH landing site.

(Please refer to testimony of Dr. Jerry Schneider from public hearing held September 23, with regard to Draft EIS) | 135

Page 33, para 2

1. The sponsors objectives are suspect due to the fact that ALNW is not attempting to deliver medical expertise available to critically ill patients in the least amount of time. | 136

A. Please explain why many transported cases have flown over hospitals that could have administered medical treatment more quickly than COH? | 137

B. What steps might be initiated by proponent and ALNW to insure that doesn't happen in future? How might geographic area be divided so as to delineate what patients are taken to what hospital? | 138

2. They are not minimizing transport time from the place of patient pickup to ER at COH. Please describe in detail the system which dispatches ALNW. What are existing problems with ths system? How might it be changed in future to expedite transfers? How does total dispatch time compare to the time involved in transfer at soccer field? | 139

The proposal may not minimize or reduce additional transfer. 140
Please define what is meant by "ground crew" that will assist in transfer of patient to ER at COH site. Will an ambulance be used to transfer patient from COH helipad to ER door, as is the case of Harborview. If not, please explain why. The proponent has not discussed what potential problems exist for the patient landed at COH and then transfered 120 ft to the ER. Please include in final EIS. Consider in discussion jostling and movement of patient, exposure to elements (i.e., rain, cold temperature, snow, hail, wind) consider also the wind chill factor produced by aircraft, the risk involved in disconnection of life support lines etc, the potential problems associated with moving patient on gurney over slick surfece. Please examine what potential effects these problems may have on patient stabilization as these must be weighed against the potential problems of a transfer at the soccer field. 141

The 4th objective,- to construct a helistop that minimizes potential environmental impacts in a manner that would not sacrifice proper patient medical treatment. The alternative locations in this section have not been adequately reviewed and discussed in order to determine that the proposed action is the action that most effectively meets this objective. Please include in next document a comprehensive discussion of alternative sites both on and off the campus of COH. Merely stating that an alternative has been judged unacceptable is not a sufficient discussion of alternatives. Who has determined that these sites are unacceptable? If discussion does not include how transfer of patient would be made and all the other information that is provided for in the proposed action section (i.e., flight path, transfer time, transfer methods, associated transfer problems), how might the reader of this document determine whether or not an alternative is even remotely feasible? One cannot, one has to rely solely on the biased opinion of the proponent in this situation. Please redo this entire section giving it as much consideration in your document as is done for the proposed action and is required by SEPA. 142 143 144

56

In addition, please address specifically

1. Why would a route through the medical center be less desirable? The patient would not be exposed to the elements which results in proposed action. 145

2. Changing floors is mentioned as being a disadvantage. Does the UW share this opinion? Their rooftop location will require a descent by elevator 5 floors to the emergency door. Please address. 146

3. Surrounding tall trees are not seen as a disadvantage in proposed action. They have been earmarked for removal. Would this not likewise be a solution to this problem with alternative location of pad? 147

4. Please explain why flight path would change in administrative wing and surface parking lot alternative. How could landing site be any closer to residences than what it is for Laurelon Terrace? Please compare distance and report 148

5. Pg 39 para 2- "The significance of the safety distinctions are believed by the pilots to be negligible". The pilots referred to are ALNW pilots whose livelihood depends on the continuation of this service. Please provide an unbiased safety report that relates to the proposed action as well as the alternatives on and off campus. 149

Pg 39. Had all concerned parties been involved in the scoping process, there would have been an opportunity to discuss as an alternate site the possibility of sharing a helipad on the NOAA or Navy property (Sand Pt Way) 150

This site is already paved, lite secured and marked with a big red H. It has adjacent parking as well. It is easily accessed from the lake without having to fly over the homes of surrounding residents. There is a paved road that leads from the site out onto Sand Point Way (short distance) and the distance to COH is minimal. (3 minutes by car). Please explore this situation as a possible alternative to a site at COH and discuss in final EIS. Since the pad is already built and would eliminate a major expense, and have minimal adverse impact on surronding neighborhoods, it should be considered. 151

Pg 40- Please address why the proposed helipad specifications are less than those proposed by NEMSPA for medium size helicopters. How do these dimensions compare with those suggested by the FAA? 152

Who would be responsible for turning on lights at helipad in event of emergency? Isn't this an additional risk to safety of community. Failure to turn on lights may result in a catastrophic accident. Please state that an added advantage to an off site pad is the option of leaving lights on 24 hours a day, and not being subject to human error. 153

Pg 40- Please state in next document that "future" in relation to this proposal equates to ten years, lest someone underestimate potential for growth of this proposed service. Please provide estimates for twenty year growth so that the cummulative impact over time might be properly assessed and weighed now when decision is being made. 154

Pg 40- Why haven't signs been posted warning people of current helicopter activity on campus as a safety precaution? 155

Pg 41- The projection for expected flights in year 1990 is not any where near accurate. COH received in Aug '86, 17 flights via ALNW alone. 3 or 4 came to emergency room, the remainder were transferred at Harborview to ground ambulance and transported. The future (10 year) projection is representative of the number of flights COH is currently receiving. Please adjust figures and present more realistic predictions for future growth. Dr. Nicole estimates that the average number of flights that COH will receive once helped is located on campus is 30-40. Since the proponents refer to Dr Nicola's report for support of their proposal many places throughout the draft, why are his figures ignored? Please provide realistic figures in terms of anticipated utilization, both current and projected. If COH does not agree with Dr. Nicola's figures then state so and provide argument for this position. | 156

Pg 41 3rd para- How has proponent arrived at conclusion that COH shares 17% of ALNW total flights? Please include calculation in next document. In order to determine whether or not one can realistically predict that COH's transports will remain constant, one must have some conception of what changes in capabilities might occur. While I recognize that it is difficult to determine what physicians may leave COH in future, certainly COH has an institutional plan for growth which would reveal what additional services would be made available at COH in near future that would affect the total number of transports expected. What programs and /or specialists does COH plan to add to present staff that may affect this proposal. | 157 | 158

It is stated that ALNW has capability of performing 80-90 flights per month. How does ALNW plan to meet demand for additional flights if requested? Would there be additional helicopters leased that might land at COH? How might an expansion of ALNW effect COH in terms of present flight #'s and expected flights? #'s What happens to flight #'s if a hospital drops out of consortium? | 159 | 160

Page 42 para 1- Please include in next document any agreement reached with MAST in terms of landing and communication. If agreement has not been reached, please include a discussion of what is being considered by involved parties. What efforts will COH make to meet with other aeromedical transport companies in the region that may have reason to transport to COH? | 161 | 162

Please define and describe a pre-arranged transport by ALNW. | 163

How much time elapses on the average from the time the first call comes in to dispatch system until the time the helicopter lifts off? | 164

Pg 43 In reviewing history of ALNW helicopter service to date, in how many instances has the helicopter landed in front of ER door of referring hospital? In how many instances has there been an ambulance ride involved in the transfer at referral hospital? | 165

How long must helicpter run after landing at COH before engine may be shut down? How long must engine run before actual lift off? | 166

How does the number of flights transported by fixed wing to Boeing field that are met by ALNW compare with those initiated by a referring physician requiring pick up of medical team at COH? Please provide figures that are representative of service since acquisition of helicopter by ALNW. (Please review statement on pg. 43 in which proponent maintains that there would usually not be a need for pick up of medical crew at COH.) | 167 | 168

Page 45 What patient condition might require deviation from flight path? | 169

Please define "adverse" weather conditions during which ALNW would not fly. | 170

Please provide comparison of FAA standards, NEMSPA and ALNW policies and/or standards for weather corditon. | 171

How does the noise generated by the ALNW helicopter relate to the turn South over the parking garage in attempting to land at COH? What are specific dangers associated with this restricted turn. | 172 | 173

Pg 45 para 4 - Please discuss the proximity of the helicopter to residences in relationship to the unusal winds which require deviation from normal flight path. | 174

Please state clearly in final EIS that when winds are out of northwest quadrant and 17 knots or better, the secondary flight path will be used which puts the helicopter over the Ville Academy School, Laurelhurst Elementary, St. Bridget's Church. Many people do not look at maps and this information needs to be clear for those assessing this proposal. | 175

Please check estimates for length of time elapsed from moment of touchdown until patient enters the emergency room. There will have to be time allowed to push patient on gurney 120 ft to the emergency room doors. This movement alone may require more than three minutes. Please adjust figures for final document to reflect this leg of the transfer. | 176

how long can one expect it to take for the pilot to retrieve the isolette and take off. For people trying to sleep at night in neighboring residences and for patients being cared for at COH this time is critical as it is disruptive to normal sleep patterns. Please include in final document. | 177

Conclusions drawn on page 46 (last two paragraphs) need to be supported by providing comparative figures for transporting patients by ALNW and Medic One or other responding gound transport systems. Please review all patients that have been transported via ALNW since May'85 and determine transport time for each and provide estimate for similar transport by ground. Please include origination of patient and specific time initial call came into ALNW. Also include how many actual transfers each patient experience before final delivery into ER at COH. | 178 | 179

How might the risk of the patient destabilizing been decreased by transporting the patient to the nearest qualified hospital to administer the appropriate level of care, rather than flying to COH? Please review patient transports May '85 to present and provide this information in final EIS. Please provide data to support claim that "time savings can reduce suffering, decrease hospital stay time and in the most severe cases, can mean the difference between life and death". If no data is available that pertains to specific nature of patients transported to COH (not trauma or burn data) please remove this statement from document. Unsubstentiated claims of this nature are inappropriate in this document. | 180 | 181

What role will medical malpractice play in the decision to transfer patient via ALNW and/or the decision of where to land? Please include discussion relating to this topic in final EIS. Please use unbiased sources (those having no affiliations with proposed service (ALNW) or any affiliation with participating hospitals.) | 182

Figure 7
What safety risks are associated with the noise abatement approach in figure 7. | 183

Page 49- Please discuss "fire prevention system" that helistop will incorporate. Where has the oxygen tank been moved to? Please describe location in terms of distance from the proposed heliped site. | 184 | 185

Please explain comment. "Childrens and Airlift have actively participated in the development of communications guidelines to ensure communication from air-to-ground is facilitated." | 186

Please include ALNW specific guidelines on acceptable weather conditions in next document as mentioned on pg. 49- paragraph 4. In addition provide ALNW pilot qualifications. Please document that ALNW requirements exceed those guidelines developed by NEMSPA and ASHBEAMS. | 187

What provision might ALNW make for pilots to report safety concerns without fear of losing employment? | 188 How are pilots checked out before lifting off? | 189 What sort of aircraft maintenance program does ALNW employ? | 190 What safety checks are made on craft before lift-off? | 191 Where are windshield wipers for ALNW aircraft? | 192 How often does FAA inspect aircraft- what does inspection consist of? | Please provide in next document the safety record for the Aguste A109 Mark II.

What is minimum distance allowed by FAA between helicopter landing site and surrounding buildings? How close to a building does the FAA allow a helicopter to land? | 195

Is there a weather advisor that will be stationed at COH to report to ALNW? and incoming flights- please discuss. | 196

How does COH see a review panel functioning? Please discuss possible participants, frequency of review, violation and enforcement, credibility. | 197

Please include in next document copies of correspondence between Tullman Trask and Trueman Katz as mentioned on page 50 in the DEIS. Also include letter to Bob Klug, Laurelhurst Community Club President with regard to same topic (Trueman Katz was sent a copy.) As your comments on pg 49 and 50 are misleading and need to be clarified. | 198

Page 52- The 15 minute transfer may not be accurate as described. I have been told that in most cases the ambulance pulls up very close to the helicopter. Consequently the eight to nine minute estimate of moving patient from chopper to ambulance is an exaggeration. Please verify that in most instances the patient is not moved across the field to the waiting ambulance. Also please clarify for readers that proposed heliped alternative area would be paved and have adjacent parking lot and allow for ambulance to back up to aircraft. | 199 | 200 | 201

Please provide data to support Dr. Neff's statement (1986) on pgs 52 and 53. If no data is available please remove from this document. | 202

Page 53- Please explain what specific liability reasons would preclude COH from using proposed UW rooftop heliped. Please include any documentation of this communication in final EIS (Goertzen, 1986; Showcroft, 1986) | 203

Argument about traffic delaying the transfer of patient from UW to COH is ridiculous. There is a back road from stadium through east campus area that would eliminate any problems caused by congested traffic (See Public Hearing transcript, Dr. Jerry Schneider testimony) Please address this point in final EIS. 204

Page 56- In the limited landings section. Please address in the final EIS that the possibility does exist for COH to remove tall trees so as to avoid deviation from proposed flight path in final approach to COH. 205

Page 57- In final EIS please clarify that potential mud problem may be eliminated by considering a landing site already paved as mentioned in Dr. Jerry Schneider's testimony, public hearing DEIS Sept 23, 1986. 206

Page 57 Para 5 - Please include in final EIS a copy of section 7.70.040 of the Revised Code of Washington and a discussion which reveals whether the city is in agreement with the interpretation made by the Hospital. 207

65

Pg 58 Please include in final EIS a report from Medic One which clearly reveals their policies on running their sirens. Also include a discussion of agreement COH has made with Laurelhurst Community and City of Seattle with regard to ambulance sirens approaching their hospital -- Please review past permits issued COH by City of Seattle. 208 209

Pg 58 Please remove statement about approval of proposed Action or Alternative not having an impact on the number of Emergency helistops constructed in this region. This is an opinion expressed by the proponent that is quite contrary to the trend across the United States that has been well-documented. 210

Pg 58 An added benefit as a result of reserving implementation of the proposed action for the future is that the area school populations (which have been sadly overlooked in this DEIS) will not be subjected to noise and vibration and resulting disruptions to classroom activity. In addition they will not be subjected to overflights in bad weather and possibility of crash on school play ground that most likely would involved death and destruction. Please address in final EIS. 211

Helicopter Safety

Pg 59 Please identify recognized authorities mentioned pg. 59 paragraph 3. For final EIS please use unbiased sources rather than opinions of ALNW pilots. Please recognize that they may be experiencing a conflict of interest 212

This discussion of "trends" in helicopter safety is not germaine to the issue. How many EMS programs were even in operation during the time frame 1975- 1981? How has that figure changed during the years '80-'85. Please focus on safety as it relates to the EMS helicopter industry from 1980 - '85. And include conclusion-recognized by authorities- that it has the worst aviation record in history (Einhorn, AMA News, Sept 5, 1986). Please secure NTSB statistics for general aviation for the years 1982-85 and provide that information for final EIS. 213 214 215

On pg 60 the proponent maintains that the increase in helicopter safety is due to the increased use of turbine powered engines. But on pg. 65 Table II shows that in 1981 the single leading cause of accidents among turbine powered helicopters was engine failure or malfunction. 216

On pg. 65 proponent makes the argument that pilots are crashing due to striking wires or obstacles (single greatest cause of EMS accidents 1977-1985) is because the pilots are unfamiliar with the landing area. I would like to submit that this has more to do with the inability to see wires and obstacles as a result of flying in restricted areas and flying at night. (See 67, 1st para). The second greatest cause of EMS accidents is power loss or mechanical failure (25%)- Thirty six percent of these accidents resulted in injury or death. 217 218

Helicopter Safety

Pg 67 It is stated that in December of 1985 ALNW refused to answer twenty calls over a two week period due to bad weather. Please investigate what happened to these patients and report findings in final EIS. Please indicate condition of patient at time of call to ALNW- subsequent treatment administered-- what hospital were patients transfered to-- geographic origin of call -- mode of transfer- time of transfer and patient outcome. 219

FAA standards for flying are written for and applicable to all aircraft. There is a big difference between what conditons are acceptable for commercial jets to fly in and what would be acceptable for helicopters-- Please include this in final EIS. Please specify what FAA standards are as well as ALNW. Who establishes the ALNW criteria for flying and how do they compare with the NEMSPA. Please include NEMSPA standards in final Document so that there is a means of comparison for the reader. 220

Pg 68 para 1- What is good visibility? Why doesn't ALNW fly with two pilots? (instead of 1) 221 222

para 2- How many Aguste 109's are in operation around the country. How many are involved in EMS programs? |223

pg 68- Gene Hill's comments on the reliability of turbine powered aircraft is not supported by information provided in Table 11-- 42.3 % of all helicopter accidents (turbine powered) were due to engine failure or malfunction. Please ask G. Hill comment on this and provide for final document. Engine malfunction is not the only factor that contributes to helicopter safety. Please have Gene Hill or preferably an unbiased pilot comment on potential outcome in the event of transmission failure or rotor problems. |224

Frank Benedict is not viewed as a reliable source in the discussion of EMS helicopter safety. In a conversation with Mr. Benedict on Sept 23, 1986, he told me that he was completely unaware of the current safety record held by the EMS helicopter industry. Please include in final EIS comments on the fact that in 1985, one out of 10 aeromedical helicopters suffered a reportable accident (Aviation Week and Space Tech., March 24, 1986). Please include this article as part of final EIS. |225 |226

Pg. 68 +69- The comments made by Dr. Thomas Poulton in regard to improved EMS flight safety are not substantiated by the data represented in this document. What is meant by "early operators"? How does Dr. Poulton feel about accident rate of EMS helicopters in 1985? |227 |228

If restrictive budgets play a role in EMS helicopter safety, please define. What is a restrictive budget? How does this compare with that of the ALNW budget. Please provide this budget information in final EIS. Please include all cost related information to the operation of ALNW (i.e., salaries of personnel, expenses, equipment etc.) Please explain how participating hospitals share in expenses, both fixed and variable. Please provide information on cost to patient of such services. Billing procedures, history of date of recovery of these charges. What has been experience (since inception of service) with regard to third party payors? |229 |230

How does the budget of ALNW affect the judgements made in regard to which flights to take and which not? |231

Pg 69 para 2- Please provide specific information and data on safety record of "major vendors". It is not sufficient to say that it is someone's opinion that they have a better record. Please provide the data to support this point. |232

Pg 69 para 3- What are "insurance companies' standards"? How do they compare with FAA regulations? It is not sufficient to say they are more stringent. Please provide information. Please provide ALNW standards for pilots so that reader may make comparison. Please provide individual pilot accident record to date for pilots flying for ALNW in final document. Please specify definition of "small airport". |233 |234 |235 |236

Pg 70 para 2- Dr. Nicole suggests COH will have 30-40 flights per month not 15-20. This document is supposed to represent worst case scenario. COH had 17 transports Aug '85-- your figures are not realistic. Please adjust for final E.I.S. |237

Pg 70, para 3- According to our review of flight logs, the average flight was not 48 minutes but 77. Please address in final EIS. |238

Please provide accident probabilities based on worst case (40 flights per month). Please project this probability over twenty year period allowing for growth of service. Include in final EIS. |239

Pg 72, para 5- Please include in final EIS Mr. Benedict's comments on which landing site would offer least safety risks to community in comparing proposed action with alternative sites reviewed in EIS and include Navy Site, Sand Point. In my conversation with Mr. Benedict (Sept 23, 1986), he was unaware that MAST had previously landed at UW soccer field and that this alternative was being considered in proposal. Has Mr. Benedict physically visited the COH campus and viewed proposed site or alternatives reviewed in this document? Please include in EIS. Comment in EIS suggest that Mr. Benedict compared the COH site only to landing areas in downtown Seattle. |240

Pg 72- There is no discussion of proposed medical office Bldg and its effect on landings at COH. Please include discussion in final EIS, include unbiased credible sources when determing effect. Please also include what other bldgs COH has planned to erect on its property (not just vicinity of proposed site). This development and proposed development should be considered in siting a helipad on campus. |241 |242

Pg 72- Please address in final EIS- possibility of natural gas meter leaking undetected as a result of accident on site and possibility of subsequent explosion. Who is responsible for shut off of main valve across SandPoint |243

Pg 73- Please refer to Table 12 - Helicopter Accidents by Cause 1972-1985. 31.5% struck wires and obstacles. 22.2% flew into the ground. 16.7% loss of control. The flight path to landing site at COH includes more wires and obstacles, trees, light standards, buildings etc., than open area of alternative sites. The flight path is over homes and schools, the landing site is 240 feet from multi family housing. The landing site is located in a very restricted area -- loss of control could have devastating results. How can you possible conclude that the alternative sites would not be more safe from a helicopter accident frequency ? Please consider varying wind currents, the influence that buildings have on wind, etc. 244

The fact that you cannot produce any statistics on ambulance accidents involving a transfer of patient such as would be required in alternative action suggests that if a risk exists it must be very minimal-- please compare this risk to that which is experienced by locating helipad at COH. 245

Please have pilots comment on whether open, paved lite secured area of alternative (build helipad on East Campus) is preferred to restricted site at COH. Please have ALNW pilots comment as well as unbiased authority. 246

Pg 76- Please explain why exempt sound sources can not be considered a public nuisance, and what authority puts forth this information. 247

Pg 80- The discussion on health effects of Noise is inadequate. Please attempt to give serious consideration to this issue. As one source of infomation please refer to EPA pamphlet entitled "Noise: A Health Problem"(Enclosed). Please refer to letter sent to Hermie Ipp, DCLU, by Liz Anderson in reference to noise tests conducted at COH. Date: See pic Attn. 248

There is no discussion of impacts of Helicopter noise on elementary schools located in vicinity of landing site. Secondary approach departure path is over both elementaries. Please give serious consideration to this issue and present in FEIS. It is not sufficient to say that they are noise-sensitive. 249

Please verify that noise measurements were actually taken at only one spot designated to be measured. Other information was extrapolated from these findings. 250

Pg 81 There is not an adequate discussion of impacts of two bladed helicopters that will land at COH-- please address. 251

Pg 81 para 6 Please verify that gross vehicular weight has negligible effect on helicopter noise. Gene Hill is not a noise expert. Provide comments by credible authority in final EIS. 253

Specific noise measurements should be taken at both elementary schools doing separate tests for primary and secondary flight paths. Include results in FEIS. 254

Pg 83- Noise information conclusions are invalid as presented in this document as the report assumed twenty patients transport or 40 round trip flights. Impacts of 40 transports per month or 160 round trip flights should be used as is supported by findings of Dr. Nicola, 1986. Please use accurate worst case predicions in FEIS. 255

Pg. 84 para 2 - The flight path that incorporates a sharp turn south over parking garage is still being used. Consequently there would not be a lowering of 7-9 dBA. Delete from test for FEIS. 256

There have been no measurements taken for backup aircraft used by ALNW which has landed several times at COH already. Please provide noise information for this aircraft in FEIS-- Please provide noise information on BlackHawk helicopter, as military plans to replace the Huey. Provide for final EIS. 257

Please provide information on how hospital rooms at COH were determined noise-sensitive. If noise studies were done accurately, it would be shown that more than 30% of hospital would be awakened. Please discuss effects on patients when windows are open during summer, fall, spring of year. 258

How did proponent determine there were no known health effects associated with the predicted helicopter sound levels for the neighborhood surrouding COH? Please discuss FEIS. 259

The current helicopter noise awakens more than 15-20% of closest residents. Please poll the closest line of sight residences to determine. 260

Please address the potential impacts on residences of consecutive night flights that prevent residents from sleeping at all. This has already been experienced at least once since landings have been taking place at COH. 261

Why is it that in addressing noise impacts of intramural field helicopter the

but does not even acknowledge this same impact with regard to the elementary schools located in vicinity of COH. This disruption occurs even when the school is not overflown. 262

Pg 89- The proposed flight path does not keep helicopters at "high" altitude over Sand Point Way. What does proponent consider high altitude? 263

The disturbance to residences as experienced in noise abatement approach is not minimal. 264

Residents to the south of hospital experience disruption to lives as a result of helicopter landing at COH. Many have complained about sleep interference. 265

Pg 90- When did the UW receive CON approval for their helistop? Helen Shewcroft (UW) was unaware that the institution had gone through process. See testimony Joanne Brekke hearing, September, 1985. 266

29

What do long range plans of Seattle area project in terms of helicopter service acquisition? 267

Please note: Six months prior to COH announcing its plans to acquire helicopter service and building pad, hospital representatives maintained in a public community meeting that they in fact had no plans to acquire such services nor did they intend to build a helistop on their campus-- so much for your survey of Seattle area hospitals. Why would these hospitals divulge their plans to COH anyway? COH certainly does not share its institutional plans with other hospitals. Please delete your survey of hospitals, it has no validity with regards to the precedent setting nature of the issuing of this permit. 268

Ludwell Lake, EMS helicopter program consultant, has remarked in the St. Luke CON hearing (helicopter proposal Spring '86) that a consortium is the worst way to set up an EMS helicopter program. Please address in final EIS and research his "Public Utility model". 269

How can ALMW do an adequate job of providing appropriate medical services to public if it is not integrated to total EMS system and part of regional plan? 270

See references to CON process and helicopter service acquisition by hospitals.

Your conclusions on pg. 91 are contrary to realistic results expected and experienced to date, of CON, PSHSA study, Washington State Medical Association guidelines, the city's land use process -- see earlier discussion. 271

Pg 91- What Dr. Nicola suggested as referenced in para 6 is illegal. 272

Pg 92- Please refer to comments on 1st para in public hearing speech, Liz Andreson 9/23/86. Please reconsider concluding paragraph on noise and vibration when accurate noise study is complete. 273

Submitted DCLU 10/17/86

LIZ ANDERSON

1. During the scoping process, the issues of Air Quality and Odors were deemed not to be significantly affected by the Proposed Action or alternatives. It is DCLU's position that the emissions from the helicopter do not warrant analysis.

2. During the scoping process, the issue of climate was deemed not to be significantly affected by the Proposed Action. The discussion of weather conditions and how they may affect Airlift Northwest's determination to fly or not to fly is presented on page 67 of the Draft EIS and in Chapter IV of the Final EIS. The frequency of use of the secondary flight path to Children's is presented in terms of the frequency (based on the average number of hours in a year) that winds in excess of 17 knots originate from the northwest quadrant.

3. See response to Comment #2, above.

4. See response to Comment #2, above.

5. Visibility conditions in which Airlift pilots fly or do not fly are presented on page 67 of the Draft EIS and in Chapter IV of the Final EIS.

6. Airlift pilots receive general weather information from Boeing Field. The distinction between weather at Boeing Field, Harborview, and the Children's campus are not significant. The pilot, upon approach to the landing area, is able to observe the weather conditions and to take the necessary steps to ensure that weather conditions permit a safe landing. Trained weather observers are used for instrument approaches, which cannot occur at Children's. Weather conditions at Children's can be ascertained by the pilot through radio contact with personnel at Children's, and through pilot observations. Following helistop approval, if received, one or more wind socks would be placed on campus.

7. A detailed analysis of climatological differences is beyond the scope of this EIS; however, the most prominent distinctions likely would be created by the topography and, to a lesser extent, the buildings and vegetation that exist at the two sites.

   Boeing Field is situated in the floor of a valley system. Valley systems of this size are typified by mild valley winds, which generally are more pronounced during summer months, and the potential for windless periods when inversions are likely to occur. Fog in the Puget Sound area occurs most frequently during the autumn and early winter months.

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Children's is situated on a hillside where winds would tend to disperse fog that would be more likely to form at lower elevations. Depending upon specific wind conditions, the area's topography could serve to either redirect and intensify winds or to disperse winds. The structures probably would influence ground layer winds at the location of the Kitchen Garden helistop site or outside the Children's Emergency Room. Winds at the Intramural Field site are less influenced by topography, structures and vegetation than any other site. Airlift Northwest pilots have indicated that the overall weather conditions are not markedly different among the helistop locations.

8. The area that would be paved for the helipad and walkway would be approximately 2,070 square feet. Surrounding the paved landing area would be grass that would minimize the amount of rainfall that would run off the helistop. Consequently, water was determined through the scoping process to be an element that would have no significant impact.

9. See response to Comment #8, above. The party responsible for any flooding would be liable.

10. DCLU would require that the applicant comply with City regulations regarding stormwater runoff controls. No other mitigation is necessary. See response to Comment #8, above.

11. In April 1986 in order to minimize the possibility of an accident rupturing the oxygen tank, it was moved from its former potentially vulnerable position to a more protected, enclosed area inside the hospital building, approximately 180 feet from the proposed helistop. An intense flame would result from a fire fueled by oxygen.

12. The issue of noise is discussed in the Noise section of the EIS. DCLU has determined that a separate section on Aesthetics is not warranted. People experiencing approaching helicopters may be reminded of wartime helicopter operations. This could have an effect on some veterans or other individuals. The helicopter operations could create anxiety or disturb sleep for some individuals. Please refer to the response to Laurelhurst Community Club's Comment #5.

13. On page 86 of the Draft EIS and in the Noise section of the Final EIS, there is a discussion of the potential impact of noise on the patient population. Please refer to the response to your Comment #258, below.

14. As described on page 49 of the Draft EIS and in Chapter III of the Final EIS, the helistop's landing lights would be "glow" lamps rather than direct beam lamps. These landing lights would be turned on only for landings. In addition, obstruction lights would mark the southern corners of the parking garage and the Medical Pavilion and main building penthouses, and a strobe helipad location beacon would be placed on the top of the main medical building. The strobe light would

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emit 30 watt-seconds of light per flash (which is 2.5 times as bright as a typical anti-collision light) and would flash 20 times per minute. The strobe would be visible to pilots within 5-10 miles of the helistop (depending on weather conditions) and would be turned on by the ground crew when a helicopter was approaching. Lighting would not project directly to the adjacent neighborhood and, therefore, the lighting would not affect sleep patterns. In addition there would be a glide slope indicator light that would project different colored light to the north as a means for indicating appropriate altitude during field approach. Consequently, there would be no significant impact.

15. The Kitchen Garden helistop site is sufficiently close to the entrance of the Children's Emergency Room that the patient can be easily and quickly wheeled by gurney directly into the hospital. See also response to your Comment #38, below.

16. A ground crew is composed of both security and medical personnel. The security staff have the responsibility of restricting individuals from entering the landing area and would consist of the regular on-staff security personnel. The ground crew medical staff, usually comprised of 24-hour Emergency Room or ICU staff, assists the on-board medical team in unloading the patient from the aircraft, placing the patient on the gurney and wheeling the gurney into the hospital.

17. The helistop would be equipped with fire suppression equipment. Children's staff will be trained in the proper use of the necessary fire suppression equipment for the possible types of accidents and the appropriate means for notifying the Fire Department.

    Children's staff have been trained to immediately notify the fire department in the event of a fire. Staff also are trained in the use of fire extinguishers. If the helistop is constructed with a foam fire suppression system, staff would be trained in its use.

    The Seattle Fire Department, Police Department and Medic Units would respond to any accident that were to occur. A fire alarm at Children's would be answered by Engines #38 (5503 33rd Avenue N.E.), #17 (1020 N.E. 50th Street), #40 (9401 35th Avenue N.E.), and #10 (13th and Pine); and Battalion Chiefs #6 (1020 N.E. 50th Street) and #1 (810 South Dearborn Street). If a fire at the hospital were confirmed, an expanded response company--either Engine #9 or #6--would also respond. Initial response time would be less than five minutes.

    Normal training of Seattle Fire Department personnel would be sufficient to adequately respond to a fire from a helicopter accident. The Fire Department and Medic Units would respond promptly to an accident that occurs at the school or any other location.

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The Seattle Fire Department may be able to instruct neighborhood residents and school personnel in any special procedures needed to respond to an aircraft-related emergency or accident.

Representatives of Airlift Northwest, if an Airlift Northwest helicopter is involved, and the FAA also would respond to investigate the cause of any accident.

18. Both noise and safety impacts on schools are addressed in the EIS. The principal means for reducing the risk of accident and noise impacts is to reduce the number of flight operations in the vicinity of the schools. This has been done through the revision of the alternatives to create a new Preferred Alternative that would not involve the pickup of the medical transport team at Children's and would land the majority of Children's-destined patients at either Harborview or the Intramural Field helistops. Direct overflights of the Laurelhurst Elementary School or Villa Academy would not occur with use of the primary or secondary flight paths into or out of the Kitchen Garden helistop, and would occur only if Airlift Northwest pilots needed to deviate from the designated flight paths. See page 86 of the Draft EIS and Chapter IV of the Final EIS for a discussion of noise impacts at the Laurelhurst Elementary School. See also responses to Laurelhurst School PTA Board Comments #1 and 2.

19. Direct overflights of Laurelhurst Park would be rare, and would occur only if helicopter pilots needed to deviate from the designated flight paths.

20. See response to Comment #17, above.

21. See response to Comment #18, above. Helicopter operations could be heard at the park. Helicopter noise would be less than that experienced at the five receptor locations as described in the Noise section of the Draft EIS and Final EIS. It is expected that these operations would have negligible, if any, effects on its use.

22. The Distribution List for the Children's Hospital and Medical Center Draft EIS inadvertently omitted the area community councils. After this was brought to the City's attention at the hearing on the Draft EIS, copies of the document were provided to community councils and the 30-day comment period was extended by 15 days.

23. The purpose of the EIS is not to evaluate the objectives of the Proposed Action but rather the environmental impacts of the Proposed Action and its alternatives. Children's does not currently advertise, nor does it plan to use Airlift Northwest or helicopter transport capabilities, in a marketing role. Airlift Northwest does meet with representatives of community hospitals, fire districts, and medic units in the region to explain the services and capabilities Airlift offers,

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and to explain operations procedures. This function allows Airlift Northwest to explain when helicopter use is appropriate and how best to prepare for Airlift Northwest helicopter operations, once requested. See also the response to Laurelhurst Community Club Comment #3.

24. Airlift Northwest pilots identified three trees that affected the safety of landing and departing from the existing landing area ouside the entrance to the Children's Emergency Room. These three trees, the cypress near the foot of the driveway and two Norway spruce west of the cypress, have been removed. The removal was performed in order to increase the safety of landing outside the Children's Emergency Room entrance. The Final EIS indicates other trees warrant removal if the Kitchen Garden Helistop is constructed and used.

25. A copy of the current FAA Form 7480 is on file at DCLU.

26. The projected number of flights presented in the Draft EIS was determined by the medical and administrative staff of Children's Hospital and Medical Center, and of Airlift Northwest. The numbers are based on assumptions that relate to historic Airlift operations, population projections and professional judgement. Dr. Nicola has indicated that, "It is difficult to derive reliable projections of total numbers of patients who would be transported by helicopter to Children's. Given that a medical breakthrough, catastrophe, addition of competing helicopter service, increasing specialization, or some other situation might change their projection, Children's estimates that by 1990 the number of children transported by helicopter for admission to Children's in any given month may be 15 to 20"(sic) (Nicola, 1987). This projection is consistent with the average number of transports that were actually flown (see the Final EIS).

    Figure 3 in the Final EIS illustrates the monthly number of Children's-destined patients transported by Airlift Northwest from May 1985 through December 1990. This figure illustrates that there is considerable variation in month-to-month transports; however, the average number of transports has been relatively stable at between 15 and 18 per month since October 1987.

    In 1988 and 1991, Children's commissioned a projection of patient transports. By considering (affected) County population cohorts, referral patterns, and Airlift Northwest utilization data by County, it was determined that by 1990 approximately 15 patients per month would be transported by helicopter. The projection for 1990 was comparable to the actual number of transports in calendar year 1990, which was 193 (see Table 3 in Volume I). Thus, it would appear that Dr. Nicola's estimate of 15-20 Children's-destined helicopter transports per month is a reasonable projection.

    Projections through 1995 also were made with an average of approximately 18 Airlift Northwest transports in 1995. When MAST and MedFlight transports are included, it is estimated that there would be

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an average of 15-21 transports per month in 1995. It was assumed that changes in projections could occur if situations, such as those identified by Dr. Nicola, were to materialize.

27. Airlift Northwest is a cooperative venture among Children's Hospital and Medical Center, Harborview Medical Center, Providence Medical Center and University of Washington Medical Center to provide fixed-wing and rotary-wing air ambulance services to the Pacific Northwest. St. Joseph's Hospital of Tacoma and Virginia Mason and Swedish Hospital of Seattle became Associate Members of Airlift in late 1987, early 1990, and early 1991, respectively.

    This cooperative venture, which is formalized through the Inter-Hospital Agreement, establishes Harborview Medical Center as the lead administrative agency for the four founding hospitals. Harborview, in turn, has contracted with Seattle Jet Center to provide fixed-wing aircraft, pilots, mechanics and fuel for Airlift Northwest, and with Hospital AirTransport to provide the rotary-wing aircraft, pilots and mechanics portion of the Airlift Northwest contract.

    Airlift Northwest is based at Harborview Medical Center and Boeing Field.

28. Hospital AirTransport requires its pilots to meet strict standards before they are hired and to continue to meet strict standards throughout their employment with Hospital AirTransport. Please refer to Appendix B, which identifies the consistency of Airlift Northwest with AAMS and NEMSPA guidelines regarding pilot standards.

29. Hospital AirTransport is required by its contract with Airlift Northwest to carry a $20 million liability insurance policy. The provider of this insurance coverage is not germane to the consideration of the environmental effects of the Proposed Action or alternatives.

    The amount of liability coverage was determined through consultation with the University of Washington Risk Management Department.

30. See response to Comment #27, above.

31. During the month of August 1986, five patients were transported by helicopter directly to the Children's Hospital campus. These five patients were determined by the attending medical personnel to be in a critical, life-threatening condition that warranted their direct transport to the advance care available at Children's. Eleven patients were transported by helicopter to Harborview and then ground transported to Children's, and one other patient landed at the Intramural Field and then was transported by ambulance to Children's. The twelve patients that did not land at the Children's campus were in a life-threatening condition; however, the attending medical transport

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team determined that their outcome would not be dependent on their being transported directly to Children's. Yet, for these remaining patients, the referring medical personnel determined that the patients well-being would be better served by being transported to Harborview via helicopter then on to Children's, rather than by an alternate means of transportation. For a description of origin of transported patients (in 1988), please refer to Appendix D.

32. Airlift Northwest medical transport teams apply their professional judgement to determine whether patients should be transported directly to Children's. Dr. Nicola reviewed transports directly to Children's as well as 30 randomly selected cases flown by helicopter to Harborview for ground transport to Children's and determined "that all cases met the State's proposed criteria for use of air transport but were less severe than those flown directly to the hospital. Referring physicians and Children's appear to be sorting patients appropriately" (Nicola, 1987). In light of this determination, descriptions of the presenting conditions of the August 1986 Children's-destined transports have not been provided.

33. Under the Proposed Action that is presented in the Draft and Final EIS, all Children's-destined patients being transported by helicopter would land at the Kitchen Garden helistop.

    Under the new alternative (the Preferred Alternative), only those patients that are in the most critical, life-threatening condition would land at the Kitchen Garden helistop. All other patients would land at either the University of Washington Intramural Field, if allowed, or at Harborview. The patient then would be transported to Children's via ground ambulance.

34. Fifteen to 20 patient transports per month is an average figure. Dr. Nicola reviewed the 17 Airlift Northwest transports of August 1986, when preparing his updated report (Appendix A). See response to Comment #26, above.

35. It is not possible to predict what other vendors would use the helistop and at what frequency in the future. Other ambulance services that operate in the area include Med-Flight out of St. Joseph's Hospital in Bellingham, which flies an MBB-105; MAST, which flies a Huey UH-1; the Coast Guard, which used the HH-52A (civilian equivalent is the F-62) until May 1988, and is currently using the HH-65A (civilian equivalent is the Aerospeatiale Dauphin); and the Navy, which uses the SH-3D. If historic use is an accurate indicator (there are only two records of helicopters other than Airlift Northwest's Agusta or MAST's UH-1 landing at Children's), then one could say that the transports by other vendors to Children's would be rare.

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The helipad would be painted with the number "12", which indicates a weight limit of 12,000 pounds. This would be able to support the weight of the MAST UH-1, Coast Guard HH-52A and HH-65A, Airlift Northwest Agusta 109, and Med-Flight MBB 105, but not the Navy SH-3D (see Table 4 in the Final EIS for the specifications of the helicopters).

The Kitchen Garden Helistop, as proposed, provides clearance of 96.4 feet, which provides for a main rotor diameter of 36.1 feet according to the FAA Design Criteria, which recommends a takeoff and landing area at least twice the rotor diameter, plus an additional one-third rotor diameter of clearance on each side to any obstruction that could be struck by the tail rotor. This main rotor diameter allowance is less than that of the MAST, Coast Guard and Navy helicopters identified that could use the helistop; however, it would accommodate the Agusta 109 Mark II and the Med-Flight MBB 105.

The design helicopter, Agusta 109 Mark II requires clearance of two times its rotor diameter of 36.1 feet (or 72.2 feet) plus 12 feet around the perimeter, which corresponds to a diameter of 96.2 feet. The MBB 105 (used by Med-Flight) requires clearance of 64.6 feet (two times its rotor diameter of 32.3 feet) plus 10.8 feet, which corresponds to a diameter of 86.2 feet.

Children's would inform these other vendors of the protocols (flight paths, sorting of patients, communication guidelines, etc.) for landing at Children's and/or for landing Children's-destined patients at Harborview and the Intramural Field, if permitted. See response to Comment #36.

Based on the available data as presented in the Final EIS, the overall statistical risk of accident would not be different for other commercial vendors; although military air ambulances do have less statistical risk of accident compared to commercial EMS vendors. The pilots of other air ambulance services could be less familiar and experienced with landing at the Children's helistop, the Harborview helistop, the Intramural Field helistop, or the University Medical Center rooftop helistop, if permitted. Such a lack of experience in landing at these helistops could be either a liability (less familiarity) or a benefit (more caution). The military aircraft do not have liability insurance. Med-Flight would not divulge any details regarding their helicopter liability insurance.

36. MAST, Med-Flight, Coast Guard, and Navy aircraft would be requested to continue to land at the Intramural Field or at Harborview. Therefore, their use of the Children's Helistop would be infrequent and limited to the most critical life threatening situations.

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37. For the majority of patients flown to Children's, the time differential between landing at the University of Washington Intramural Field and landing at the Children's Emergency Room would not be critical. In cases of the most critical and/or rapidly destabilizing patients, however, it is the professional opinion of Dr. Neff, Medical Director of Children's Hospital and Medical Center, that the delay resulting from landing at the Intramural Field and transporting the patient from there to Children's via ambulance could result in suffering, the need for prolonged treatment, or even death. Dr. Nicola has concurred that "there are hospital transfers to Children's where ten minutes are critical to a severely ill infant or youngster; but the actual number of such cases are small" (Nicola, 1987).

The proponents have created a new alternative (the Preferred Alternative) that would land only the most critical patients at Children's, with the majority of patients landing at the Intramural Field, if allowed, or at Harborview.

38. Under the original Proposed Action, there is the least need for patient manipulation and the associated potential risk of patient destabilization. There is less manipulation of the patient if the patient does not have to be loaded into and out of the ambulance.

In landing at the Kitchen Garden site the patient would be exposed during transfer out of the aircraft and onto the gurney, and while in (the revised 142 foot) transit to the Emergency Room. In landing at the Intramural Field site the patient would be exposed during transfer out of the aircraft and onto the gurney, while in transit to the ground ambulance, while loading, and then while unloading at the Emergency Room entrance. It is important to note, however, that the patient typically is wrapped in a plastic blanket and fabric blanket that protects him/her from the elements.

In the event of patient destabilization, stabilization is more easily accomplished in the hospital (Children's) than in the ambulance at the Intramural Field.

39. As discussed on page 83 of the Draft EIS and in Chapter IV of the Final EIS, Airlift flight logs for a period of several months indicated that between 19% and 25% of flights occur during the hours of 10:00 p.m. to 7:00 a.m. It was, therefore assumed for the purpose of the noise analysis that such a distribution of flights would continue to occur.

Table 2 in the Draft EIS indicates that five of 21 (24%) of the patients transported directly to the Children's campus had a takeoff and/or a landing that occurred between the hours of 10:00 p.m. and 7:00 a.m.

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Table 2 of the Draft EIS has been updated and included in the Final EIS as Appendix D. That appendix indicates that 26 of the 141 (18.4%) patients transported directly by Airlift Northwest helicopter to Children's between August 1, 1985 and March 26, 1989 had a takeoff and/or landing during the nighttime hours.

40. Sound levels of ambulance sirens are discussed on page 80 of the Draft EIS and in Chapter IV of the Final EIS. The sirens produce sound levels between 90 and 105 dBA at 50 feet. Maximum helicopter sound levels that occur at the nearest residential receptor locations (Laurelon Terrace and 4720-24 44th N.E.) are calculated to be 84 dBA. Although the sirens may not be used depending upon traffic conditions and are turned off once the ambulance enters the Children's campus, the sirens, if used, could be audible in other neighborhoods adjacent to the ambulance's travel route.

41. Dr. Nicola's worst-case estimate of 20 transports in 1990 is characterized by one flight to pickup the medical transport team at Children's and one flight to deliver the patient for each of the 20 patient transports. Since the 48-minute per transport estimate that Airlift Northwest developed incorporated this return flight, the 15-20 patient transports per month calculation is an appropriate estimate, given the assumed frequency of accidents. An updated accident frequency analysis that is not flight-duration based has been incorporated into Chapter IV of the Final EIS.

42. The figure of 48 minutes used in the Draft EIS represented an average air time for all segments of the transport: from the time the helicopter leaves Boeing Field, through picking up the medical team, then picking up the patient and delivering the patient to the hospital, to returning to base. Airlift flight logs for all patients transported by helicopter to Children's through June 1987 indicates an actual average of 49.8 minutes. (Note that Airlift bares the medical transport teams with the aircraft.) An updated accident frequency analysis that is not flight-duration based has been incorporated into Chapter IV of the Final EIS.

43. The site is not secured by fencing; however, security personnel do restrict access into the area during helicopter operations. Please refer to response to Comment #45, below.

44. The City of Seattle does not assume any liability in the event of an accident at Children's. Please refer to the response to Laurelhurst School PTA Board Comment #7.

45. The current landing procedure is initiated by Airlift notifying the Children's communications center, which alerts the appropriate medical staff (by phone) and security personnel (by page/phone). In order to restrict unauthorized personnel from the landing area for the approximately three-minute period before a landing and until the aircraft rotor stops (typically 2.5 - 3 minutes after a landing),

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hospital personnel lock the Emergency Room door and the side door near the Emergency Room and are stationed at the Emergency Room driveway intersection with Penny Drive, and at the Emergency Room entrance. (During night landings, there is one security person on duty. Rather than stationing this person at the intersection with Penny Drive, a hospital van is used to block access into the emergency room drive.) These personnel are instructed not to allow non-necessary individuals into the vicinity of the landing area. Similarly, during takeoffs, the area is restricted from the time the pilot prepares for takeoff until the helicopter is clear. This procedure has proven to be sufficient to protect the public and Hospital employees. The construction of the helistop with a low chain link security fence, as proposed, would enchance security. The Facilities Director has the overall responsibility for security during landings and takeoffs.

46. The determination that, in the event of an accident that severs the natural gas line on the Children's campus, the gas would flare until shut off (rather than cause an explosion) was made originally by Joe Jainga, a supervisor with the Washington Natural Gas Company. Mr. Jainga's letter is on file at DCLU. It should be noted that Children's staff have received training and equipment for shutting off gas service.

    Doug Damm of Washington Natural Gas' Safety Division stated that a helicopter accident involving the meter house most likely would cause a gas leak that would in turn ignite and result in a flare. If the leak occurred beyond the pressure regulator where the pressure is one pound/square inch, there would be a small fire ball and a flare limited to the immediate vicinity. If the gas line were broken before the pressure regulator where the pressure is 60 pounds/square inch, a flare 40 to 60 feet high could be ignited.

    Captain W.J. Donohoe of the Seattle Fire Marshall's Office was reluctant to speculate as to whether a helicopter accident involving the natural gas meter house would result in a flare or an explosion. He said there were too many variables to predict the likely result of such an accident.

47. Comment acknowledged. There are elements of risk associated with helicopter operations, including motorist distraction and the possibility of a helicopter accident resulting in a vehicular accident. There is an element of risk associated with an overflight of populated areas by any type of aircraft.

48. Comment acknowledged.

49. Comment acknowledged. As noted by Dr. Nicola (see Appendix A), the use of the helistop could save the lives of some of the patients being transported by helicopter to Children's. Most, if not all, hospitals in the State of Washington do face life-threatening emergencies.

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It is possible that the City Council could allow helistops only at those Seattle medical institutions that offer life-saving specialty care that is not available at other local hospitals.

50. The patients transported by Airlift Northwest are being taken to the receiving hospital that has been designated by the referring physician. It is acknowledged that some of the patients being transported to Children's could have been transported to another hospital that also would have been capable of providing appropriate care to the patients. At the request of referring physicians, Airlift Northwest has transported patients to Mary Bridge Hospital.

    Mary Bridge Hospital in Tacoma offers similar primary care facilities as Children's; in selected services, Mary Bridge offers equivalent secondary and tertiary care capabilities; however, Mary Bridge does not offer the full range of secondary and tertiary services available at Children's. These specialities include cardiac surgery, hemodialysis, treatment of congenital defects and neonatal surgery. See response to Comment #58, below. Mary Bridge PICU with six beds is frequently filled so that potential patients cannot be served.

    Also, see response to Comment #56, below.

51. The City has extended the compliance date of the issued notice of violation for landing helicopters at the campus until resolution of the Council Conditional Use Permit process.

    Other hospitals could be subject to the enforcement provisions of the Land Use Code if they are found to be in violation.

52. Comment acknowledged. The PSHSA is no longer an active entity and it does not appear as though the PSHSA proposal(s) will be funded. Please refer to the response to the Montlake Community Club Comment #9.

    The Washington State Medical Association guidelines are designed, in part, to assist referring medical personnel in the determination of when helicopter transport would be appropriate. Although these guidelines would assist in reducing inappropriate use of helicopters, they may not have an effect on the proliferation of helistops. The effect of the guidelines on existing helistops and medical facilities has not been established. The text of the EIS has been revised accordingly. Please refer to Central Seattle Community Council Federation Comment #3.

53. Please refer to the discussion of the Certificate of Need Program in the response to Seattle Department of Community Development Comment #1.

54. As discussed in the response to Comment #52, above, the Washington Medical Association guidelines may reduce the potential for the improper use of helicopter transport services.

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The Conditional Use Permit process does guard against proliferation of helistops in Seattle. The Department of Construction and Land Use and City Council will review Conditional Use Permit applications for helistops from medical institutions, which would need to demonstrate compliance with the criterion that the helistop is needed to save lives. An application-by-application review of medical institution helistops does not preclude the development of a regional plan.

55. The sponsor states that the helistop was proposed in order to make the helicopter transport of critically ill and injured Children's-destined patients as effective as possible. The patient requiring helicopter transport is already in jeopardy; increasing delays in treatment or subjecting the patient to a more difficult transport may aggravate the patient's medical condition. A secured, lit, and solid landing surface close to the location of advanced treatment increases the safety of the transport and reduces the time required to initiate hospital-based care.

    Part of the problems with helicopter landings at the Intramural Field have included there being no attending ambulance when a MAST flight approached; the security gate at the Intramural Field being locked; and an ambulance getting stuck in the mud; and members of the transport team slipping in the mud during the patient transfer. Although notification and confirmation procedures have reduced the potential for the first two situations recurring, the absence of a secured, solid landing surface and solid walkway from the landing area does remain a potential problem.

56. Dr. Nicola states that, "Although there is no formal classification system, by industry standards Children's is a tertiary care center. Based on a self-assessment questionnaire prepared by nearly all Washington hospitals, the State of Washington's Profile of Critical Care Facilities (Second Edition, January 1980) lists Children's as a Level III facility for all services profiled (trauma, burns, cardiac, respiratory, neonatal, and head and spinal). Under the State's classification scheme, Level III generally indicates in-house, 24-hour availability of specialists, specialized facilities, capability to perform specialized surgery and special therapies, and availability of special transport teams. The State's Level III corresponds with the generally accepted definition of tertiary care" (Nicola, 1987). Self-designated Level III services offered by hospitals in King, Snohomish, Pierce, Pacific, Lewis, Gray's Harbor, Kitsap, Jefferson, Clallam, Skagit, Island and Whatcom Counties include the following:

    Neonatal: Children's, University Medical Center, Madigan Army Medical Center, Tacoma General Hospital
    General Trauma: Children's, Harborview Medical Center, Virginia Mason, St. Joseph Hospital and Health Care Center, Tacoma General Hospital

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Head and Spinal: Children's, General Hospital of Everett, Harborview Medical Center, Northwest Hospital, Overlake Memorial, Providence Medical Center, Providence (Everett), University, Valley General (Renton), Virginia Mason, St. Joseph Hospital and Health Care Center, Tacoma General Hospital

Burns: Children's, Harborview Medical Center, St. Joseph Hospital and Health Care Center, St. Peter Hospital

Cardiac: Children's, Providence Medical Center, Swedish, University, Virginia Mason, St. Joseph Hospital and Health Care Center, Tacoma General Hospital

Respiratory: Children's, Burien Medical, Evergreen General, General Hospital of Everett, Group Health Eastside, Harborview Medical Center, Highline Community, Northgate General, Northwest, Overlake, Providence Medical Center, Providence (Everett), Riverton General, Stevens Memorial, Swedish, U.S. Public Health, University, Virginia Mason, St. Joseph's Hospital (Bellingham), Good Samaritan, Puget Sound General Hospital, St. Joseph Hospital and Health Care Center, Tacoma General Hospital, Mary Bridge

Dr. Nicola indicates that pediatric and/or neonatal intensive care unit beds are located at Children's as well as University of Washington Medical Center, Tacoma General Hospital, Madigan Army Medical Center and Swedish Hospital.

57. It is acknowledged that some of the cases designated unique by Blue Cross could have been treated by other medical institutions. Some cases requiring specialty treatment could be served by other centers that administer care to children. Please refer to the response to your Comment #58.

58. The following statement by Dr. Neff, Children's Medical Director, describes distinctions between Mary Bridge and Children's Hospital.

> "There are many similarities between Mary Bridge and Children's Hospital. Both are specialty pediatric centers and both have excellent staff. Children's Hospital and Medical Center in Seattle, however, is a larger and more comprehensive facility. There are more full-time children's specialists at CHMC than at Mary Bridge. There also are some groups of critical surgical illnesses that are treated at Children's but not at Mary Bridge because Children's has teams of pediatric surgical specialists, anesthesiologists, intensivists and other pediatric specialists who cover the services 24 hours per day. These illnesses include most complicated congenital heart disease and children born with complicated newborn surgical problems. These include omphalocele and gastroschisis (children born with intestines extruding from the abdominal cavity), diaphragmatic hernia (children born with intestines in the chest) and tracheo-esophageal fistula (children

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born with a hole between esophagus and trachea and obstruction of esophagus). These are unusual situations that require specialty care of physicians who have treated enough of these problems to maintain their skills. Although infrequent, these children come from hospitals all over the state. These illnesses are emergency, life-threatening conditions. Children's Hospital is the only hospital in the Puget Sound area that provides surgery for these conditions on a regular basis." (Neff, 1988)

59. A complete inventory of neonatal and pediatric services available at hospitals in Idaho, Alaska and Montana is beyond the scope of this EIS.

60. Both the December 1985 and March 1987 reports by Dr. Nicola to the Department of Construction and Land Use cite studies that examined pediatric air transport. Dr. Nicola also examined cases of neonates and adolescents transported to Children's. These included non-trauma conditions (see Appendix A). Refer to responses to your Comments #62 and 63, below.

61. In March 1987 Dr. Nicola did update his report, which, in part, included a retrospective review of appropriateness of patients being transported by Airlift Northwest helicopter to the hospital. The updated report is attached as Appendix A to this Final EIS.

62. Children's does treat some patients who are referred to by physicians as "trauma" patients. Although Children's met the definition of being capable of providing trauma treatment, as contained in the Critical Care Hospital Facilities questionnaire (see response to your Comment #56, above), Children's has no current plans to develop a regional pediatric trauma or burn facility that would compete with Harborview. See response to your Comment #63, below.

    Trauma and burn patients who have received treatment at the designated trauma and burn center, Harborview Medical Center, may be transferred to Children's for recovery. There is no agreement between Harborview Medical Center and Children's regarding which hospital receives burn and trauma patients. These patients typically are treated at Harborview because of their specialized staff and facilities. Those trauma or burn patients whose medical conditions are serious enough to warrant helicopter transport for advance care would be transported to Harborview.

    The consortium has no agreements regarding the division of patients.

63. As discussed in the response to Comment #56, above, care facilities self-designate their capability classification, based on criteria provided by the State.

    Children's, Harborview and Virginia Mason are three Seattle-based medical institutions that, based on the criteria, in 1980 designated themselves as capable of treating general trauma patients. Children's

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operating rooms are ready immediately or within 30-45 minutes depending upon the time of day or night (see response to Comment #72) while Harborview is 24-hour operating room ready. Harborview also maintains a neurosurgeon on-campus all the time and, therefore, is always capable of treating patients requiring emergency surgical intervention. In order to become a recognized trauma center, Children's would need to acquire these capabilities.

64. The decision to transport a patient via helicopter is made by the referring physician and is based on that physician's judgment regarding the gravity of the patient's condition. Airlift Northwest is requested to transport the patient to a tertiary care facility for treatment that is not available at the referring hospital. Once activated, Airlift Northwest assumes medical responsibility for stabilizing and transporting the patient.

65. This sentence was deleted from Dr. Nicola's updated report.

    It is acknowledged that if time is not a factor or if more advanced level of care is not a factor, then most physicians prefer to transport their patients via ground rather than helicopter. The transport of patients by helicopter is performed for that (very small) population of patients whose treatment at a tertiary care center must commence earlier than otherwise would occur if the patient were transported by ground.

    The medical transport team uses a doppler to monitor the heart and (potentially) the patient's lungs. Just as in ambulance transports, the helicopter medical team watches the patient's breathing.

66. Paramedics certified to practice in King and surrounding counties have graduated from year-long training programs that are characterized by the acquisition of clinical information and supervised practice on critically ill patients. Paramedics deal almost entirely with life-threatening medical emergencies. The care delivered in those life-threatening medical emergencies is under medical control provided by physicians at base hospitals in radio contact with the paramedics. Afterwards the emergency supervising physicians review the entire medical response.

    The appropriate disposition of a patient to a prepared medical facility is an important aspect of the practice of field emergency medicine. This disposition is reached concurrently by the paramedic and his/her supervising physician. Once a decision to transport by helicopter is reached with medical control, the paramedics contact their dispatch center to request activation of the helicopter via Airlift Northwest dispatch (see response to Comment #76, below).

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The King County EMS Division has established guidelines for assisting paramedics in the South King County area to decide whether to transport by ground or by helicopter. These guidelines are cited on page 12 of the Draft EIS and in Chapter II of the Final EIS. The Washington State Medical Association's EMS Standards Committee also has developed guidelines to assist field medical personnel in determining the appropriate mode of transport (see Dr. Nicola's revised report in Appendix A of this Final EIS).

67. Local fire departments and paramedic units throughout the Puget Sound area have received instructions on the selection of appropriate landing zones. In addition, pre-designated landing zones have been established in many areas of King and surrounding counties. Should a landing zone not be satisfactory, the Airlift Northwest pilot has the authority to alter the landing site.

68. There are approximately 40 physicians and flight nurses who conduct transport missions for Airlift Northwest. The physicians include a number of specialists in areas such as pediatrics, pediatrics/infectious diseases, hematology burn treatment and neonatology. These lead physicians have completed medical school training and are in at least the third year of their residency program. (Medical doctors have a three-year residency; surgical doctors are required to complete five or more years of residency.) Some of the lead physicians are up to the eighth year of their residency. Other physicians are fellows who are in training beyond their residency, or are attending physicians. Another lead physician is an intensivist, and others are in training to be intensivists. Some of the lead physicians are Board-certified.

69. Comment acknowledged. It should be noted that Dr. Nicola's next sentence is that "Once stable, a patient can be transported much more safely" (Nicola, 1987).

70. Although Dr. Nicola's December 4, 1985, report did call for "specific criteria for use," a subsequent conversation among Dr. Nicola, Steve Call (the Director of the King County EMS Division) and the EIS author on May 13, 1986, revealed that Dr. Nicola believed that the concept of applying criteria would potentially dilute the authority of the attending medical team and that, furthermore, the combination of presenting conditions could be so complex as not to be able to be fully and appropriately covered by the criteria.

    Dr. Nicola's updated (March 25, 1987) report to DCLU states "I recommend that the emergency transport of patients by helicopter be a planned part of a complete EMS transportation system, with guidelines for use rather than a hospital-by-hospital provided service." (Emphasis added.) Because no guidelines for use have been implemented, no mechanism for monitoring adherence to them has been developed. As part of the new alternative (Preferred Alternative) presented in the

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Final EIS, a Medical Review Committee has been proposed. Such a committee could examine the relationship of the transported patients to the guidelines that have been generated by the Washington State Medical Association.

71. The Patient Distribution Guide was last updated in 1978. Copies of this guide are available from the King County Emergency Medical Services Division.

72. Children's operating rooms can be made available immediately during the hours of 6:30 a.m. to 7:00 p.m. From 7:00 p.m. to 11:00 p.m., an operating room generally can be made available within minutes. After 11:00 p.m. it takes approximately 45 minutes to ready an operating room.

The Emergency Room at Children's is a Level III facility; Harborview is the only other Level III facility in Seattle (see definition of Level III facility in response to Comment #56, above). The Children's Emergency Room is staffed by an attending physician 24 hours a day. From 8:00 a.m. to 5:00 p.m., the attending physician is joined by a senior resident. During the remainder of the day, family practice, emergency medical, pediatric and other specialty residents are in the Emergency Room. Specialists from all disciplines are on-call 24 hours a day. The Children's Emergency Room staff also includes two registered nurses (RNs) from 7:30 a.m. to 11:00 a.m.; three RNs from 11:00 a.m. to 3:00 p.m.; four RNs from 3:00 p.m. to 11:30 p.m.; two RNs from 11:30 p.m. to 3:00 a.m.; and one RN from 3:00 a.m. until 7:30 a.m. In addition, there are interns and medical trainees at varying periods throughout the day and night.

Children's has two Intensive Care Units (ICUs): an infant (IICU) unit that handles newborns and infants up to the age of six months, and a pediatric (PICU) unit. Both are facilities with a house staff of doctors, nurses, and respiratory therapists. The IICU house staff always has one attending, legally responsible physician and from two to four senior level residents in pediatrics or physicians in training to be pediatricians. There is always a 1:2 ratio of nurses to patients, except in the case of air medical patients, for whom at least a 1:1 ratio and sometimes even a 2:1 ratio during the most critical early hours is maintained. At least one respiratory therapist is in or near the IICU unit at all times.

The PICU facility is staffed in an identical fashion to IICU in terms of nurses and respiratory therapists. However, the PICU house staff has two attending physicians at all times, each of whom is doubly or triply trained in pediatrics, critical care medicine, and/or pediatric anesthesiology.

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73. In 1986 a total of 183 patients were transported to Children's through referral by King County Medic Units (South King County, Bellevue FD, Shoreline FD, and Evergreen). Thirteen of these transports were by helicopter (Call, 1987). The increase is attributable to the Airlift Northwest helicopter service beginning operations in April 1985.

74. The geographic area affected by these distribution guidelines is primarily the southeastern portion of the County where ground ambulance transports can take 40 to 45 minutes. Steve Call, Manager of the King County EMS Division, has indicated that the County deliberately did not establish geographic boundaries, as distance is only one variable that may affect the appropriateness of a decision to transport by helicopter. Other non-medical variables include time-of-day, traffic and weather.

75. According to Steve Call, "The statement that "under no circumstances should there be a delay at the scene waiting for a ride from the helicopter" is intended to reinforce the general policy that there should be no unnecessary delays in transporting patients to the appropriate medical facility. Since air transport is in most circumstances used to move patients to tertiary care facilities in Seattle, paramedic personnel are expected to exercise judgment regarding total transport time to such a facility. As a result, waiting for air transport may be appropriate in some instances if total transport time is still less than ground transport to the same facility" (Call, 1987).

76. The base hospital physician approves/disapproves the paramedic's recommendation to go either to the base hospital or to another hospital, and also approves the mode of transport. (See also response to Comment #66, above.)

77. Requests for Airlift Northwest are routed through its dispatch center. Once the request is made, the following steps are undertaken for inter-hospital transports:

    1. On-call Airlift Northwest Administrator is paged to determine the team configuration for the flight.
    2. Pilots and medical team are paged. The medical team is provided with patient information.
    3. Pilot notifies dispatch center of the approximate flight transit time at time of lift-off.
    4. Dispatch center calls referring facility with estimated time of arrival.
    5. Dispatch center arranges ground transportation at referral end, if necessary.
    6. Dispatch center calls receiving facility with estimated time of patient arrival and arranges ground transportation at receiving end, if necessary.

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The response time to complete the above steps is approximately two to three minutes. Dispatching and aircraft preparation averages 5-10 minutes, but can be as long as 27 minutes if an isolette or specialized transport team is required. For pre-hospital transports steps 1 and 2 are different: the medical transport team is fixed and the Airlift Administrator on-call is advised of the mission.

78. According to Steve Call "The rationale for directing paramedics not to ask for comparative estimated time of arrival (ETA) for MAST and Airlift Northwest is clear when this protocol is considered in the context of the EMS policy memorandum dated February 12, 1986. As stated in the second paragraph, "The underlying principle that should be considered when ordering air transportation is not so much that the patient gets to a hospital fast, but that it is a rapid method of getting medical help to the patient. Therefore, the primary concern for EMS is to focus on patient care and utilizing the type of service and transport that is most appropriate for the patient." In other words, the quickest air transport service (shortest ETA) is not always the most appropriate. Airlift Northwest offers a higher level of care with their medical transport teams than does MAST. However, if the first service of choice is not available, then the second helicopter service can be requested" (Call, 1987).

79. Please see the response to Comment #50, above.

80. The list of patients in Table 2 of the Draft EIS (updated and included as Appendix D of the Final EIS) is a list of all patients who were transported directly to Children's by Airlift Northwest helicopter between August 1, 1985, and June 10, 1986. Patients who landed at the University Intramural Field or Harborview and were subsequently transported to Children's by ground ambulance were not included in this table. The City of Seattle has determined that an "expanded Table 2," which would include information on all patients transported by helicopter to Children's, is not warranted.

"Attachment A" refers to Dr. Nicola's original report, which examined Airlift Northwest's fixed-wing and rotary wing transports to Children's during the period from July 1, 1984 to June 30, 1985. None of the patients identified in Table 2 of the Draft EIS would be expected to be incorporated into the data cited in Dr. Nicola's original report.

81. The decision regarding to which hospital a patient is transported is made by the referring physician. The objective of the transport is to take the patient to the hospital that offers the most appropriate care as determined by the referring physician. Variables that affect that decision include the type and severity of the illness/injury, the distances to various hospitals from the patient's location, weather, and the types of care available at the various hospitals. It is conceivable that the patients mentioned in the referenced paragraph could go to Children's or to other hospitals in the area.

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If a trauma patient is transported first to Harborview, it cannot be assumed that Harborview is where the surgery would be performed.

82. The isolette may or may not be opened in the ambulance depending upon the specific weather conditions. Neonates are extremely vulnerable to temperature extremes and dramatic changes in temperature. Any ambient temperature--whether in the ambulance or outside--that is markedly below the isolette temperature of approximately 91 degrees, has the potential of causing hypothermia.

83. This table, which has been revised in the Final EIS, is included to illustrate to the reader the amount of time that can be saved when transporting a patient via helicopter rather than by ground ambulance. As background information, it is designed to provide the reader with an understanding of the issue of reduced patient transport time, which is one of the objectives of the Proposed Action.

It should be noted that average transport time from the helicopter landing at the Intramural Field to the Emergency Room entrance is ten minutes, with a minimum of seven minutes and a maximum of 20 minutes. Actual time could be less or more than that (see Figure 11 in Chapter III of the Final EIS).

Not all patients could be served at Mary Bridge. See response to your Comment #58, above.

84. Flight time from Enumclaw to Mary Bridge is approximately ten minutes; to Seattle it is approximately 15 minutes. See response to Comment #83, above.

85. The following physicians provided Dr. Nicola with factual information about their facilities:

Robert Scherz, M.D., President, Medical Affairs, Mary Bridge Children's Health Center;
John Coombs, M.D., Vice President, Medical Affairs, Tacoma General Hospital;
John Mulligan, M.D., NICU, Mary Bridge Children's Health Center;
John Neff, M.D., Medical Director, Children's Hospital and Medical Center.

In his letter of October 24, 1985, Dr. Lothar Pinkers provided information about a number of helistop-related issues to Dr. Nicola. Dr. Nicola also spoke with a number of other physicians about the medical need for a helistop at Children's; these physicians requested anonymity (Call, 1987).

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86. Please refer to response to Comments #60 and #61, above.

87. Please refer to the response to Montlake Community Club Comment #14. As part of the literature search that was conducted for Dr. Nicola's updated report, no journal articles or other source material were identified that definitively concluded that helicopter transports may be harmful to certain patient populations. Some of the risks that have been identified include exposure to high concentrations of carbon monoxide (Poultan, 1987), and concerns experienced regarding the helicopter transport of high risk infants and neonates (Mattox, 1986).

88. Dr. Nicola's findings are based, in part, on a review of medical records of actual transports. Please refer to Dr. Nicola's updated report, which has been appended to this document (Appendix A). Also please refer to projections prepared for Children's, as presented in Appendix E.

89. An analysis of the impacts of patients being transported to other facilities that may or may not offer appropriate services for treating the types and magnitudes of the illnesses and injuries of the patients being transported by Airlift Northwest is outside the scope of Dr. Nicola's report.

90. It is not possible to predict future plans for either the MAST program or other vendors that might occasionally use the helistop. The dimensions, weight and specifications of the Blackhawk helicopter are provided in Table 4 in Chapter II of the Final EIS.

91. MAST helicopters would continued to be encouraged to land at the Intramural Field or Harborview helistops.

92. MAST operates its program under the provisions of Title 10 U.S.C., 2635, (Section 814, Public Law 93-115), which stipulates, in part, that MAST will not unreasonably compete with private air ambulance services. A Letter of Agreement between Civilian MAST and Airlift Northwest formalizes this understanding.

Between May 1985, and December 31, 1990, there were a total of 77 MAST transports of Children's-destined patients. This figure compares to 912 Airlift Northwest Children's-destined helicopter transports during the same period.

The sponsor contends that Airlift Northwest offers superior in-flight medical care (compare for example, superior flight physician training as cited in response to Comment #68 v. description of MAST personnel medical capabilities in Chapter II of Final EIS), faster transports (the Agusta can cruise at 180 m.p.h. v. MAST's UH-1 cruising speed of 52 m.p.h.), greater availability (because MAST gives precedence to

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military transfers over civilian transfers) and less vibration. Consequently, Airlift Northwest's service provides a preferred mode of transport for certain critical helicopter transports.

93. According to the late Dr. Jay Kranz, former chairman of the MAST Coordinating Committee, there have never been any "bad outcomes" from landing patients at the Intramural Field site. On one occasion, in the winter of 1986, the MAST pilot found it necessary to land at the Children's campus.

94. At the direction of the Army, MAST will continue to perform civilian search and rescue missions and to transport military personnel and their dependents. As is the case currently, it may be expected that if MAST receives a call to which no private vendor is able to answer, MAST will respond. See also response to Montlake Community Club Comment #10.

95. A Letter of Agreement between Civilian MAST and Airlift Northwest is on file at DCLU.

96. A copy of the contract is on file at DCLU.

97. Please see response to Comments #27 and 29, above.

98. Please see response to Comment #96, above.

99. Hospital AirTransport has agreed to supply Airlift Northwest with an Agusta 109 identical to the two aircraft (one full-time and one part-time, which will be available full-time in May 1990) for use as a back-up rotary wing aircraft. This backup helicopter is available when one of the dedicated rotary wing aircraft is unavailable during long periods of maintenance. The medical equipment, including the isolettes, is standard and interchangeable among the aircraft.

100. One hundred forty-seven gallons of fuel weigh approximately 984 pounds. Airlift pilots typically fly with fuel tanks that are half full, and will fill up for longer missions. The aircraft used for noise tests had approximately 900 pounds of fuel on board when the noise test was conducted. As shown in the comparison below, the typical Airlift Northwest helicopter transporting a patient and landing at Children's would be lighter than the aircraft used in the noise test.

Test Helicopter Base weight (includes pilot)	4,600 lbs.
Fuel	900 lbs.
Flight Nurse	130 lbs.
TOTAL WEIGHT	5,630 lbs.

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Airlift Northwest Helicopter Base weight (includes pilot)	4,600 lbs.
Fuel	500 lbs.
Flight Physician and Nurse	300 lbs.
Isolette	160 lbs.
TOTAL WEIGHT	5,560 lbs.

101. Airlift Northwest made no helicopter transports directly to Children's during May, June, and July 1985. The list of patients shown in Table 2 of the Draft EIS represents all Airlift Northwest transports directly to the Children's Emergency Room entrance through June 10, 1986. The remainder of the patients being transported by Airlift Northwest helicopter landed either at Harborview or the Intramural Field and were transferred into an ambulance and then driven to the hospital.

    Other helicopter transports directly to Children's during that time include two transports by MAST (December 1985) and one transport via the KIRO news helicopter. Please refer to response to Comment #80, as well as the updated information on patient transports by all vendors contained in the Final EIS.

102. See response to Comment #26, above.

103. Table 5 in the Draft EIS (Table 3 in the Final EIS) notes that the number of transports reflects the total number of patient transports and does not reflect all flight segments, which would include "return flights," pickup of the transport team (if necessary), and pickup and delivery of the patient.

104. Each of the alternatives in both the Draft and Final EIS describes the origins and destinations of the flight segments. Under the Preferred Alternative, presented in the Final EIS, there would be no pickup of medical transport crews at Children's--the crew would be picked up at either Harborview Medical Center (the aircraft's operations base) or the Intramural Field, if allowed. "Return flights" have been included in the environmental analysis in both the Draft and Final EIS.

105. Comment acknowledged. Please refer to Comments #26 and #104, above.

106. NEMSPA has prepared guidelines for dimensions of landing zones but not helistops; AAMS and the FAA have prepared guidelines for helipads. The pamphlet LZ, which is circulated by NEMSPA, is designed to assist field personnel in establishing landing zones for helicopters. Landing zones do not have the same amenities (surfaced, lit, fenced) as helistops, consequently their area requirements are greater. Airlift Northwest disseminates LZ information to fire departments, hospitals and medic units to assist them in preparing safe landing zones for Airlift helicopters. A review of AAMS Interim Safety Guidelines indicates that the proposed helistop is consistent with the stated interpretation of the standard that "the helipad must be designed and located so as to facilitate the safe and effective transfer of patients."

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The proposed landing pad at Children's was designed in cooperation with Airlift Northwest personnel familiar with the Agusta 109. The landing pad is large enough to accommodate the Agusta's requirements for maneuvering during landings and departures.

107. FAA Advisory Circular #150/5390-2, Heliport Design, provides general guidelines for helipad design, including dimensions. On page 11 of this circular, the dimensions for private use heliports are recommended as:

> TAKEOFF AND LANDING AREA. A private use heliport should have an unobstructed area available for the takeoff and landing of helicopters.
>
> a. Location. The takeoff and landing area may be located on the ground, on a water surface, a roof of a building, or an elevated platform. The location should provide at least 1/3 rotor diameter, but not less than ten feet (3 m), horizontal clearance between the takeoff and landing area and buildings, fences, parapets, curbs, and objects which could be struck by main or tail rotors.
>
> b. Size. The takeoff and landing area length and width, or diameter, should be at least twice the rotor diameter of the design helicopter.
>
> HELIPADS AND HELIDECKS.
>
> a. Size. The minimum length and width, or diameter, of a helipad or helideck should be at least 1.5 times the design helicopter's undercarriage length or width, whichever is greater.

The Agusta 109 has the overall length, from rotor tip to tail, of approximately 43 feet, and its rotor diameter is 36 feet (Table 4). The unobstructed area of the proposed Children's helistop would be 96.4 feet in diameter. The Agusta 109 would require a takeoff and landing area diameter of 72.2 feet, which is smaller than the unobstructed area that would be provided. The additional one-third rotor diameter horizontal clearance (12 feet) also would be provided on both sides of the takeoff and landing area, for a total of 96.4 feet. The concrete helipad of 40 feet square would be more than 1.5 times the undercarriage length.

The designers of the pad believed that to make the landing area any larger could serve to encourage MAST and other helicopters to land at Children's, rather than at the Intramural Field site. Although based on the FAA criteria (see Table D-1), all of the aircraft except the

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Agusta 109 Mark II (flown by Airlift Northwest) and MBB 105 (flown by Med-Flight) would have rotor diameters that would exceed the obstacle-free area guidelines contained in the FAA circular. Also, see response to Comment #35, above.

108. FAA regulations of helicopters are less restrictive than those of fixed-wing aircraft. For example, certain fixed-wing aircraft have specific flight paths that must be followed in every phase of flight. Helicopters, because of their ability to hover, change direction quickly and change altitude with minimal lateral movement, are far more maneuverable. Moreover, helicopters require a relatively small clear area to land and are able to perform autorotation landings in the event of engine failure.

109. Please see response to Comment #25, above.

110. The flight paths approved by the FAA are established as guidelines for helicopter pilots to follow. The FAA would be responsible for enforcing their use. The Airlift Northwest pilots would adhere to the established paths, but in certain conditions (e.g. extreme medical emergency, unusual weather conditions, conflicting air traffic) could deviate from the flight path. A mechanism could be established to respond to citizens' complaints or flight path deviations.

111. It is not unusual for guidelines rather than criteria to be applied in the medical community. Criteria, by their very nature, are restrictive. The purpose of guidelines is to ensure that the authority of the medical personnel attending to a patient is not restricted. In most cases, when a medical professional is considering the transport of a patient by helicopter the patient is extremely ill or injured. The medical symptoms may be straightforward or the condition may be complex. It would be impossible to develop criteria that would accommodate every situation.

112. Inappropriate use could be defined as the frequent landing of patients that were not facing life-threatening medical emergencies. The proposed Medical Review Committee could formulate criteria for purposes of their review, and recommend corrective action, if during review of transport it appears medically unnecessary landings are occurring. Additional review criteria could be added by the City as conditions for approval to any permit issued for the helistop.

113. Dr. Nicola determined that, "Referring physicians and Children's appear to be sorting patients (among these landing locations) appropriately" (Nicola, 1987). A Medical Review Committee, which is described in Chapter III and Appendix C of the Final EIS, would provide a review of the medical necessity of patient transports by helicopter directly to Children's. See also response to Comments #110, 111, and 112, above.

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114. There have been both formal and informal review of the guidelines. The City of Seattle cannot require a private association to involve the public in its activities. The Department of Social and Health Services (DSHS), however, is considering protocols (see the draft guidelines appended to Dr. Nicola's updated report in Appendix A), which will involve a formal public hearing process after an internal review of the proposed guidelines has been completed. According to Howard Farley of the DSHS, the public hearing on the guidelines has not been scheduled and will not occur until after the proposed guidelines have been circulated at a legislative level.

115. Airlift Northwest is a provider member of the Association of Air Medical Services (AAMS), and Seattle Jet Center and Hospital Air Transport are associate members of AAMS (formerly known as ASHBEAMS).

116. Under the Council Conditional Use Permit process, the City has the ability to impose conditions that it deems necessary and appropriate. Such conditions could include requiring compliance with AAMS guidelines, or allowing only AAMS member transport to Children's. See also response to Comment #119, below.

117. Some of the Airlift Northwest pilots are members of the NEMSPA.

118. The City does not concur with Children's interpretation of WAC 248.18.285 Children's would communicate with other area aeromedical vendors to discuss landing protocols, particularly as they relate to patient condition and the suitability of the Kitchen Garden, Intramural Field, and Harborview helistops. See also response to Comment #112, above.

    The City has authority to issue or deny a Council Conditional Use Permit for the facility. Should the City deny the facility, continued landings at the site would be in violation of the Land Use Code and subject to enforcement action.

119. As noted in the response to Comment #116 above, under the Council Conditional Use Permit process, the City has the ability to impose whatever conditions it deems necessary and appropriate for a project. The EIS identifies mitigating measures that could reduce adverse impacts (see Chapter IV of the Final EIS). Other conditions may be recommended by DCLU or the Hearing Examiner and/or imposed by the City Council.

    The purpose of this EIS document is to provide full disclosure of the expected impacts that the Proposed Action and alternatives would cause, and to identify possible mitigation. Additional conditions that may be placed on any permit issued are not known at this time. The enforcement of the conditions would be in accord with the enforcement provisions of the Land Use Code and with any possible new enforcement and monitoring methods that might result from permit conditions.

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120. Such a conclusion would not be accurate. The FAA has the authority to regulate the flight paths. The City of Seattle also may condition the project, including provisions for regulatory enforcement, which may include revocation of the permit.

121. It is acknowledged that the Washington State Department of Transportation (WSDOT) could conduct studies on aeromedical helicopters and could prepare an "overall plan."

122. Bill Hamilton, WSDOT Aviation Division Assistant Secretary, was contacted during the preparation of the Draft EIS. A determination of whether WSDOT was considered by the Puget Sound Health Systems Agency during development of their proposal on state and regional EMS helicopter transport is outside the scope of this EIS. WSDOT could be involved in the development and/or review of such a plan.

123. The Council Conditional Use permit approval process allows helistops in major institutions zones, provided that the City Council finds that the helistop is needed to save lives and meets the other two criteria.

124. Dr. Nicola concluded in his initial report that "there will be a small number of cases at (both University Medical Center and Children's) where the ability to land at the hospital may be life-saving" (Nicola, 1985). This finding was confirmed in his updated report: "Based on my review of Children's case files, I conclude that the Children's helistop meets the City's land use permit requirement that it save lives" (Nicola, 1987).

    It is not possible to determine which of the remaining patients' lives actually were saved by being transported by helicopter directly to the hospital.

125. In directing the preparation of the Draft EIS, the City's Department of Construction and Land Use (DCLU) determined that an informed and objective medical specialist should assist DCLU in addressing the issue of whether the helistop is needed to save lives. DCLU requested that Dr. Nicola, who, at the time, was the Director of the Seattle-King County Department of Public Health, provide the opinion regarding this first criterion of the Council Conditional Use Permit. Children's provided Dr. Nicola with all medical information that he requested in preparing his initial and updated reports to the Director of DCLU.

126. Representatives of the City of Seattle have visited the Children's campus. Hermia Ip, a DCLU land use specialist, observed the helicopter landing at Children's that was staged for Dr. Nicola. City representatives also have observed helicopter operations at other facilities. Observing a helicopter landing may be an option for the Hearing Examiner and/or City Council prior to making a decision.

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127. An independent survey of residences of the surrounding area is not necessary for DCLU to make a recommendation. The numerous comments received by DCLU have presented many of the experiences and viewpoints of the neighbors.

128. Allen Morrow, Supervisor of the Rate Review Division of the Washington Insurance Commission, has stated that he is unaware of a homeowner's insurance rate or underwriting potential being affected by proximity to airports, airfields, heliports or helipads.

129. Comment acknowledged. Please refer to response to Comment #127, above, and Laurelhurst Community Club Comment #5.

130. Dr. Nicola in his updated report stated that a "review of the case files of the children flown directly to Children's indicates that, with one possible exception, all presented life-threatening conditions that warranted transport right to the doors of the hospital. Review of 30 additional randomly selected cases flown by helicopter to Harborview for ground transport to Children's shows that all cases met the State's proposed criteria for use of air tranport but were less severe than those flown directly to the hospital" (Nicola, 1987).

A Medical Review Committee that would retroactively review the medical appropriateness of patient transports with the helicopter landing at Children's has been proposed by the Sponsor. The Medical Review Committee is described in Chapter III and Appendix C of the Final EIS.

The "Return Flights" cited in "Attachment A" (Attachment 1 in Dr. Nicola's original report) include transports of patients by fixed-wing aircraft as well as rotary wing aircraft.

131. One of the objectives of the helistop is to minimize patient transport time. Any means by which transport time can be reduced deserves consideration. Airlift Northwest has taken steps to shave minutes from its overall transport time, including improving the previously "archaic" dispatch procedures, and basing the medical transport team at both Harborview and Boeing Field.

Regardless of whether there are other ways that Airlift Northwest and/or Children's could safely reduce the overall time of patient transport, there would still be a time savings (of 3 - 16 minutes) associated with landing the patient at Children's as opposed to landing at the Intramural Field. Please refer to Figure II in the Final EIS for a comparison of ground transport times from alternate landing locations to the Emergency Room entrance. As the comment acknowledges, there would still be extremely critical situations in which the judgment of the medical team aboard the helicopter would dictate the necessity for a direct landing at Children's, rather than at the Intramural Field or Harborview.

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132. It is acknowledged that neither landing at Children's campus nor at the Intramural Field is perfect; however, the landing at the Children's campus is better from the perspective of reduced patient manipulation.

A patient being flown to Harborview or the Intramural Field would have to be unloaded onto a gurney, pushed 30 feet or more on the gurney to the ambulance, transported via ambulance to the Emergency Room door, and unloaded again (patients flown directly to Children's would be unloaded once and transferred via gurney 142 feet to the Emergency Room door). In the event that tubes or intravenous lines are disconnected during the transfer from helicopter to ambulance, the tubes must be reconnected to the patient and the patient restabilized before the transport can be completed. This procedure can add to the overall transport time. With landings at the Kitchen Garden site or outside the Emergency Room entrance, any dislodged tubes can be reconnected in the hospital where advanced care can be administered earlier.

It should be noted that regardless of the alternative, the patient is protected from the elements during the transfer process(es) (see response to Comments #15, above and #133, below.

133. The patient would not be exposed to the elements while being wheeled from the Kitchen Garden site to the Emergency Room entrance at Children's. As necessary, the patient is protected by a plastic cocoon, hat and blanket(s) during transfers.

During extreme weather conditions, the risk of hypothermia for neonates being transported via isolette would not be as great under the campus alternatives; in the event that tubes became dislodged during transfer out of the helicopter the isolette would not have to be opened until inside the hospital.

Under most transports, the rotor comes to a complete stop before the patient is unloaded. Thus, there is no wind chill from the rotors.

134. Comment acknowledged.

135. In recognition of these concerns, Children's has proposed an alternative that reduces the number of transports to Children's without sacrificing patient care. Refer to the description of the new alternative (the Preferred Alternative), in Chapter III of this Final EIS.

136. The applicant is Children's Hospital and Medical Center, not Airlift Northwest. Please refer to the response to your Comment #68.

137. Please refer to the response to Comment #50, above.

138. The most appropriate hospital is not always the closest hospital. Please refer to the response to Comment #50 in this letter.

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139. The dispatch system procedures are described in the response to Comment #77, above. Airlift Northwest considers the problems with the existing dispatch system to be relatively minor; there are no plans to change the concept of the current system, although Airlift Northwest will continue to seek improvements. Airlift Northwest has calculated that dispatching takes two to three minutes. Between December 1, 1986, and April 30, 1987, average mobilization time from receipt of call to helicopter take-off (this includes the two to three minutes of dispatch time) ranged between 6.05 and 8.34 minutes (see response to Comment #164, below).

The transfer of a patient at the Intramural Field adds 3-16 minutes to a patient transport, compared with landings directly at the Children's campus.

140. Please refer to responses to Comments #16, 132 and 133, regarding patient transfers.

141. Unlike Harborview, where the distance from the helistop to the Emergency Room entrance is several hundred feet, Children's would not require a ground ambulance to transport the patient the 142 feet from the Kitchen Garden site to the Emergency Room. Please refer to responses to Comments #132 and 133, above.

142. The City has deleted the sponsor's fourth objective. The Council Conditional Use Permit requires that, "The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas." The purpose of a helistop is to provide a safe location for the landings of a helicopter. This differs from the sponsor's objectives for the helistop, which are stated on page 33 of the Draft EIS, and in Chapter III of the Final EIS.

Alternative sites for the helistop, both on-campus and off-campus, that were considered are identified on pages 38 and 39 of the Draft EIS and in Chapter III of the Final EIS. Those pages also contain brief statements as to their acceptability as defined by the sponsor's original four objectives. These judgments are those of Children's professional medical staff. The sponsor contends that only a helistop located at the Kitchen Garden site or immediately outside the entrance to the Emergency Room entirely meets its objectives. The new alternative (or Preferred Alternative) proposes a balance between the objectives of Children's and the reduction of impacts on surrounding residential areas. The discussion of these alternatives has been expanded in the Final EIS.

143. The Lead Agency is responsible for the determination of acceptable alternatives. Please refer to the response to Comment #142, above.

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144. It is not necessary for the EIS to provide detailed analysis for alternatives that were considered but not advanced. Additional data on the alternative sites are provided in the Final EIS.

145. A route through the medical center from other entrances requires the negotiation of doorways, corridors and, for some alternatives, changes in floors. The proposed Kichen Garden site is 142 feet away from the entrance to the Emergency Room and adjacent to the operating room and Intensive Care Units. No other hospital entrances are as close to these key units. The Children's medical staff has determined that the effects of the 142-foot outdoor journey on the patient, if any, are less severe than the possible time lost in transporting the patient from an alternative landing site on the campus and wheeling the patient to and through the hospital. In any case, no matter what helistop location is used, a patient would be protected to reduce "exposure" to the elements (refer to the response to Comments #132 and #133, above).

146. The rooftop helistop site at the University Medical Center requires a transfer by elevator that is not optimal.

147. Although removal of trees could make alternative helistop locations to the east or south of the hospital building more feasible with respect to landing the helicopter, there would still be a need to transport the patient through hospital corridors, doorways, and/or elevators. These alternative helistop locations also would bring aircraft operations closer to residential areas and the Laurelhurst Elementary School. Refer to response to Comment #145, above.

148. The removal of the three trees enables the final approach to the temporary landing location outside the Children's Emergency Room to be more direct from the north, somewhat further away from Laurelon Terrace than occurred previously.

The administrative entrance to the hospital is closer to Laurelon Terrace than either the Kitchen Garden site or the temporary landing location that is outside Children's Emergency Room entrance. Residences along 44th Avenue N.E. are closer to the surface parking lot than are the Kitchen Garden site or the temporary landing location.

149. Frank Benedict, the FAA Principal Aviation Safety Inspector, was asked to provide his professional opinion of the alternative sites evaluated in the EIS. Mr. Benedict inspected the sites and determined that, "Given the hypothetical of a helicopter approaching over an open area and landing in a soccer field versus an approach and landing over a congested area, one would have to surmise there is no risk to persons or property on the surface regarding the first instance. This is by virtue of the fact it is a complete open area.

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The site of the U of W proposed helistop (orginally this was the rooftop helistop location) was evaluated and inspected by me. In my view it is slightly different in that much of the ingress and egress can be accomplished over a more open area....

"The acceptable level of safety is extremely high at the Children's facility, U.W. facility and the soccer field" (Benedict, 1987).

A copy of Mr. Benedict's letter is on file at DCLU.

150. Comment acknowledged.

151. The location of a landing site at the Sand Point Naval Station, as is proposed in the comment, was considered. The Sand Point helistop is farther from Children's than the Intramural Field helistop site and, therefore, was determined to be less suitable in achieving the proponent's objective of minimizing transport time. Because of the distance of Sand Point from the University of Washington Medical Center, it is less attractive as an alternative that would enable shared use.

152. See responses to Comments #106 and #107, above.

153. There are several options for controlling of the proposed helistop lighting. The helistop lights could be left on 24 hours a day, as suggested in the comment. Children's and Airlift Northwest are currently examining the possibility of installing lights that could be turned on and off by the pilot, much like an automatic garage door opener. Should this option not prove to be feasible, turning on the lights would be an item on the ground crew's procedural checklist.

In the event that the lights were not turned on or otherwise inoperable, most helicopters (including Airlift Northwest's Agusta), are equipped with searchlights, which would be able to supplement the lighting already provided by outdoor lights. This capability reduces the risk associated with an unlighted landing area.

154. Estimates provided by Children's and Airlift Northwest regarding projected numbers of flights for 10 years into the future are speculative. An attempt at a 20-year estimate would be less reliable than the ten-year estimates used in the Draft EIS. The Final EIS presents demographic/use based projections to 1995.

155. Children's currently uses security staff to secure the landing area prior to the arrival of an incoming helicopter. Additional warning and safety precautions are believed to be unnecessary at this time, however, the hospital has been considering mitigation measures (including the placement of warning signs) that could be implemented.

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156. There is a difference between the number of patients transported and the number of flights. As described in the Draft EIS, there would be two flights (one takeoff and landing per flight) for each patient transport. In actuality, with the medical transport crew based with the helicopter at Harborview and Boeing Field, there has been one flight per patient transport (exclusive of the flight to the patient's point of pick-up).

Dr. Nicola offered inaccurate monthly patient transport figures in his first report. Please refer to response to Comment #26, above.

157. The figure was provided by Airlift Northwest, which in a letter dated July 10, 1986, stated, "Children's Hospital's rotary-wing volume has been running consistently around 17% of the total rotary-wing flight volume. We anticipate that that percentage will remain fairly constant through (1995/1996 fiscal year)." This letter from Airlift Northwest is on file at DCLU. Data indicate that between 1988 and 1990 Children's percentage of total Airlift Northwest rotary-wing transports has averaged 14.1%.

158. Children's does not have an institutional plan for growth or program for offering additional services that has been incorporated into the projections of the number of aeromedical transports.

159. If the demand for Airlift Northwest's services exceeded its existing capabilities, the organization would add equipment and personnel as needed. Airlift Northwest has contracted for a second, medically-equipped Agusta that currently is available "half-time" and is based with its transport teams at Boeing Field. This aircraft will be available full-time (24-hours per day) in May 1991. This has increased Airlift Northwest's transport capability.

160. The effect on Children's of an Airlift Northwest expansion (assumed to mean the addition of new members to the consortium) would depend on the capabilities and location of the new member. It is not known how, if at all, the number and destination of transports would change if an existing member hospital left the consortium or if a new member were added.

The effect on Children's of the second full-time Airlift Northwest helicopter is enhanced ability by Airlift Northwest to accommodate those requests for transports that were previously not accepted when the single helicopter was not available because of its use on another transport.

The availability of a second Airlift Northwest helicopter was assumed by Carona in her projections of future use (see Table 3 in the Final EIS).

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161. Children's has requested that MAST land at the Intramural Field. Most of the MAST helicopters have been equipped with telecommunications equipment that enable the aircraft to communicate with non-military ground personnel and other aircraft. No other specific agreements regarding landings and communications have been reached.

162. Children's has met with Med-Flight, the Bellingham vendor, and will meet with other area air medical transport services (including the Navy, Coast Guard, and MAST) after the City Council considers the Conditional Use Permit application for the helistop. The purpose of the meetings will be to agree to protocols for use and communications.

163. A pre-arranged transport is the transport of a critically ill or injured patient that has been arranged in advance by the receiving hospital and the referring physician.

164. Based on Airlift Northwest flight statistics from July 1 to December 31, 1990, the average mobilization time was 6.05 minutes for Pre-Hospital Transports and 8.34 minutes for Inter-Hospital Transports. In both cases, the flight nurses were based with the aircraft at either Harborview or Boeing Field.

Airlift Northwest estimates overall average mobilization time is 5-10 minutes.

165. Through March 1987, there were a total of 866 inter-hospital transports via Airlift Northwest helicopter. Of those, 545 transports (63%) landed at designated landing zones at referring facilities and required no ground transport. The remainder of the transports landed at designated landing zones removed from the referring facilities' campus that required ground transports of the patients to the helicopter.

166. According to Gene Hill of Hospital AirTransport, the manufacturer of the Agusta's engines recommends two minutes of cool down time prior to shut down. For some particularly critical patients, the transfer process will commence before the motor stops. Normally, the motor will come to a complete stop before the patient is unloaded from the helicopter. It takes approximately two minutes of run-up prior to lift-off.

167. As of May 20, 1987 Airlift Northwest had used the helicopter four times to transport a critically ill or injured child to Children's campus after a fixed-wing aircraft had transported the patient to Boeing Field.

168. Airlift Northwest has yet to pick up a medical crew at the Children's campus. Under the Proposed Action, it was indicated that a specialized medical crew could be picked up at Children's or the Intramural Field,

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while under the Preferred Alternative the specialized medical crew would board at Harborview, or would be picked up at the Intramural Field, if permitted.

169. Any decision to deviate from the established and approved flight paths would be at the discretion of the pilot but would still have to be consistent with applicable FAA guidelines. A pilot could deviate from the flight path in the case of a destabilizing patient in extremely critical condition.

170. Please refer to your Comment #2, above.

171. Comparisons of Airlift Northwest policies with AAMS, NEMSPA and FAA guidelines are presented in Appendix B of the Final EIS.

172. Some blade slap may occur during the helicopter's turn to the south; however, blade slap in an Agusta 109 at that point in the approach is minimal.

173. There are no extraordinary dangers associated with the turn.

174. When winds necessitate the pilots using the secondary approach (approaching from the northeast), the helicopter would directly overfly an area of single-family residences, whereas the primary approach would proceed along the Sand Point Way N.E. corridor. While the primary approach would not directly overfly any residences, the 100-yard band on either side of the flight path contains several multifamily residential buildings. The 100-yard band on either side of the secondary approach contains a number of single-family residences.

175. When winds are out of the northwest quadrant at 17 knots or more, the secondary approach would be used (see page 47 of Draft EIS and Chapter III of the Final EIS). This approach is from the northeast, but would not directly overfly the Villa Acadamy School, Laurelhurst Elementary School, or St. Bridget's Church. This approach would overfly approximately one block north of both the Villa Academy School and Laurelhurst Elementary School, and approximately two blocks north of St. Bridget's Church.

176. Comment acknowledged. The total elapsed time from helicopter touchdown to the patient being wheeled via gurney (142 feet) into the hospital building is estimated to average about four minutes, including three minutes for patient landing and preparation and one minute for transfer to the ER.

177. Current policy and procedures call for the pilot to wait no longer than 30 minutes for the retrieval of the isolette and/or conveyance of patient medical information from the transport team to the hospital staff. It is acknowledged that for some nighttime flights, there could be added or repeated sleep disruption for some residents.

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178. A detailed comparison of transport times for patients being brought to Children's via helicopter versus what it would have taken to send a medical transport team to the patient and transport the patient via ground ambulance is outside the scope of this document. Table 3 in the Draft EIS (Table 2 in the Final EIS) was provided to illustrate a hypothetical example.

179. A comparison of numbers of transfers associated with different scenarios is as follows:

Patient pickup at referring hospital, landing at Children's	2 transfers
Patient pickup removed from referring hospital (necessitating ground transport at referring hospital), landing at Children's	3 transfers
Patient pickup at referring hospital, landing at Harborview or Intramural Field with ground transport to Children's	4 transfers
Patient pickup removed from referring hospital, (necessitating ground transport at referring hospital) landing at Harborview or Intramural Field with ground transport to Children's	5 transfers

180. In nearly all cases, the transport of the patient is to the most appropriate care facility as determined by the referring physician. If the patient is being transported a greater distance to Children's when another hospital would have been able to administer comparable care, then the patient would be exposed to an unnecessary risk of destabilizing during the added transport time. It should be noted that in some cases it may be that the referring physician, at time of referral, determined that the most appropriate care was available at Children's, even though in retrospect it may have been that appropriate care would have been available at a closer medical institution. Refer to the response to your Comment #89, above.

181. In response to this comment Dr. Neff replied, "...that re (probably) is no such controlled data. One, instead, has to use medical sense and clinical experience (to support the statement). There is no question that a small child whose blood pressure is dropping, who has a fulminant infection or obstruction in the respiratory tract, should be given every chance at optimal survival as soon as possible, and should be in an appropriate intensive care unit as quickly as possible. We can relate the cases that have landed at Children's Hospital from August 3, 1985 to December 31, 1986, [when] there were 57 transports directly to Children's Hospital and Medical Center. These all were admitted directly to the Intensive Care Units. These children were so critically ill that 22 of them died as part of their presenting condition, and 35 survived... All of these children were critically ill and required immediate transport to an intensive care unit...and had life-threatening conditions that required their immediate landing at

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Children's Hospital...in each situation it was the physicians' feelings that the child should be in the intensive care unit quickly. Any landing other than at Children's only would have had the potential to worsen the outcome and increase cost, and could not have possibly helped the child" (Neff, 1987).

182. With respect to the question of medical malpractice concerns affecting patient transport requests, please refer to the response to Montlake Community Club #7.

    The decision to land at the Kitchen Garden site versus Harborview or the Intramural Field may not be as susceptible to influence by medical malpractice concerns, due to the experience the medical transport crew has in assessing the transport needs of patients and choosing the appropriate landing location. Nevertheless, the medical transport team is aware of its liability for the patients under its care.

183. The noise abatement approach requires higher rates of descent at lower power settings. Below 300 feet above the ground, the pilot of a twin-engine helicopter is committed to a landing should there be an engine failure.

184. See response to Comment #17, above.

185. See response to Comment #11, above.

186. The communication practices between Airlift and Children's are designed to ensure that the hospital is alerted to both patient medical requirements as well as aircraft operations.

    Operational communications include the dispatching notification procedures, as described in the response to Comment #76 above, and the aircraft-to-hospital communications (direct communications with the Emergency Room) that inform the ground team of the estimated time of arrival (ETA) in order to ensure that security and medical preparations are properly timed.

    Medical communications are designed to inform ground medical staff of patient status and identified changing patient needs, if any.

187. An examination of the consistency of Airlift Northwest's weather standards and pilot qualifications requirements with those of NEMSPA and AAMS is provided in Appendix B of this Final EIS. See also response to your Comment #234, below.

188. Recognizing the importance of safety, Airlift Northwest encourages the pilots to identify safety concerns so that steps may be taken to enhance safety. Airlift indicates that no pilot would be discharged because of reporting safety concerns to Airlift Northwest management.

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189. Pilots are not checked out prior to liftoff.

190. Hospital AirTransport employs two full-time mechanics whose responsibility is to maintain the Airlift Northwest helicopters. The aircraft are inspected by one of Airlift Northwest's mechanics every day. The mechanics each have more than five years of helicopter maintenance experience. One is factory-trained and the other will be factory-trained by fall 1991.

191. Pilots conduct a pre-flight inspection of the aircraft before each shift according to the manufacturer's checklist, including an exterior inspection of the aircraft, testing of critical equipment, etc.

192. The windshield wipers are installed on the Airlift Northwest aircraft.

193. According to Earl Van Eaton of the FAA's Flight Standards Division, air worthiness inspectors assess and certify Airlift Northwest aircraft once a year. Maintenance procedures are inspected, log books and records are verified, and aircraft are physically examined before an Air Worthiness Certification is issued.

194. As of March 6, 1991, the Agusta had been involved in three aeromedical accidents (Phoenix, 1983; New Orleans, 1984; 1986) and four incidents as described in Chapter IV of the Final EIS.

195. The FAA does not specify a minimum distance that buildings may be located from a helipad. They do, however, specify "heliport approach surfaces" and "heliport transitional surfaces" within which no obstructions should be located. This "approach surface" specifies a rising slope of 8:1 extending in a horizontal distance to 4,000 feet from the landing area. The "transitional surface" specifies a rising slope of 2:1 to a distance of 250 feet on either side of the landing area. For heliports obstructions are allowed within these surfaces only when an aeronautical study concludes that the obstruction would have no adverse effect upon aeronautical operations. Neither existing nor future hospital expansion would penetrate these surfaces. Several trees and light poles to the north and northeast of the helipad would penetrate these surfaces and therefore have been identified for removal with the development of a helistop at the Kitchen Garden site.

196. Please refer to the response to Comment #6, above.

197. The Medical Review Committee, as proposed by Children's, is described in general in Chapter III and in detail in Appendix C of the Final EIS.

198. Copies of the cited correspondence are available for review at DCLU.

199. A more detailed examination of transfer times is contained in Chapter III of the Final EIS. The helicopter lands approximately 30 or more feet south of the paved parking area on the south side of Clark Road.

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It is not the distance between the helicopter and ground ambulance that most affects the average three minutes of transfer time, but rather the time taken to unload the patient from the aircraft, the time to move the gurney across the field surface, the time taken to load the gurneyed patient into the waiting ambulance, and then to secure the patient in the vehicle. The same average transfer time occurrs at Harborview and Boeing Field (see Figure 11 in Final EIS).

200. In most cases, the patient is moved 30 or more feet across the field to the waiting ambulance.

201. Future improvements at the University of Washington's existing helistop at the Intramural Field site may include paving and fencing. The ambulance would be able to pull up to a gate in the fence but would not be able to back-up directly to the aircraft.

202. See response to Comment #181, above.

203. According to Helen Shawcroft, the University Medical Center's Planning Director, the principal liability concerns that have been identified are the medical liability associated with a destabilizing patient who would need to be treated at the University Medical Center, and any situation during the rooftop-to-ground ambulance transfer that would adversely affect the patient's condition.

204. The back road that could be taken from the University of Washington Stadium area through the east campus area is not considered to be an improvement over Pacific Avenue and Sand Point Way for emergency vehicle use. This back road is unpaved in portions, and is obstructed by several closed (and, in some cases, locked) gates. An arrangement could be made with the University of Washington to provide ambulances with keys to the existing gates. In addition, portions of this road are used by University-oriented traffic, which can be especially heavy during athletic events at either the University Stadium or Hec Edmundson Pavilion.

205. The three tall trees have been removed. The Final EIS has been revised accordingly.

206. Comment acknowledged. A paved facility is a characteristic of the Intramural Field Helistop Alternative (if future improvements including paving are made by the University) and the new alternative (Preferred Alternative), as presented in the Final EIS.

207. A portion of Title 7 RCW 7.70.040 is in the Final EIS. The City of Seattle does not agree with Children's interpretation of this portion of the RCW.

208. The standard procedure for dispatch aid cars and medic units responding to an emergency involves the use of lights and sirens. However, according to Chief Harris of the Seattle Fire Department, patient

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transports from a helistop site to Children's Hospital rarely involve the use of lights and sirens. Medic units typically stabilize the patient at the helistop site and then perform the transport without the use of lights or sirens. Only when a patient's condition is deteriorating are lights and sirens used.

209. Children's, the City of Seattle, and Shepard Ambulance have no record of an agreement between Children's and the City.

210. Because of the cost of designing, permitting and constructing helistops, it is expected that only those medical institutions that have a need for helistops will pursue their construction. The Cumulative Impacts section of the EIS has an expanded and updated discussion of the proliferation of helistops.

211. The potential disruption of classroom activities has been described in Volume 1 of the Final EIS.

212. Recognized authorities mentioned on page 59 of the Draft EIS include some of the leading authorities on hospital air transportation in the nation. The opinions of Airlift Northwest pilots were included as well, due to their familiarity with the proposed landing sites, the Agusta 109 aircraft, and general flying conditions in the region. Their opinions are essential to understanding how the alternative helistop locations would operate. Please refer to the response to Laurelhurst Condominium Association Comment #7, above.

213. As shown in the following table, as of 1986, there were a total of 138 hospital-based EMS helicopter services started (two of which failed) since the first program began in 1972.

Year	Number of Programs Begun
1972	1
1973	0
1974	0
1975	1
1976	1
1977	1
1978	7
1979	14
1980	5
1981	12
1982	13
1983	14
1984	21
1985	25
1986	23
Subtotal	138
Programs Failed	2
TOTAL	136

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A total of 42 of these programs were started before 1982, with the remaining 96 programs having initiated operations between 1982 and 1986. According to Howard Collett of Air Medical Transport magazine, in 1986, there were approximately 30 other programs in the country that are not operated by hospitals. These include various publicly-run programs, such as those administered by police departments and regional EMS agencies.

214. Statistics on the EMS helicopter industry for the period from 1980-1986 indicate an accident rate that is much worse than helicopter aviation as a whole. Updated information on EMS helicopter safety, which reveals that the safety of the EMS industry has improved since 1986, has been incorporated into the Final EIS.

215. The NTSB data for 1982 and 1983, as well as NTSB data on the EMS helicopter industry, have been incorporated into the Final EIS.

216. It is acknowledged that the leading documented cause of accidents among turbine-powered aircraft in 1981 was engine failure or malfunction, which accounted for more than 42% of accidents. Nonetheless, the accident rate for turbine-powered aircraft is less than half that for all helicopters. Every authority contacted during the preparation of the Draft EIS cited the reliability of turbine-powered engines as the primary reason for the improvement in overall accident rates.

217. According to NEMSPA data, of 79 EMS-related helicopter accidents that occurred between 1972 and 1986, 13 (16%) are known to have involved a wire strike. Of these 13 accidents, seven occurred at night. Of these seven, three occurred in the vicinity of the host landing area. One of these three was due to a loss of power. The reasons for the other two wire strikes were unknown; however, it is known that one occurred during takeoff and the other occurred during the climb after takeoff.

218. Comment acknowledged.

219. The analysis requested is outside the scope of the EIS.

220. A comparison of FAA, NEMSPA and Airlift Northwest standards has been incorporated into Chapter IV and Appendix B of the Final EIS. Airlift Northwest's weather criteria are determined by applying the more stringent of AAMS' or Hospital Air Transport's (HAT's) guidelines. In all cases, ALNW's weather minimums are equal to or greater than the AAMS minimums.

221. Good visibility allows the pilot to maintain visual reference to the ground at his/her flight altitude.

222. In an EMS configuration, the Agusta 109 does not allow for two pilot operation.

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223. As of 1988, there were approximately 300 Agusta 109 Mark II helicopters in operation worldwide, 76 of which were in the United States. Of those in the U.S., nine were used in Emergency Medical Service.

224. See response to Comment #216, above. According to recent NTSB data, 15 of 59 EMS helicopter accidents were caused by mechanical failure.

225. Frank Benedict is the Principal Aviation Safety Inspector for the FAA's Seattle office, where he has been assigned for the past 11 years. He is considered a reliable source on aircraft safety, including helicopters, the safety of helicopter landing areas, and the acceptability of flight paths.

226. The cited article was reviewed in the preparation of the Draft EIS. The article is on file at DCLU. A profile of aircraft safety, including data more recent than that cited in the referenced article, is presented in Chapter IV of the Final EIS.

227. Early operators are defined as the first non-military EMS pilots.

228. Contact with Dr. Poulton following the issuance of the Draft EIS indicated that the document accurately reflected his opinions. A copy of Dr. Poulton's letter is on file with DCLU.

229. A restrictive budget is one that constrains the amount of funds allocated to various budget items. A budget that restricts funds for adequate helicopter personnel (e.g., training, staffing) and/or operations (e.g., maintenance) could affect the safety of the program.

230. The Airlift Northwest budget has not been filed with DCLU; however, the Airlift Northwest consortium contract that, in part, allocates the distribution of costs and revenues is on file with the agency. The cost of helicopter transports and flights is outside the scope of this analysis.

231. Airlift Northwest indicates the budget does not affect judgments regarding which transports will be accepted.

232. Data on major vendors have not been aggregated by any of the sources. Howard Collett, publisher of The Journal of Air Medical Transport magazine, is recognized as a credible source.

233. FAA Regulation 135.243 requires the following experience for commercial pilots who transport people and/or cargo:

Pilot in command under Visual Flight Rules:

Commercial pilot certificate. 500 hours of flight time as a pilot, including at least 100 hours of cross-country flight time, of which at least 25 hours were at night. 50 hours of the above must be in rotary-wing aircraft; the rest may be in fixed-wing.

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Pilot in command under Instrument Flight Rules:

Commercial pilot certificate with instrument rating. 1,200 hours of flight time as a pilot including at least 500 hours of cross-country flight time, 100 hours of night flying time and 75 hours of actual or simulated instrument time of which 50 hours were in actual flight. 50 hours of the above must be in rotary-wing aircraft, the rest may be in fixed-wing.

Insurance companies' requirements are variable. In some cases, they will accept the carriers' requirements for pilot flight minimums and adjust their premiums accordingly. In other cases, they will stipulate the minimum amount of flight time necessary before accepting a carrier. The Final EIS has been revised to reflect the distinction.

234. Airlift Northwest pilot standards exceed those of the FAA and are presented in Table 14 of Volume 1 of the Final EIS.

235. One pilot has been involved in a helicopter accident. There were no injuries and only damage to the aircraft.

236. The term "major airports," which refers to Sea-Tac and Boeing Field, was used in the Draft EIS; "small airport" was not. "Smaller airports and airfields" was used. The smaller airports and airfields cannot accommodate the larger commercial aircraft or jet craft that use major airports.

237. Please refer to response to Comment #34, above.

238. Please refer to response to Comment #42, above.

239. Chapter IV of the Final EIS contains an updated assessment of the risk of accident, that is based on the projected number of patient transports. See also response to Comment #154, above.

240. Please refer to response to Comment #149, above. Sand Point is not an alternative that has been advanced in the EIS. Mr. Benedict has not been asked to assess its safety as part of this EIS. MAST has been landing patients at the Intramural Field since the 1970s.

241. As illustrated in Figure 5, the Medical Pavilion is south and east of the Kitchen Garden site. The approach and departure path is from the north. Therefore, the Medical Pavilion would not be an obstruction along the designated flight path. The FAA Advisory Circular guidelines are discussed in Comment #195, above. The Medical Pavilion has been added to the discussion in the Final EIS.

Indirect effects (i.e., the building's influence on micro wind patterns) are not expected to result in a significant impact on aircraft approaches and departures.

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242. No major development is planned or proposed by Children's that would affect helistop's compliance with FAA Design Guidelines.

243. When distributed, natural gas is amended with a substance that provides it with a tell-tale odor that would be detectable if there were any leaks. In the event of an accident that involved the natural gas meter house, the meter and all pipes would be examined to ensure their integrity.

According to Doug Damm of Washington Natural Gas and Safety Division, the gas line at Children's would be shut off within 30 minutes after the gas company was notified. Alternatively, the natural gas purveyor has provided Children's with a "key" that enables the hospital personnel to shut off the main valve.

Refer to response to your Comment #46, above.

244. The Draft EIS states that "because the area immediately surrounding the Intramural Field and the primary and secondary approach/departure paths are located in an undeveloped area, potential physical damage from a helicopter accident would be relatively less for that alternative." On first appearance, the Intramural Field would appear to be a more obstacle-free area to land and, thus, a safer one. It should be noted, however, that the proximity of the driving range screen, several light standards, and a baseball backstop in the area appear as likely to precipitate an accident as the obstructions near the Children's site. To date there have been no helicopter accidents or incidents at the Intramural Field. The obstructions at the Children's site possibly would be more easily visible to an approaching pilot than those at the Intramural Field site. Thus, while it is noted that an accident occurring near the Children's site could have more serious consequences than a similar accident at the Intramural Field site, the likelihood of such an accident occurring is not significantly different between the two sites.

245. The Washington State Department of Transportation (WSDOT) has record of 46 accidents involving ambulances in the Seattle area in the approximately 9.5-year period between January 1, 1977, and May 31, 1986. In those 46 accidents, there were 34 injuries and no fatalities. WSDOT's transmittal letter regarding these data and attachments are on file with DCLU.

The lack of useful data associated with the frequency of ground ambulance accidents is due to difficulty in assembling available data into a format that can be accurately compared with helicopter accident statistics.

Several sources, including Tom Schibe of the U.S. Department of Transportation's EMS Division, Rick Minerd of the Journal of Emergency Medical Services, Robert Elling of the New York EMS Division, Howard

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Handler of the American Insurance Agency (a primary insurer of ground ambulances), Dr. John Stafford of the Arizona EMS Division, and Grace Hazzard of the National Highway Safety Administration, indicated that there is a large amount of data available on numbers of ambulance accidents in various states, but that there is no means by which to determine a rate of occurrence. Thus, it is impossible to meaningfully compare data or reach any conclusions about the data.

Handler, who many of the other sources acknowledged as perhaps the leading authority in the country, stated "The incidence and frequency of accidents involving land ambulances as opposed to air ambulances is very high, both in straight volume (which is expected due to the vast number of land ambulances in operation) and proportionately."

Ken Ruef, the former General Manager of Shepard Ambulances in Seattle, expressed concern about the use of any comparison of air and ground ambulance accident frequency. He noted that comparing ground and air ambulances is like comparing "apples and oranges," due to the relative lack of traffic and obstructions that helicopters have to deal with.

246. According to the Airlift Northwest pilots, if medical cost (the additional cost of an ambulance transfer) and medical concerns are not considered, a lit, fenced and paved helistop at the Intramural Field would be preferred over a lit, fenced and paved helistop at Children's campus.

247. The exemption is set forth in Section 25.08.510 of the Seattle Municipal Code.

248. The EPA pamphlet "Noise: A Health Problem" contains no quantitative information. Nevertheless, the cited material does indicate that noise can cause reactions including anxiety, stress, elevated blood pressure and other physical reactions. However, the EPA criteria used in the Draft EIS for evaluating impacts were developed with the objective of protecting public health and welfare. The letter referred to was considered in preparing the Draft EIS noise analysis.

249. The noise impacts on classroom activities is discussed in the Draft and Final EIS. Neither the primary nor secondary flight paths pass over either Laurelhurst Elementary School or Villa Academy. See response to Laurelhurst School PTA Board Comments #1 and 2.

250. The SJO measurement of helicopter noise at Children's was made at Location 1 (as shown on Figure 3 of the Draft EIS) and extrapolated to other locations based on the distance to the flight path. Towne, Richards and Chaudiere's noise predictions in the Draft EIS were based on multiple measurements by FAA made at various distances along several axes relative to flight paths, and verified by additional measurements at Harborview Medical Center.

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251. Please refer to response to Jerry Schneider Comment #23, below.

252. The measurements at Harborview Medical Center were made at locations with a direct line of sight to the helicopter flight path and, therefore, are considered applicable to those locations near Children's that also would have a direct line of sight to the flight path.

253. The noise measurements at Harborview Medical Center did not indicate that loaded medical emergency helicopters produce more noise than the levels given in FAA test data and used to prepare the Draft EIS noise predictions. Also, please note response to your Comment #100, above.

254. Because of the moderate sound levels predicted and infrequency of helicopter events over the schools, additional helicopter noise tests at the two schools are not warranted.

255. The operations used in the Draft EIS Noise section are considered to be worst case. See response to Comment #34, above, concerning the number of transports and the number of flights.

256. With the removal of hazard trees, the flight path incorporating a sharp turn is no longer used to land outside the Emergency Room entrance and would not be the flight path for the proposed Kitchen Garden helistop.

257. The backup helicopter used by Airlift Northwest is an identical Agusta 109 Mark II. The second helicopter also is an identical Agusta. The Sikorsky UH-60 Blackhawk helicopter has a four-bladed rotor instead of the noisier two-bladed rotor of the current MAST helicopter and based on FAA data is expected to be slightly quieter than the Agusta.

258. According to the Children's engineering office, the entire hospital building is air-conditioned, and windows are kept closed. The greatest probability of awakening is for rooms on the side of the hospital closest to the proposed helistop.

259. The determination concerning health effects was based on findings of published studies of health effects from noise, and on criteria that have been developed based on such studies. See also response to Comment #248, above.

260. The predictions of sleep interference are based on the sleep interference curves shown on page 79 of the Draft EIS and in Chapter IV of the Final EIS. These curves are fairly representative of average findings from sleep interference studies, although findings tend to vary from one sleep interference study to the next. Actual sleep disturbance may differ from these figures because of such factors as type of home construction, age, and characteristics of individuals. Please refer to the response to Comment #177, above.

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261. In the event that there are consecutive night transports, sleep interference impacts could be greater than those discussed in the Draft EIS. Based on the expected frequency of transports, relatively moderate sound levels and the fact that a large portion of residences in Seattle regularly experience similar or higher sound levels many times during nighttime hours, it is not expected that consecutive night transports would prevent residents from sleeping at all.

262. Helicopter noise received at Laurelhurst School, the school nearest the helistop, was evaluated on page 86 of the Draft EIS. See also response to Comment #254, above.

263. The approach flight path is 1,000 feet above Sand Point Way N.E. The departure flight path climbs to 2,000 feet.

264. The noise abatement path is designed to reduce noise impacts on surrounding residences. It is acknowledged that the disturbance is not perceived by some residents to be minimal.

265. Comment acknowledged.

266. The University of Washington has not received a Certificate of Need. The statement on page 90 of the Draft EIS was in error and has been corrected in the Final EIS.

267. There are several applications for constructing private use helistops that have been submitted to DCLU. See Chapter IV of the Final EIS for an identification of existing helistops and pending applications for helistops.

268. The survey may or may not be an accurate reflection of long-term hospital plans. The survey appears to be accurate with respect to the hospitals' intentions over the more than four years since the hospitals were contacted.

269. The appropriateness of organizational models for EMS helicopter services is not the focus of the EIS. Please refer to response to Kate Hemer Comment #3, below.

    It should be noted, however, that the member institutions of this consortium offer tertiary care services that are the general types of services that are needed to care properly for very sick or severely injured patients. It is unlikely that another service could cost-effectively compete with Airlift Northwest.

270. Airlift Northwest provides a key medical service to the region. It has been integrated into King County's EMS system and with local Fire Departments and Medic Units. Airlift Northwest will continue to support the physicians in community hospitals and will cooperate in the integration of its service into regional EMS plans, including an air transport plan.

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271. Please refer to responses to Community Council Federation Comments and your Comments #52, 53 and 54, above.

272. In his updated report (see Appendix A of the Final EIS), Dr. Nicola deleted the recommendation to review the Council Conditional Use Permit after six months.

273. According to a comment letter received from the Seattle-King County Department of Public Health (see letter in earlier section), the noise analysis is credible and adequate. Although additional information on noise and vibration has been incorporated into the Final EIS, a new analysis is not warranted and has not been conducted.

Thank you for your comments.

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To: Katy

RECEIVED
SEP 30 1986
DEPT. OF CONST. & LAND USE

2118 E. Shelby St.
Seattle WA 98112

27 September 1986

Ms. Holly Miller, Director
City of Seattle, Department of Construction and Land Use
Room 400 Municipal Building
Seattle WA 98104

Dear Ms. Miller:

This letter is a response to the Draft Environmental Impact Statement for the Children's Hospital and Medical Center Helistop (September 1986). My direct interest in the outcome of the licensing of the helistop is that I live along the Montlake Cut which lies along one of the major proposed helicopter approach and takeoff paths. More generally I am very concerned about the high levels of noise throughout the city which may yet force us to move from Seattle into the suburbs. I have only a few brief points and a suggestion or two to make.

I strongly support the concept of rapid access to hospitals for patients who require it. My goal here is to assure reasonable access consistent with the health of city residents. A reasonable heliport site and approach path will be proposed that will permit CDH (and University Hospital) patients to have necessary timely medical care without placing an unfair burden on permanent residents along the helicopter flight paths. First I wish to draw your attention to serious deficiencies in the draft EIS regarding the impact of helicopter traffic on neighborhoods in the vicinity of CDH, including mine.

I refer primarily here to the chapter entitled "Noise and Vibration" in the EIS. Here are the data upon which the EIS draws its conclusions regarding helicopter noise in the neighborhood:

- Monthly number of takeoffs and landings: 80 (p.83)
- Typical maximum outdoor sound levels: 75-85 dBA (p.85)
  (75 dBA is comparable to siren at 500 feet - 1 block;
  85 dBA is comparable to accelerating truck, lawn mower, p. 75)
- Outdoor-to-indoor noise reduction level: -25 dBA

Based on these data and adopting standards of noise impact from of undiscussed acceptance, the EIS manages to conclude:

- Increases in neighborhood noise levels will be 0 to 3 dBA monthly (p.85)
- The impact of such noise increases ranges from "Barely Perceptible" to "Noticeable" at worst (p.74)
- The very worst case is an increased noise level of 5 dBA (p.83) which is considered "noticeable".
- In the worst case 40% of neighbors will be awakened if their windows are open and 20% if their windows are shut.

1 Anyone over the age of 3 years living anywhere in the University District or Montlake knows that the noise generated by a helicopter on approach to CDH is very loud. "Barely perceptible" is not a description of helicopter noise that any sane person would ever dream of using. "Noticeable" seems much too modest. The conclusions regarding noise impact fly right in the face of experience. How can the experts be wrong?

2 This is easy to understand if the data are converted into measures that most of us understand, and if the procedure for processing the data are made clear. The second question first. Believe it or not, the EIS allows itself to convert the noise made by helicopters from a "peak" value -- the value heard by people nearby when the helicopter passes overhead -- to a monthly average value! (See bottom of p.74 and top of p. 76.) Since helicopters are overhead no more than 10 minutes per day, and since there are 43,200 minutes per month, the monthly average noise made by a helicopter trip is about 18 percent of its peak value. In other words the writers of the EIS divide the noise of a helicopter by a factor of approx. 100 before they assess their noise impact! How's that for taking the benefit of the doubt! I am dazzled. If this is standard "industry" practice then Lord help us.

3 My second point regards the assumtion that going indoors is a perfectly good way to escape from helicopter noise since noise levels inside a house are 25 dBA (about six times) less inside than outside. The 25 DBA result is based on high frequency noise (such as sirens), and it assumes that the windows are closed. The assumption seems very reasonable for sirens during the half of the year that windows are shut. I submit that these standards are completely irrelevant for low frequency noise all year long.

4 Consider expensive loudspeaker cabinets. The best ones are invariably the largest. Why? Because even the best loudspeakers have difficulty producing low frequencies (helicopters are great at it, however). The loudspeaker

cabinet resonates and helps to strengthen the lower frequencies. The larger the cabinet the more effectively it boosts lower and lower frequencies. 4

A very expensive loudspeaker cabinet is your house. It resonates very effectively at the very low frequencies -- the sounds that helicopters produce abundantly. These frequencies are so low that the ear does not hear them. Instead the house (and all of the people inside of it) vibrate. As noted in the EIS (p.81) "short-term sound pressure of these [helicopter-generated] levels can cause rattling and movement of dishes and other lightweight objects". How would you like to live in a house whose dishes vibrate eighty times per month, or almost one-thousand times per year?

I have described the worst case, according to the EIS. Maybe, but I doubt it. My house is more than a mile from the landing site. I have never counted the occurrence of dish-rattling helicopter overpasses, but I assure you that they are not just occasional. I can also assure you that the writers of the EIS don't live near me, or that they have decided to take more doubtful benefits! Finally it is well known that low frequency noise is far more objectionable than high frequency noise to humans. I cannot supply a reference for this conclusion, but it is cited frequently in FAA documents on the subject of jet noise. 5 6

In other words, I urge you to not let yourself get lost in the overabundant words and jargon in the EIS chapter on noise impact. The data, or the interpretation of the data, or both, completely conflict with reality. Challenge their conclusions, especially the rationale for interpreting the data in the way that they have. 7

In spite of my cynicism regarding the noise impact of helicopters, I believe that it should be possible to land helicopters near CDH with only minor noise impact, and that the people at CDH and their consultants have not tried very hard to find a prudent procedure for accomplishing this. 8

My proposed landing procedure is based on the first alternative listed in the EIS; namely, the U.W. playfield site. I accept the conclusions that landings at this site will not be highly objectionable. My concern is with the proposed flight paths to this site which were recommended by the helicopter pilots. Since helicopter pilots are inside the helicopter and cannot escape its vibration and noise, the pilots cannot be expected to be very concerned with the noise impacts of helicopters along the approach paths. Rather, they want to fly the most direct routes and over low-lying parts of the city. I can't blame them 9

But that doesn't mean that they are right. Consider first the "generalized flight paths", or general approach routings, shown on p. 44. All approaches over the city follow either the I-5 or Fremont-Montlake canals. These are already among the noisiest parts of the city. Perhaps the helicopter pilots feel that these routes are safe (I wouldn't know) or that since these routes are already noisy, a little more noise won't hurt. I consider these routes to be highly inconsiderate of noise impacts for the many residents of these areas. 10

I urge you to require that large-scale approaches be overwater wherever possible. Flights from the west should come over Elliot Bay, along the Mercer Street corridor, over Lake Union across U.W. (see Figure "A" below), to the playfield. The approach from the east shown on p.44 is fine. Flights from the north and south should be required to fly over Lake Washington to a point a mile south of Webster Point and then approach the playfield as shown on p.51. None of these approaches will add more than 30 seconds to flights headed for CDH. 11

Generalized Flight Paths



Figure "A"

Approach Paths to Playfield Helistop



Figure "B"

Now examine the figure on p.51 which shows the proposed final approach paths to the playfield landing site. The approach from the southeast is fine as 12

shown. That from the southwest is abominable. The Montlake Cut region is already jammed with small planes and news helicopters, especially in the summer months. Emergency helicopters will create a safety hazard in this zone, and will add appreciably to the noise in the residential area to the south where I live. In addition, the route passes over University Hospital which it will vibrate. The University Hospital hopes to add a helipad on their roof, and the conflict of airspace will become even more hazardous if their rooftop landing site is approved. 12 13 14

In the interest of health and safety I urge you to require an approach path from the southwest as follows: cross the I-5 overpass over the canal and University Bridge. From there follow a line to the intersection of NE Boat Street and Brooklyn NE, and along the Burke-Gilman Trail to the I.M. Buildings immediately north of the Hec Ed Pavilion, and then directly to the landing site. (See figure "B" above). This flight path is far from residences and avoids classroom buildings on campus. The noise will impact transients (motorists) rather than residents. Conflict with low flying planes and helicopters is avoided. It is also faster than the routes shown on p.51. 15

Sincerely yours,

Bruce Balick

BRUCE BALICK

1. It is acknowledged that a single helicopter flight approaching Children's is audible. The "barely perceptible" increase is based on EPA regulatory criteria for average daily or monthly sound levels, which includes the cumulative effect of all noise during that period. Also, please refer to response to your Comment #2, below.

2. Maximum sound levels (Lmax), as well as Ldn levels, are described in Table 18 of the Draft EIS and Table 19 of the Final EIS. Criteria based on the Leq and Ldn descriptors are commonly accepted by acoustics professionals and regulatory agencies. These descriptors incorporate individual noise events as part of an average. Please refer to the definition of Lmax in the Final EIS. Also, please refer to the response to Jerry Schneider Comment #18.

   It should be noted that Leq and Ldn are not arithmetic averages of the sound levels, if influenced by the lower and higher sound levels, but are instead more heavily influenced by the higher noise events. It also should be noted that criteria using Leq and Ldn (see Chapter IV for a definition of these terms) were developed initially using aircraft noise, and therefore more intermittent higher sound levels, rather than the more constant surface traffic noise. The use of Leq and Ldn descriptors, and the concept that noise impacts (whether steady or fluctuating) are best gauged by the average or cumulative sound energy, are today generally accepted throughout the world.

3. Outside to inside sound reductions of 25 dBA are based on both high frequency noise and low frequency noise. Sound reductions would be less if windows are open. Also, please refer to the response to Jerry Schneider Comment #20.

   Comment acknowledged.

5. The noise consultants have worked with DCLU and the Seattle-King County Department of Public Health to discuss methodologies, assumptions and means for presenting findings.

6. Comment acknowledged.

7. Comment acknowledged. Please refer to the response to your Comment #5, above.

8. Children's, its consultants, and the City have worked to determine appropriate alternative locations for helistops, recognizing the importance of balancing patient medical needs with environmental effects on the surrounding community. Airlift Northwest has established a flight path designed, in part, to reduce noise impacts.

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9. Airlift Northwest's helicopter pilots' first commitment is to the safety of their passengers and those on the ground. Airlift also states that they are concerned about reducing noise impacts on the community. The pilots were the primary developers of the proposed flight paths to and from the sites, including the noise abatement approach and departure paths that are designed to reduce noise levels experienced by the community.

10. These generalized flight paths have been selected for safety as well as to reduce noise. Airlift Northwest pilots have indicated that, in using these flight paths, there have been fewer noise complaints than when they deviate from these paths. The most significant noise impacts are expected to occur to those residents immediately surrounding the landing and takeoff areas.

11. Flight paths over water are used whenever possible.

12. A description of aircraft use of the referenced area has been incorporated into Chapter IV of the Final EIS. It is acknowledged that emergency helicopter flights along the designated flight path would be audible along the Montlake Cut, and that there could be increased use of the airspace in this area.

13. Children's-destined helicopters that fly over the area of the University Medical Center would do so at an altitude of at least 1,000 feet, which would not cause significant vibration to the hospital.

14. If the University Medical Center receives permission to land helicopters at its constructed rooftop helistop, it would be served by Airlift Northwest, as would Children's. (Note that the University is not pursuing approval of the rooftop helistop at this time.) There could be a conflict of hospital-related air traffic in the area on occasions when helicopters are approaching the hospital(s) at approximately the same time. Airlift Northwest has developed communication and flight protocols to ensure that their aircraft operations are safe.

15. Request acknowledged. This flight path appears to take the helicopter over the University Medical Center complex and also closer to University campus classrooms.

Thank you for your comments.

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7/23/86 Port Border

3905 48th PL NE
Seattle, WA 98105
September 23, 1986

Julia Gibb
City of Seattle Department
of Construction and Land Use
Room 408
Municipal Building
Seattle, Wa

Dear Ms. Gibb:

For six years I was a Search and Rescue pilot for the U. S. Coast Guard. I also served for three more years as the Senior Controller in the Coast Guard's Rescue Coordination Center located atop the Federal Office Building downtown. I was responsible for information processing, planning, and launching helicopters from Astoria, North Bend, and Port Angeles, and fixed-wing aircraft from Sacramento and Kodiak. I have worked extensively with MAST, the National Guard, Navy helicopters from Whidbey Island, and the Air Force in conjunction with the National SAR Plan. I am a graduate of the National Search and Rescue School in New York. I have personally been involved in hundreds of search and rescue operations and medical evacuations on both coasts, the Caribbean, Mexico, Alaska, and the South Pacific. I am currently a Captain for Alaska Airlines. I am the 737 Safety Representative for the Airline Pilots Association, and recently completed the Association's Accident Investigation School in San Diego, California.

118

It is my professional opinion that the Children's Hospital and Medical Center Helistop Proposal is neither necessary nersafe. 1

It takes 2½ minutes, in rush hour traffic, to drive from the University of Washington Intramural Field to the door of the Emergency Room at Children's Orthopedic Hospital. On Table 2 (p. 14) of the DEIS, from August, 1985 thru June, 1986 the average one-way flight time (from pick-up of the patient to arrival at COH) was one hour and four minutes (1:04). If two of the longer flights are excluded, the average flight time is 46 minutes. The total mission time, including flight time from Boeing Field to COH to pick up the Medical Team, flight time to arrive at the accident scene or the referring hospital, and return to COH, is at least twice the amount of time reported in the DEIS. This does not take into account the initial medical evaluation time, the decision making process, notification, flight planning, and the preflight checks of the aircraft. The time frame we are discussing is obviously not minutes and seconds. In nine years of hands-on operations, I never, ever saw the outcome of a single mission determined by 2½ minutes. 2 3 4 5

The DEIS would have you believe that the jostling sustained in the transfer from helicopter to ambulance might be dangerous to a critically ill child. Turbulance is primarily caused by low level winds. Even light winds, when associated with buildings, hills, or trees can cause moderate to severe turbulence from the surface up to 2000 or 3000 feet in altitude. This, exactly, is exactly the operating regime of most helicopters. 6 7

I can personally guarantee that the smoothest part of a child's ride will be when it is carefully lifted by the paramedics from the helicopter and placed in the ambulance. To assert that a professional medical team will jostle a small child more than a 46 minute helicopter ride is nonsense. 7

While the necessity of the proposal seems contrived at best, the safety issues are very real.

The current helicopter landing sight at the University of Washington Intramural Field allows a wide-open, normal, controlled approach profile from all quadrants with no obstructions. The proposed helicopter landing sight at COH is surrounded by hills, tall trees, power lines, tall buildings, an elementary school and a densely populated residential area. 8

The approach profile proposed by Airlift Northwest calls for a 1500 ft/min rate of descent. A normal approach by a commercial jet aircraft is based on a 500-700 ft/min rate of descent. Remember how that feels on your ears and sinuses and thentry to appreciate the damage possible to a small child with a descent rate three times as great. 9

The proposed flight path also calls for excessive maneuvering in downwind landing situations. This is always a critical maneuver, but is made more so by the lack of escape routes from the proposed landing sight. A helicopter simply does not enter or sustain hover as well downwind, and a downwind departure with full fuel tanks, medical personnel, and at maximum gross weight, could be particularly demanding. 10

Emergency Medical Operations are conducted under the rules of Part 135 of the Federal Aviation Regulations. When operating under the Visual Flight Rules of this Part, helicopters must maintain 300 ft altitude over congested areas except in the landing environment. They must not operate under Visual Flight Rules when the in-flight visibility, as observed by the pilot, is less that one-half mile. Contrary to the testimony of the Airlift Northwest pilot in the DEIS, there is no FAA minimum ceiling specified for helicopters. 11

There are no FAA weather minimums, other than visibility and icing that are restrictions on Part 135 helicopter operations and inflight visibility is determined by the pilot and if the pilot, based on his observation of the weather, believes there might not be icing conditions, regardless of forecasts, then this restriction does not apply. 12

FAR Part 135.213(a) states that for operation under VFR, the pilot in command may, if a National Weather Service weather report is not available, "use weather information based on the pilots own observations...." 12

Under Part 135, and EMS pilot is limited to eight hours flight time in a twenty-four hour period, except in the event of bad weather when there is no restriction.

It is reasonable to assume that a helicopter pilot will do everything in his power to transport a critically ill child, even into a marginal landing environment. 13

Given a single piloted aircraft, such as the Agusta, in marginal weather conditions, the pilot must not only maintain aircraft speed, altitude, and attitude, monitor critical engine operating parameters, and maintain navigational guidance by reference to his instruments, but he must also maintain visual reference with the surface, all the while talking on the radios and maneuvering his aircraft to avoid obstacles such as hills, trees, power lines, tall buildings, and elementary schools. 14

There is no question that helicopters play a vital role in the transport of critically ill patients. 15

I would only ask that you consider the following. First, the need for a helicopter landing site 2½ minutes closer to Children's Orthopedic Hospital is negligible. 16

Second, the shift from a wide open, inherently safe landing site, to a congested, difficult, and demanding landing site invites incident ranging from the merely injurious, to the catastrophic. 17

If for some profit motive or marketing consideration this proposal is considered favorably and is brought to fruition, and if one small child dies or is seriously injured as a result of this senseless plan, this community and the city of Seattle should be morally outraged. 18

Sincerely,

Bart E. Baxter

BART BAXTER

1. The opinion is acknowledged.

2. It is acknowledged that the travel time from the Intramural Field to the entrance to Children's Emergency Room is brief. The 2.5 minutes is an understatement of added total travel time as it does not include the time that it takes to transfer the patient in and out of the ambulance.

3. Please refer to the response to Liz Anderson Comment #42.

4. Comment acknowledged. Please refer to the response to Liz Anderson Comment #164, regarding mobilization time. Please see Table 2 in the Final EIS. This table defines patient transport time by task for a hypothetical helicopter transport, and is compared with a hypothetical transport by ground ambulance.

5. Comment acknowledged. Please refer to response to Liz Anderson Comment #131.

6. Please refer to response to Liz Anderson Comment #132.

7. It is acknowledged that turbulence can affect the flight of a helicopter, although the Airlift Northwest helicopters generally cruise at altitudes greater than 2,000 feet, which is higher than the ground layer in which turbulence is likely to occur. One transport objective is to minimize the amount of transfers that would subject the patient to potential destabilization. The Draft EIS does not assert that a helicopter flight will jostle a patient less than an ambulance. It should be noted that the vibration on the helicopters typically flown by MAST, the Coast Guard and Navy is greater than that experienced on an Agusta.

8. Please refer to Liz Anderson Comment #244.

9. While commercial jet aircraft typically descend from an altitude of 30,000 feet, Airlift Northwest helicopters will be descending from a typical altitude of 2,000 feet. According to Airlift Northwest medical staff, the rate of descent used by Airlift Northwest helicopters will not cause any damage to a person's aural canal.

10. It is acknowledged that a downwind landing is the most demanding of landings. Airlift Northwest helicopters normally do not fly with full fuel tanks (please refer to the response to Liz Anderson Comment #100).

11. The correction has been incorporated into the Final EIS.

12. Comments acknowledged. Please refer to the response to Liz Anderson Comment #220.

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13. It is not reasonable to assume that a helicopter pilot will do everything in his/her power to transport a critically ill or injured child if the safety of the mission is questionable. Airlift Northwest provides its pilots with the discretion to fly or not to fly when the weather conditions are unsafe or marginal, or to land or not to land in an unsafe or marginal landing zone.

14. Airlift Northwest pilots are required to have in excess of 3,000 hours in flying helicopters. This Airlift Northwest requirement exceeds FAA minimums. Please refer to Table 14 in the Final FIS, which compares FAA and Airlift Northwest pilot requirements. See responses to Liz Anderson Comments #233 and #234.

    As noted on pages 67-68 of the Draft EIS and Chapter IV of the Final EIS, the Airlift Nortwest pilots would not land at Children's when operating under Instrument Flight Rules. Rather, the pilots would land at Boeing Field where an instrument-controlled landing could be performed.

15. Comment acknowledged.

16. See response to Comments #2 and 5, above. It should be noted that the time difference in landing at the Intramural Field and at Children's campus is at least three minutes, as much as 16 minutes, and typically would be closer to six minutes.

17. See response to Comment #8, above. The helistop at Children's is consistent with the FAA guidelines for helistop design (see Appendix B). Frank Benedict, the FAA Principal Aviation Safety Inspector, has stated that "The acceptable level of safety is extremely high at the (Children's) facility, U.W. facility and the soccer field."

18. The applicant presents the Proposed Action and alternatives in order to extend the tertiary care services available at Children's to all community hospitals in the region. With respect to marketing, please refer to the response to Liz Anderson Comment #23.

    Thank you for your comments.

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4217 51 Ave. N.E.
Seattle, WA 98105-4930
October 16, 1986

RECEIVED
OCT 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Holly Miller
Director, Dept. of Construction and Land Use
Municipal Building
Seattle, WA 98104

Dear Ms. Miller:

I am writing about the proposed helipad at Children's Hospital. I am a pediatrician and on the staff of Children's Hospital, so I am not unsympathetic to the need for efficient and effective transportation of sick children. However, I believe that the current plan proposed by the hospital is insufficient and does not contain adequate safeguards for either the patients or the community. 1

Regarding the patients, while it may seem intuitively obvious that faster transport will enhance survival, this is not necessarily the case and should be documented with good scientific studies. Judging by Dr. Nicola's recent excellent review of the literature on this issue, there are none. A possibly analagous example of the misuse of technology is the situation with monitoring of near-term fetuses, where the use of electronic monitors increases the rate of Cesarean sections but does not necessarily enhance rates of survival of infants. Ground transportation has advantages over air transportation. The only way to resolve situations in which such uncertainty exists is to perform proper comparisons of the available methods on appropriate subjects. Until such a study is performed, one might be able to draw some tenuous conclusions from a review of data from transports performed during last year's snow. During that time, what was the survival rate of patients in comparison to similar patients transported during better weather? I think that Children's Hospital should be required to provide such data to justify the use of an expensive technology, for which the neighbors, the patients, and society at large must pay. It should be analyzed by a third party. 2

Regarding the community, are they being protected from the strictly entrepreneurial interests of Airlift Northwest and Children's Hospital? What mechanism is there to prevent the abusive use of helicopter transport for all sorts of medically unnecessary purposes? I have heard stories of Airlift Northwest transporting corpses of children. Why should the community suffer this? Will the city allow the proverbial fox to guard the henhouse? What disinterested party is going to monitor the use of a heliport once it is constructed? Who has verified the hospital's data on noise and other environmental concerns? Rather than belabor the issue with a long litany of possible abuses of the community by entrepreneurs, I will simply urge that this issue be considered in light of the recent history of Children's Hospitals relations with its neighbors. 3 4 5

Sincerely,

Thomas A. Bell, M.D., M.P.H.

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1. Your comment and belief are acknowledged.

2. It is Dr. Nicola's opinion that a helistop at Children's campus could be essential to saving the lives of the most critically ill or injured children being transported to the hospital by helicopter (see Appendix A).

   An examination of the patient outcomes from periods during which weather conditions prohibited Airlift Northwest operations is outside the scope of this document. Please refer to the response to Liz Anderson Comment #219.

3. A Medical Review Committee that examines the cases of patients being transported by helicopter to Children's would enable an examination of protocols and transport decisions. A description of the sponsor-proposed Medical Review Committee is presented in Chapter III and Appendix C of this Final EIS.

4. The City of Seattle, by releasing this EIS, has verified that it is satisfied with the data and the analysis presented in the document. The data and analysis are sufficient to disclose the magnitude of possible significant environmental impacts and provide sufficient information on which to base a decision.

5. Comment acknowledged.

   Thank you for your comments.

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DAVID S. BELVIN
4757 - 45th Northeast
Seattle, Washington 98105
10/16/86

To: Holly Miller. Director DCLU
Municipal Bldg. Seattle 98104

Subject: COH Helipad "Deis"

So much has been said against the COH helipad, I would be repeating what has been said. The exception would be the "DEIS" COH has released. It is nicely prepared with words of motherhood, but loaded with misleading statements and facts. These range from misapplying safety statistics to expanding the time line difference to transport from the playfield aread to COH vs direct flight. An Ambulance should not take any longer time than required to walk the distance. Please count this statement as strongly in opposition to the COH proposal. 1 2 3

Sincerely yours,

David S Belvin

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OCT 20 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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DAVID BELVIN

1. Your opinion is acknowledged.

2. The discussion of transport time as presented in the Draft EIS has been expanded and clarified. Please refer to the response to Liz Anderson Comment #131.

3. Your opposition is acknowledged.

Thank you for your comments.

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3804 48th NE
Seattle WA 98105

10/11/86

RECEIVED
OCT 14 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Holly Miller, Director
Seattle Dept of Construction and
Land Use.
400 Municipal Bldg
Seattle WA 98104

Dear Ms Miller:

Just a note in opposition to the proposed helistop at Children's Hospital and Medical Center. As a physician I feel this helistop is not needed. It will not handle the larger helicopters most likely needed in real emergencies. The transfer time from the already used site at Graves Field is minimal and little more than at Harborview. 1 2 3

The proposed helistop offers more danger to the surrounding community, than it does advantages for improved emergency care. The enthusiasm of the arguments proposed by Children's exceeds the real medical needs by far. 4

The helistop offers little if any advantage in critical care over the current program and real disadvantages and danger to the community. Sincerely yours

R O Bullard M.D.

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R. O. BIRCHFIELD, M.D.

1. Your opposition to the helistop is acknowledged.

2. The proposed helistop's size has been designed purposely to discourage larger helicopters from landing. The Agusta 109, which would be the primary aircraft to use the helistop, is of sufficient size to transport a single patient and adequate for most types of medical emergencies. See response to Liz Anderson Comment #35.

3. Comment acknowledged. As described in the Final EIS, the average length of time (from touchdown to entering Children's Emergency Room entrance) for the transport of patients is 4 minutes for the Kitchen Garden site, 10 minutes for the Intramural Field site and 22 minutes for the Harborview site.

4. According to Dr. Nicola, the helistop could offer a significant medical advantage for some critically ill or injured patients. Dr. Nicola's findings are appended to this document (see Appendix A).

Thank you for your comments.

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Lisx. Com 4

October 1, 1986
Maureen Brotherton
4542 49 N.E.
Seattle, Wash. 98105

TO: Holly Miller, Director.
Dept. of Construction and Land Use
408 Municipal Bldg.
Seattle, Washington 98104

RECEIVED
OCT 9 - 1986
DEPT. OF CONST. & LAND USE

Dear Ms Miller,

I am writing concerning the helipad issue in regards to Children's medical Center (C.O.N.) located in Laurelhurst community. I am a great supporter of the hospital and all it seeks to achieve however, I do have some concerns regarding the necessity of a helipad at the hospital. Will there be a weather observer at the hospital to keep pilots informed of prevailing weather conditions? The flight patterns shown in the EIS show a secondary approach which when used in bad weather conditions appears much more dangerous to the pilot and his/her passengers. The existing field at the University of Washington which is used for hospital landings seems a more logical and safer place for all concerned. There are telephone poles, electrical wires

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homes, schools and many occupants - in these dwellings that the pilot must be aware of. In an emergency (ie. unforseen weather problems, engine problems ...) the obstacles one must deal with & potential disasters are fewer if the soccer field approach and landing were to remain as is. In my dealings with the hospital, (I currently give tours for the hospital + was president of a guild which supports uncompensated care at the Children's Medical Center. I fail to see the critical need for a helipad sight located so far from the entrance to ER as opposed to a safer landing site and short driving distance to the door of Children's Do not trauma victims go generally to Harborview for emergency treatment? In conclusion - I must add the statistics printed in the American Medical News journal dated 9-5-86 alarms - and frightens me and my neighbors. 21 crashes this past year of medical helicopters is astounding. The boundary flight approach as proposed by the hospital puts the lives of my 4 children and 13 nieces + nephews along with their friends in school at Villa Academy in potential jeopardy. I urge you to consider the existing landing field at U.W. as a safer and better for all concerned place to land Airlift N.W..

Sincerely
Maureen Brotherton

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MAUREEN BROTHERTON

1. Please refer to response to Liz Anderson's Comment #6, above.

2. The secondary approach path to the Children's site is the safest flight path for the weather in which it would be used. It would present no increased danger to the pilot or passengers. The secondary approach is located over a more populated area, however. In the event that an accident did occur, there could be a greater risk to persons and property.

3. Please see response to Liz Anderson Comment #244.

4. It is acknowledged that there would be fewer people at risk and less risk to property associated with landings at the Intramural Field.

5. According to Dr. Nicola, the helistop at Children's could offer a significant medical advantage for some critically ill or injured patients being transported to the hospital by helicopter. Dr. Nicola's findings are appended to this document (see Appendix A).

6. Please refer to the response to Liz Anderson Comment #62.

7. Comment acknowledged. The data on helicopter safety have been updated and expanded (see Chapter IV in the Final EIS). These data indicate that the safety of EMS helicopters has improved since 1986.

8. The secondary flight path proposed for the Children's site would fly closer to the Villa Academy than the primary flight path would; however, the helicopter would not directly overfly the Academy.

9. Comment acknowledged.

Thank you for your comments.

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TESTIMONY:
MARY CRISMAN
(Presented Sept 23, 1985)
Public HEARING DEIS/
COH HELIPAD

131

In reviewing the section in the DEIS concerning federal, state, local, and private agencies with jurisdiction over helipad construction and air ambulance servies, it has become clear that the hospital's statement that " there is no single agency with jurisdiction" is painfully true. While a number of agencies advise and give suggestions concerning helipad proposals, there is no agency that is responsible for enforcement, regulation and supervision of air ambulance services. To illustrate, the FAA, which many assume police and assure the safety of the skies, offers only guidelines, not specifications for helistop construction. Further, as quoted from the Draft, the FAA will investigate complaints but will "generally not take action" on them (p.26). At the state level, the CON office with the DSHS has been empowered to review helistop construction, but was unable to enforce this regulation on COH. Another state agency, the Emergency Medical Services, has no authority for COH's helistop, nor does the Washington State Department of Transportation. In short, this striking lack of jurisdiction was outlined in the Draft; it was not identifed as a problem area nor one requiring resolution. We in the community, however, feel that enforcement and regulatory provisions should be a necessary part of this draft and therefore ask that these concerns of regulation, enforcement and jursidiction be addressed in the next DEIS.

1

OCT 17 1986

Some of the enforcement questions which should be answered are:

1. Who ensures that pilots abide by FAA standards? |2

2. Who will monitor flight paths, for compliance with noise abatement procedures as outlined in the DEIS? |3

3. Who will ensure that ALNW functions to benefit the region, not just its sponsoring hospitals? |4

4. How will the appropriateness of patient transfers be assessed, with a consideration of retrospective review? |5

5.How will the military and civilian services be coordinated? |6

6. What will be the consequences of violations of the permits issued? |7

7. Who will monitor the safety of the flights? |8

While these are only a few of the questions which have occurred to us, they show our concerns with enforcement, regulation, and jurisdiction which need to be addressed in the DEIS.

We would also like to note that our concerns over regulation are neither idle nor naive; rather, they reflect a number of unfortunate experiences with COH which have impressed upon us the need to guarantee that safeguards are in place before the cat is out of the bag, the toothpaste is out of the tube. To illustrate, in 1979 and 1980, COH began a policy of charging for parking in their parking lots. This policy violated the City's Land Use Code but COH did not comply with the code until they received a number of citations(October, 1979; March, 1980). Further, the City's Land Use Code requires a permit for a helicopter to land; as far as we know, the Hospital still does not have a permit but continues to land anyway. Lastly, enforcement at the state level has been equally difficult. The State CON office did ask, on three separate occasions, that COH submit a CON application. COH refused and the State did not enforce their regulations. The failure of COH to complete a CON is of particular importance, as this regulation is one that is cited in the Draft as a |9 |10

safeguard against helicopter proliferation and resulting escalating health care costs. If COH can avoid doing a CON, there is little hope that other hospitals will not do the same and the promise of a source of regulation is further undermined. (It should also be noted that there is currently a concerted lobbying effort designed to abolish CON requirements totally.) 10

In sum, we would like to see our concerns about regulation, enforcement, and jurisdiction addressed in the EIS. The "who, what, and how" of enforcement should be an integral part of this proposal, not only so that COH can be encouraged to fulfill its obligations and agreements, but also so that the EMS system in this region can continue to be viable and affective. It is not enough to say the an agency does not exist that can oversee this proposal. What is needed is a plan for an agency, a proposal for regulation and supervision, which will ensure proper and fair compliance with provisions and standards. 11

132

Signed,
Mara Chrisman
(EA)

MARV CHRISMAN

1. Comments acknowledged. With respect to the comment regarding the FAA's investigation of complaints, the full sentence as presented in the Draft EIS should be considered: "It is important to note that the FAA does give pilots discretion in deviating from the flight path; they will investigate complaints but would generally not take action on a complaint unless the pilot was operating in an inherently unsafe manner (Benedict, 1986)." The issues of compliance with conditional use permit criteria is important. The City of Seattle has the authority to impose conditions through the Council Conditional Use Permit.

2. The FAA is responsible for enforcing its standards.

3. Please refer to the response to Liz Anderson Comment #110.

4. Currently, there is no mechanism available to ensure that Airlift Northwest functions to benefit the region. To the extent that the consortium hospitals provide a service to referring physicians in community hospitals, the service provides a benefit to the region.

   Please refer to the response to Kate Hemer Comment #3, below.

5. In order to monitor the helistop's consistency with the City's requirement that the use of the helistop is restricted to life-threatening emergencies, Children's has proposed a medical review committee, which is described in Chapter III and Appendix C of this Final EIS.

6. See responses to Liz Anderson Comments #94, 161, and 162.

7. Please refer to the responses to Liz Anderson Comments #119 and 120.

8. The safety of the flight is the responsibility of the pilot. Please refer to the responses to your Comment #2 and to Liz Anderson Comment #119.

9. Your concerns are acknowledged. Please refer to the response to Liz Anderson Comment #51.

10. Children's has not submitted a Certificate of Need application because the State determined that one was not required. Subsequently, the State determined that helistops will not be subject to Certificate of Need regulations. Please refer to the response to Seattle Department of Community Development Comment #1.

11. Comment acknowledged. The development of a plan for a regulatory agency that would oversee the construction and operation of the helistop is outside the scope of this project review. Please refer to the response to Liz Anderson Comment #119.

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Thank you for your comments.

October 19, 1986

RECEIVED
OCT 21 1986
DEPT. OF CONST. & LAND USE

Holly Miller, Director
Dept. of Construction and Land Use
408 Municipal Building
Seattle WA 98104

Dear Holly Miller,

As you will note by my address below, I live across the street on the south edge of Children's Hospital. I am very much in favor of a helipad at the hospital to help children suffering traumatic health problems. The following are a few of my thoughts: 1

- Helicopter path and safety are controlable human factors. If the path is up 45th street at a reasonably high level and a quick decent to the pad, the noise is very briefly heard and safety to residences could not be a concern. 2
- Helicopter noise from those landing in the past has been no louder at my location than many of the street vehicles that go up and down 45th street. 3
- Helicopters are fun to watch even though it would only be a brief time at my location. And it is inspiring to know they are helping children. 4
- Please consider the south side of Children's Hospital for the helipad — in the area of the current play yard for children. 5

I am sorry to be so late with my comments and I was unable to attend the September 23rd hearing. When is the next hearing scheduled? I would like to support the helipad development.

Sincerely,

Rick Dam
4415 43rd Ave. N.E.
Seattle WA 98105
524-5590

work: 771-0570
Edmonds School District

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RUTH DAM

1. Your support of the helistop is acknowledged.

2. Comment acknowledged. Noise and risk impacts have been reduced from the original project through the introduction of a Preferred Alternative that reduces the number of flights that would land at Children's, thus reducing the number of flights that would follow N.E. 45th Street and Sand Point Way N.E.

3. Comment acknowledged.

4. Comment acknowledged.

5. Please refer to the responses to Liz Anderson Comments #145 and 147.

Thank you for your comments.

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September 28,1986

Ms. Holly Miller
Department of Construction and Land Use
408 Municipal Building
Seattle, Washington 98104

RECEIVED
OCT 6 - 1986
DEPT. OF CONSTR. & LAND USE

Dear Ms. Miller:

I would like to submit some comments and criticisms on the Draft EIS, submitted for a proposed helistop, by Children's Hospital and Medical Center. Most of my criticisms and suggestions center on the issue of safety; I have also touched upon the issues of alternative sites. Lastly, I comment on the presence of bias in this document. Because of the number of problems in all these areas, I would like to see the next follow-up document be a second, rather than final, draft. In this way, comments could again be taken from the community with the hopes that a better, more credible and complete EIS would be produced. 1

Thank you for your time and consideration of this matter.

Sincerely,
Ruth Engelberg
Ruth Engelberg
4717 45th N.E.
Seattle, Washington 98105

137

1. A set of standards has been proposed for the EMS industry. These standards should be responded to in the DEIS (Bill Roy, AirNet, May, 1986).A stated, they represent" MINIMUM objective factors which should be present for safe EMS operations: 2

1. Four pilots serving 12 hour duty periods-- with a mandatory ratio of one day off duty for every half-day worked.
2. Night weather minima outside of metropolitan areas of 1000 ft ceiling and 3 miles visibility. 3
3. A system of stability augmentation for all night flights that is certified for single-pilot IFR. 4
4. Lacking stability augmentation, night flights must be flown by two pilots. 5
5. Four thousand hours total helicopter flying time. More than aircraft handling proficiency is demanded in EMS flying; a well-developed judgement in operational decision-making, based upon long and varied experience, is necessary as well. 6
6. The EMS pilot must be licensed and recurrently trained in instrument flight proceudres." (Air Net, Hospital Aviation, May, 1986) 7

It should be noted that these guidelines were to be formally reviewed and released to the industry this past week. While we presently do not have a copy of the regulations passed by NEMPSA, they should be secured and responded to in the EIS. 8

2. A pumphlet LZ put out by NEMPSA has been described by Helicopter News (12:11), p.85, 1986, as" making a major contribution to safety in EMS missions". Yet, CCH's proposal for a helistop is 40x 40 sided; LZ recommends 60x60 sided, with 100x100 sided for night. The Draft should discuss the implications of their reduced size of pad and why they did not feel they needed to comply with LZ standards.There are so few authorities in this field, as noted in DEIS-- shouldn't they have complied with one which has surfaced? 9

3. Another concern with standards- Gene Hill, an ALNW pilot, states that their (ALNW) standards are stringent (p.69), yet these standards are not included, except for flying conditions (p.45). . In the EIS, therefore, the pilot standards (staffing, training, required hours flying) should be included. 10

Hill also states that "pilot discretion" is used in marginal weather (p.67). How will pilot decisions in marginal weather be made and assessed? This is particularly important, as a major source of accidents has been found to be pilot error in marginal weather (p.66). Further, NEMPSA contends that EMS safety would be improved if pilot discretion and vulnerability to flying pressures were reduced. This policy does not seem to help the pilot with reducing vulnerability. Could the EIS respond to these concerns? Further, COH itself points out, with references, that "the rash of accidents suggests that one reason for the accidents is the pilots' willingness to fly in adverse weather when other commercial helicopter pilots would not fly." As stated by Paul Procter, a business flying editor for Aviation Week and Space Technology, "Those guys absolutely hate the thought of losing a patient because they can't fly"(p.62). 11 12

Other pressures noted by NEMPSA- institutional pressures, nursing pressures, financial pressures. The EIS should discuss the chain of command and the safeguards which will ensure that safety is a first, not last, consideration. On p.42, the referral chain is indicated. Nowhere in the outline of steps is the pilot's decision concerning whether it is safe or unsafe to fly-- he is told to fly after all medical decisions are made. The next Draft needs to specify when, how, and who makes the safety decisions. In addition, when do these safety decisions come into play in the referral chain? 13

4. Alternative considerations- this section is very inadequate, particularly regarding the safety advantages of alternate sites. COH needs to answer these concerns.

For example, Bill Roy (AirNet, May 1986) states:"It is commonplace among our pilots that the situation they fear most to be placed in is that of powerless flight at altitudes over a severely restricted landing or takeoff area". Yet the ALNW pilots (and this is the only source) state that there is no advantage to an improved East Campus site(p.73). Are there other sources (objective) who would agree with this appraisal of the equivalent safety characteristics of the COH site vs. East Campus site? With the professional building to the East, the Hospital to the South and West, and residential homes to the North-- this site presents a restricted area. Further, a quote from Benedict in which he says the hospital site is as safe as the downtown sites does not qualify as an assessment of safety for the alternative East Campus site(p.72). Lastly, there are a number of East Campus sites that were not even discussed which might prove desirable alternatives; these sites should be considered, with attention to safety, noise, and cumulative impacts. For example, could the stadium provide a good spot for a shared helipad for COH and UW? It is lighted, big, provides a sound barrier, and is unobstructed. With the exception of football Saturdays (during which time helicopters could land at an alternative site), it represents an important alternative. 14 15

5. BIAS: Shouldn't the EIS attempt a little more objectivity? The considerations concerning safety are clouded by the use of biased, non-objective sources. None of these sources would be considered credible by researchers, because of their involvement in the program and a resulting conflict of interest. While there may be different sides to this issue, it is clear that the Draft has done little to illuminate the controversies, differences of opinion, and points of view that characterize the issue. For example, the statements (p.65) from the Agusta marketing representative on the safety of the Aguste is not particularly convincing. Are there other sources that could be used? Further, the statement on p.68 that "there is a general perception ...in the industry.. that overall safety has improved" contrasts with other statements from Airnet (January, 1986) "The accident rate we are experiencing in EMS aviation is horrendous". It should be noted that the support for the Draft's statement of improving safety is from Hill, an ALNW pilot. The statements from Poulton and Collette indicate that the industry is committed to improving safety through the new standards from ASHE,EAMS and NEMPSA. Is ALNW a member of these organizations? Will/do they comply with their standards--please include in EIS! Lastly, the table on p. 64 should be contrasted with a table from Airnet, January, 1986. The data are not different; they are interpreted differently. From Airnet, the information is more revealing about fatalities and injuries as due to pilot error vs. the interpretation by the Draft as due to mechanical error. 16 17 18 19

6. Enforcement, jurisdiction and regulation ensuring safety are considerations that have been overlooked in the DEIS. In the "Fly Neighborly" program,sponsored by Helicopter Association International, there are agencies that have been used to set up, monitor, and trouble-shoot helicopter programs, both before and after they are operational. Shouldn't these kinds of organizations be considered in the Draft, as part of the helistop plans? Ex. FAA Rotorcraft Task Force (Houston, 1981), Helicopter Safety Advisory Conference(HSAC0), HAI Heliport Development (From Rotor News, May-June, 1981/2), Houston Aircraft Facility Review and Appeals Board. 20

RUTH ENGELBERG

1. The SEPA guildelines provide for a Final EIS to respond to comments generated by the Draft EIS and to discuss any proposed changes to a project under consideration. DCLU has determined that a new Draft EIS is not necessary.

2. The standards presented in the cited article were developed by NEMSPA. Airlift Northwest flies with six full-time pilots and one part-time pilot. The pilots work either day or night shifts, with the day shifts occurring between 7:00 a.m. and 7:00 p.m., and the night shifts occurring during the remaining twelve hours. Pilots work for five days and are off for the following five days.

   Pilots can take off-duty time any time they request.

   These standards are consistent with the NEMSPA guidelines for Minimum Staffing Requirements and for Duty Time Limitations. Please refer to Appendix B, which details the conformance of Airlift Northwest with the NEMSPA guidelines.

3. Airlift Northwest operations are consistent with these weather minimums.

4. Airlift Northwest aircraft are equipped with stability augmentation systems.

5. Please refer to the response to Liz Anderson Comment #222.

6. Airlift Northwest pilots have a minimum of 3,000 hours of helicopter pilot time, 1,000 hours of turbine helicopter experience, and 100 hours of night flying time. Airlift Northwest requirements are consistent with NEMSPA experience requirements for total helicopter time and turbine helicopter time, however they are 150 hours less than NEMSPA requirements for night flight.

7. The Airlift Northwest pilots are IFR-trained and certified, and re-train regularly (are "instrument-current").

8. At the time of the preparation of the Draft EIS, the referenced NEMSPA guidelines had not been adopted. Appendix B of the Final EIS, however, does review the consistency of Airlift operations with the adopted NEMSPA and AAMS guidelines.

9. Please refer to responses to Liz Anderson's Comments #106 and 107, above.

10. A comparison of Airlift Northwest standards with those of NEMSPA and AAMS has been added to the Final EIS. Please refer to Appendix B.

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11. The pilot uses his/her professional experience in evaluating weather conditions and his/her judgment in determining what course of action is most prudent.

    It is acknowledged that pilot error in marginal weather conditions has been found to be a cause of helicopter accidents. An important contributing factor has been non-Instrument Flight Rated (IFR) pilots flying in acceptable weather and then encountering adverse weather conditions that warrant instrument flight capability.

    The policy of allowing the pilot to have sole discretion as to when to fly was designed with the specific purpose of providing the pilot the authority to decide not to fly in weather that he/she was not completely comfortable flying in, even if other weather/flight guidelines would indicate that the pilot could fly under those conditions. The policy does not give the pilot the discretion to decide to fly in weather that is less than FAA minimums. Therefore, this policy reduces the pilot's vulnerability to outside pressure to fly.

12. As noted in the previous response, Airlift Northwest recognizes that external pressures have contributed to safety concerns in other EMS operations. In order to reduce the pilot's vulnerability to flying pressures, the above-referenced Airlift Northwest policy was designed to give pilots the discretion not to fly in marginal weather (weather that is acceptable for flight under FAA guidelines); not discretion to fly in poor weather (that is, weather that is unacceptable for flight under FAA guidelines).

13. Airlift Northwest specifies visual flight rule (VFR) minimums for its pilots, including:

Mode of Flight	Ceiling	Visibility
Day Local Area	800 feet	1 mile
Day Cross-Country	1,000 feet	2 miles
Day Cross-Country (mtns)	1,000 feet	2 miles
Night Local Area	800 feet	2 miles
Night Cross-Country	1,000 feet	3 miles
Night Cross-Country (mtns)	2,000 feet	5 miles

    This is an Airlift Northwest policy and is not open to discretion on the part of pilots, administrators, medical teams, or anyone else. If weather conditions are better than the specified minimum, the Airlift Northwest policy is to fly. If, under marginal conditions, the pilot decides not to fly, there is no one who can override that decision and order the pilot to fly.

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14. Please refer to response to Liz Anderson Comment #244. Also, the discussion of the relative safety of the alternative helistop sites has been expanded in the Final EIS. Please see Chapter IV.

15. The alternatives were developed by Children's and DCLU. A number of helistop sites were suggested and evaluated by University Medical Center when they considered the development of a new helistop. Please refer to response to Liz Anderson Comment #142.

16. Please refer to response to Liz Anderson Comment #212. It is acknowledged that Sue Godar, the marketing representative with Agusta, has an interest in portraying the aircraft she sells in the best possible light. Therefore, her input was limited to the facts that she was able to provide on a single accident involving the Agusta, not qualitative judgments. The other sources used in the EIS are some of the foremost authorities in the nation on the subject of EMS helicopter safety.

17. When the original research for the Draft EIS was conducted (early 1986), there was an emerging awareness of the magnitude of the safety problem that the EMS helicopter industry had been experiencing. In early 1986, it had become apparent that 1985 had been a bad year in terms of the number of EMS helicopter accidents. The perception among the sources contacted for the Draft EIS was that, in general, the accident rate for 1985 was an aberration to an otherwise improving trend. Nonetheless, there was expressed concern that in the absence of strict safety guidelines, the rapid growth of the industry was causing the number of accidents to increase to unacceptable levels. Two trade organizations, NEMSPA and AAMS (see Chapter II of the Final EIS), began to research the problem and establish guidelines to self-regulate the industry. As 1986 progressed and the number and rate of EMS helicopter accidents continued to increase, the media examined the problem on several television news programs.

    The Final EIS has updated the information on EMS helicopter safety.

18. See responses to Liz Anderson's Comments #115 and 117, above.

19. The Final EIS contains updated information on helicopter safety.

20. Please refer to the response to Liz Anderson Comment #119.

    Thank you for your comments.

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ALBERT A. FELDMANN
P. O. BOX 88568 UNIVERSITY STATION
SEATTLE, WASHINGTON 98105

9-2-86

RECEIVED
SEP 08 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Director,
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Sir/Madam,

With reference to the application for construction of a Helistop Facility accessory to Chidrens' Hospital and Medical Center,I want to protest such a construction in the strongest terms ,both as individual resident within a few hundred feet of the hospital and as Vice-president of the Laurel Crest Condominiums Home Owners Association. 1

While pretending that the use of helicopters to ferry patients to the hospital is resorted to only in emergencies,the C.O.H. administration has demonstrated the untruthfulness of that claim by arranging for almost daily helicopter landings on its grounds during the month of August, including one at around midnight during a recent weekend. To the best of my knowledge ,C.O.H. has no permit for such landings and is constantly violating ordinances of the City of Seattle .Why do you and our elected officials remain silent in the face of such overt lawbreaking by a politically powerful organization ? The recent spate of crashes by helicopters used for ferrying patients and the disastrous effects of such a crash on the lives of people residing in a densely populated part of the city,should be enough reason to outlaw even a single landing of a helicopter on the grounds of C.O.H. .In addition to which the noise of the helicopter is deafening and certainly wakes up anyone trying to sleep at night. 2 3 4 5

The original reason for C.O.H. to locate in the Laurelhurst area was to get the benefit of a quiet neighborhood.If,some decades later, the goals of C.O.H. have changed and helicopter service for patients has become an indispensible marketing tool in the competition for patients ,then Childrens' Hospital must move to where such services will not interfere with the lives and the tranquillity of people living in a quiet neighborhood.The fact that Childrens'Hospital is out there aggressively campaigning for more patients is clear to all of us who watch its advertisements on Television and its fullpage advertisement in magazines such as Newsweek 6 7

Sincerely yours,
Albert A. Feldmann

cc. Mayor Charles Royer

4873 Terrace Drive NE
Seattle,WA 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

ALBERT FELDMANN

1. Your opposition to the construction of the helistop is acknowledged.

2. There were a total of 17 patients transported by helicopter to Children's in August 1986. Five of these transports landed outside the entrance to Children's Emergency Room. The remainder landed at the Intramural Field (1) and Harborview Medical Center (11).

   Dr. Nicola's (1987) review of patient transports resulted in the following determination: "review of case files of the children flown directly to Children's indicates that with one possible exception, all presented life-threatening conditions that warranted transport right to the doors of the hospital. Review of 30 additional randomly selected cases flown by helicopter to Harborview for ground transport to Children's shows that all cases met the State's proposed criteria for use of air transport but were less severe than those flown directly to the hospital" (Nicola, 1989). The choice of the most appropriate landing location was the professional judgement of the attending medical team.

3. See response to Liz Anderson Comment #51, above.

4. It should be noted that the majority of the accidents that have occurred have been located at a distance of more than one mile from the host hospital. It should also be noted that it appears that the safety record of EMS helicopters has improved dramatically since 1986. There never has been a ground fatality associated with an EMS helicopter accident. See Chapter IV of this Final EIS for revised information on helicopter safety.

5. See responses to Liz Anderson Comments #260 and 261. As noted on pages 83-84 of the Draft EIS, nighttime helicopter landings at Children's would be expected to awaken approximately 15% of a normal population. That figure could be as high as 30% for those residents immediately surrounding the landing area, depending on existing sound levels, whether windows are open, and other factors.

6. Comment acknowledged. Please refer to the response to Liz Anderson Comment #23.

7. It is acknowledged that Children's does advertise day surgery and other services. Air ambulance service has not been advertised, nor does Children's intend to use the helicopter service in its advertisement of services.

   Thank you for your comments.

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✓

To: Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Wash. 98104

OCT 17 1986

From: Anita Francis, Ph.D.
5003 45th N.E.
Seattle, WA 98105

October 15, 1986

Comments on the Draft Environmental Impact Statement for a helipad proposed by Children's Hospital of Seattle

(Page numbers refer to the page of the DEIS).

Page 2. "The patient would be removed from the helicopter, placed on a gurney, and wheeled to the E.R. entrance." COMMENT: How much distance is involved in this transfer? What personnel are involved and where do they come from? How is the patient protected from hypothermia, wind from the helicopter, and rain and snow? How much time is estimated to be involved in the patient transfer with this COH campus landing site alternative? [1] [2]

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Page 2. "Impacts on patient outcome are expected to be more favorable under the proposed action (i.e. landing at Children's) than under the Intramural Field Helistop Alternative (or the other alternatives)." COMMENT: What are the data on patient outcome from those transported to the E.R. door? Since Children's has been landing patients at the E.R. door, this experience should be examined. [3]

Page 2. "The increased time of transport and increased manipulation of patients that would result from any of the alternatives other than the proposed action would result in suffering, the need for prolonged treatment, or even death." COMMENT: Are there ANY supporting data for these comments? [4]

Page 3. "...the noise...would not cause significant impact during daytime hour(sic), when three-quarters of the patient transports are expected to occur." COMMENT: Please explain how the hospital can make this prediction that 3/4 of the life-threatening emergencies will occur during daytime hours. Don't many emergencies occur at night? If not, why not? [5]

Page 3. "Any alternatives to the proposed action could result in ambulance sirens being used between the landing area and Children's. These sirens are approximately as loud as the helicopter." COMMENT: We have seen, in DCLU files, an agreement between the city and COH that the sirens would not be used as the ambulance approached the hospital. What has become of that agreement? Is it no longer being honored, or would it not be honored in the future? Also, as a neighbor of CHH, I can attest to the fact that the sirens are NOT as loud as the helicopter; the assertion to the contrary is ridiculous. [6] [7]

Page 3. Safety Impacts.--"The worst case expected statistical frequency of a helicopter accident...would be one in every 5,459 flights, which, assuming an average of 20 patient transports a month, translates to a worst case of an accident occurring once every 23 years."

COMMENT: Isn't this 80 flights a month, i.e., 20 x 4 landings or takeoffs which would decrease the ratio to 1 in 1366 or once every 5.75 years? [8]

NB: I have an additional comment on the expectable crash rate in my comments relevant to page 62 of the DEIS.

Page 4. "Potential for cumulative impacts...at additional Seattle area hospitals...City land use criteria...limit the use of helistops to facilities that can demonstrate that the helistop is needed to save lives. (Only a few Seattle area hospitals...are routinely involved in treating life-threatening emergencies.)"
COMMENT: Most hospitals would disagree. They are involved in treating life-threatening emergencies! 24-hour emergency care is given at Auburn General, Ballard Community Hospital, Highline Community Hospital and others listed on page 11 of this DEIS. A complete list is available in the Journal of the American Hospital Association guidebook issue. [9]

Page 7. "Children's...with 1050 active physicians..."
COMMENT: How many physicians at Children's Hospital provide tertiary care, which is the topic of this DEIS? Does the 1050 figure include courtesy staff and other who are not involved in providing care on a daily basis, and indeed, may rarely set foot in Children's Hospital? [10]

Page 7. "A summary of 1984-1985 cases indicate that of the 621 Children's patients affiliated with the Blue Cross system, 54% were categorized as unique cases (defined as patients diagnosed with illness or medical need common to no other or one other patient affiliated with the Blue Cross system)."
COMMENT: The meaning of this statement is unclear. Were these cases trauma or life-threatening or just "unique" and unrelated to this proposal? [11]

Page 7. "Children's neonatal intensive care unit (NICU) has 19 beds, the NICU at the University...Hospital has 12 beds. The only other NICU beds in the Puget Sound area are the 12 located at Tacoma General."
COMMENT: How many NICU beds are there at Swedish Hospital? [12]

Page 8. "Traumatized and severely burned children in the Puget Sound region generally go just to the region's recognized trauma center, [13]

Harborview..., but may be transferred to Children's for follow-up surgery or treatment and stabilization."
COMMENT: Harborview is fully capable of stabilizing patients requiring it. Patients would not be transferred from Harborview to COH for stabilization! 13

Page 10. "It is the opinion of the Seattle-King Co. Dept. of Public Health that any recommendations be used as guidelines and not standards. (Nicola, 1986)." COMMENT: We have not had access to this information. Has this been written, or is it verbal? What is the context in which the comment was made? What does Dr. Nicola mean by "guidelines" and "standards" here? In Dr. Nicola's report to Beatrice Ryan, Acting Dir. of DCLU, Dec. 4, 1985, Page 6, he states that "If a helistop were being used for purposes outside those expressly permitted, I believe it would be appropriate to revoke the permit at the end of the six months." If he does feel that there can only be recommendations, to be used as "guidelines", then how can "purposes outside those expressly permitted" be defined and enforced? Please discuss this dilemma, and provide the documentation to Dr. Nicola's comment as cited on page 10, DEIS. 14

Page 11. "Only 2 hospitals--Children's and University--offer neonatal services."
COMMENT: Why is Tacoma General Hospital not listed here? It is listed on page 7, paragraph 4 as having a neonatal intensive care unit. 15

Page 12. "Pediatric emergency services involving critically ill or injured patients are generally referred to Children's."
COMMENT: Since pediatric trauma cases go to Harborview and Tacoma General/Mary Bridge Children's Hospital has a pediatric care unit, this statement is inaccurate. 16

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Page 12. "Air transport provides a rapid method for getting the appropriate medical help to the patient, not that the patient gets to the hospital quickly. (Call, 1986a)."
COMMENT: This is an important point that seems to be glossed over in by Children's Hospital in terms of their objectives for citing the helipad at their hospital E.R. doors. 17

Page 12. "Guidelines to assess need for helicopter transport." ...c. Major medical problems in a pediatric patient where time is critical for the survival of the mother and/or baby."
COMMENT: For those cases where the patient was landed off at the COH ER door, what was the survival data and the mortality data? 18

Page 13. "Under no circumstances should paramedics request dispatch center to get comparative estimated time of arrival from MAST and Airlift Northwest." COMMENT: I do not see the rationale or logic for this. If time is so important as stated throughout this DEIS, why wouldn't comparisons of time be relevant? 19

Page 13. "The Korean conflict was the first to recognize the helicopter's role in providing care..."
COMMENT: This is such a specious argument! Ground transport is hazardous during a war. Also, there were few roads and ground ambulances available in the war zones! To compare the Seattle situation with the Korean and Vietnam situations is ludicrous. 20

Page 13. "The first civilian helicopter ambulance service in the U.S. was initiated in 1972 at St. Anthony's Hospital in Denver."
COMMENT: How relevant is St. Anthony's experience to COH? Does St. Anthony's have a PICU and a NICU, level III? We understand that the helicopters take off and land at St. Anthony's and patients are transported by ground to Denver Children's Hospital or one of the other 2 nearby units. Also, nurses, not physicians conduct these transports, and terminally ill patients or newborns are not transported back to the hospital.
Please explain some questions which have arisen as a result of comparing COH's statistics to date with the Denver experience. Although the Denver hospital had 125 primary emergencies from August 1979 to February 1980, (a) only five were transported by helicopter and (b) only 14 of the 125 transported patients died after being admitted to the receiving hospital. (Dobrin, R., et al., "The Development of a Pediatric Emergency Transport System" Pediatric Clinics of North America Vol. 27, No. 3, August 1980, pages 40-41). The DEIS for COH shows a much higher rate of transport (i.e., 15-20 per month) and many more patients expiring. For example, on page 16 of the DEIS is a listing of some of the cases transported by helicopter to COH. 10 of the 21 cases presented in this listing died; 2 of the 10 went to Boeing, the other 8 went directly to COH and yet died anyway. Please explain why COH's statistics are so different from Denver's, which has a comparable population. Is it true that Airlift Northwest transports any and all regardless of the chances for survival? If so, doesn't that make it more of a business than a health service? 21

Pages 14-16. Table 2, entitled" Key characteristics of critically ill patients transported by Airlift Northwest helicopter directly to Children's". COMMENT: Although the speed of the helicopter is cited as a critical factor in providing optimal care, consultation with physicians shows that about 40% of cases which could have been treated at Mary Bridge Children's Hospital of Tacoma were flown over that hospital and taken to COH, even though that lengthened the trip and the time to obtain care. We would like an explanation of why the following cases would not have been better served by being treated at Mary Bridge/Tacoma General: 22

admitting date	referring city	presenting condition	current status
1.8/85	Chehalis	Fulminating meningitis; coma; neurologically damaged	Disch.home
2.11/85	Olympia	Subdural hematomas;	Disch.to hosp.
3.12/85	Bremerton	Severe lung dis.; overwhelming infection; respiratory failure	expired
4.12/85	Chehalis	Pneumomediastum	Disch. home
5.2/86	Grays Harbor	Near Drowning	expired
6.4/86	Federal Way	Near drowning	disch. home
7.6/86	Auburn	Chemical ingestion; respiratory distress	disch. home
8.6/86	Bremerton	Born to diabetic mother. Increasingly severe respiratory distress, acidutic.	still at COH

Of the 21 cases shown in Table 2, of the DEIS, the above 8(38 %) could have been treated at Tacoma General/Mary Bridge Hospital in terms of that hospital's capabilities. All of them were located at a site nearer Tacoma than they were to COH.

Page 17. "Surgical emergencies in the child, as well as infections, near drownings and trauma, are some of the conditions that need immediate intervention. Since time is critical, transport time has a direct bearing on the patient's prognosis. (Neff, 1986)." COMMENT: Is it possible to get a knowledgeable, unbiased judgement of this? We have been told by physicians who are experienced in emergency pediatric care, that the care needed for infections is not a matter of minutes, hours of time lapsing wouldn't be good, but a few minutes is not going to make a difference here. With near drownings, physicians tell us that the nearest hospital is the most appropriate one in which to give care and that "CPR is not all that sophisticated, and getting the patient warm will be done much more expeditiously in any hospital than in a helicopter." Finally, we know that trauma cases go to Harborview, not COH, so that condition does not belong in this list. Please comment. | 23

Page 18. "Table 3. Comparison of elapsed time for transport of a patient from Enumclaw to Children's Hospital."
COMMENT: Tacoma General is much closer to Enumclaw than is Children's. For all but heart surgery cases, Tacoma General's capabilities are similar to Children's. If speed is so essential, why was this case not taken to Tacoma General/Mary Bridge Children's Hospital? | 24

Page 19. Dr. Nicola's report cites "several studies that relate severity of illness to need for transport." These studies show mortality rates of 6%, 9% and 17.9% for these patients transported by helicopter.
COMMENT: Table 2, page 14-16, shows a mortality rate for cases helicoptered to Children's of nearly 50%. Is this because terminal patients are being (inappropriately) transported? | 25

Page 19. "Retrospective analysis of the data available to the tertiary care center at the time of the decision to transfer the patients by air revealed that it was not possible to differentiate those patients who did not benefit from the service from those for whom the service was judged essential or helpful."
COMMENT: But who was evaluating the patient? Was it an M.D. or an EMT? This is an important question in evaluating the relevance of this citation. | 26

Page 19. Dr. Nicola's review of the literature consists almost entirely of studies of trauma victims. It is misleading to include them here; they should not be included in the FEIS. | 27

"Dr. Nicola also concluded that of the ten patients that he estimated would be transported to Children's by helicopter each month, an estimated three or four" 'may have a medical need for helicopter transport to the doors of the hospital' (Nicola, 1985))"
COMMENT: But on page 1, COH states 15 to 20 transports of critically ill children would need to be transported each month. Why is there such a discrepancy? What is the basis of Children's prediction? | 28

Page 20. "Helicopter transport in the central Puget Sound area is provided by two general services:" COMMENT: There are many more services listed in the Seattle Yellow Pages, plus there are the Coast Guard and Navy helicopters. Please include a list of all of those in the FEIS. | 29

Page 24. "The medical transport team of ICU physicians and nurses are based at Harborview, except for the pediatric team, which is based at Children's. When not flying, the pediatric medical transport team members work in the ICR at Children's."
COMMENT: The DEIS statement suggests that the physicians on the transport team are intensivists. However, this is not the case. The transport physicians are "moonlighting" pediatric residents and fellows with quite variable backgrounds. Unfortunately, these less experienced physicians are the ones who make the decision to land at the L.H. door. Please comment on this situation and show how the decision about where to land can be made by those with seasoned, careful judgement, avoiding abuse of the helicopter service. | 30

Page 36. "Transports would be limited to critically ill patients as determined by the referring physician/medical team in consultation with Airlift Northwest and/or Children's medical personnel."
COMMENT: This is a very important statement. What education about appropriate use of helicopter transport is being provided for referring physicians? What protection and guidelines will be followed so that the referring physicians do not feel pressured to order helicopter use simply in order to avoid malpractice suits? The DEIS states that any recommendations would be used as guidelines and not as standards. (DEIS, page 10). How can this be adequate protection to the referring physician and conversely, how can this be adequate to avoid the misuse and overuse of the helicopter? | 31

Page 42. "The Airlift Northwest Medical Director and/or physician assesses whether helicopter transport is warranted and, if so, provides the referring physician with an estimated time of arrival (ETA)." COMMENT: Dr. Copass, in statements made to the Laurelhurst Community Club Executive Board, stated at least twice that his role in Airlift Northwest dispatching is as a facilitator and that he never says "no" to physicians requesting the helicopter service. Dr. Copass said, "We are here to provide a service. We don't say "No." Dr. Copass' statements can be verified by witnesses as well as notes taken at the meeting when he made the statements. Please comment. How many referring physicians actually have been "dissuaded" from using the helicopter? | 32

It is also obvious from these statements that there is no screen in operation that is designed to sort out the non-emergency from the emergency patients. At Washington Hospital Center, the MedSTAR Director, Dr. Howard Champion, has developed a 10-page checklist which must be completed before a flight is approved by WHC management (Rotor and Wing International, December 1985, page 36). What sort of written guidelines does Airlift Northwest have? How do ALNW guidelines compare with those of Washington Hospital Center and other hospital based helicopter services? | 33

Page 42-43. The amount of time the helicopter spends on the ground at Children's Hospital varies greatly. It is NOT atypical for it to remain on the ground 30 minutes. During that entire time, we anticipate another pass over us, but we don't know when it is going to happen. Also,we hear the helicopter coming when it is quite a distance away and hear it for a long time as it leaves; sometimes it circles and rarely flies straight in to the landing pad. Thus, its presence is felt much longer than the minimal time alleged in the DEIS. 34

Page 43. As has been mentioned repeatedly by residents living near COH, the helicopter follows a highly variable flight path. 35

Page 49. "Children's is moving the location of its oxygen tank, thereby minimizing that potential hazard." COMMENT: COH had planned to enlarge the oxygen tank and leave it at its present location and only after adverse publicity and much concern raised by nearby residents were they finally convinced to move it! This is a prime example of the lack of concern for safety on the part of the COH administration. Please explain honestly and openly how the decision to move the oxygen tank was made. 36

Page 49. "The helistop will incorporate a fire-prevention system. Please describe this in detail. We are vitally interested! We know that the Fire Chief in Bellingham made extensive study the proposed helipad in that city and made stringent requirements. What are the details of COH's plan? 37

Page 49. "Children's has agreed in principle to the development and participation on a review panel composed of physicians and others involved in helicopter transport..." COMMENT: It is crucial that consumers and nearby residents be included on this panel. 38

Page 50. "In that Airlift Northwest would use a standard approach (as opposed to a noise abatement approach) for any of these approach patterns..." COMMENT: Please explain what is the difference between a standard approach and a noise abatement approach. Is the latter not as safe as the former? Are we being asked to trade off our safety for the noise? Isn't this an indication of the basic lack of safety of the COH landing site at their E.R. doors? 39

Page 52. para. 3, last sentence. "Exposure to adverse weather and/or field conditions increase(sic) the potential for destabilization (Andrews, 1986)." COMMENT: On page 45 of the DEIS, it is stated that the helicopter would not fly with adverse weather conditions. Please explain this apparent discrepancy. 40

Page 52. "Delays in treatment of other patients, while perhaps not a life or death situation, could result in suffering, the need for prolonged treatment, permanent disability or other unfavorable outcome." COMMENT: There seems to be a very basic problem here with keeping things in persepctive. We can't afford to do everything for everybody. We can't have a hospital on every corner to prevent needless death and suffering. Cutbacks in the availability of care IN LARGE PART BECAUSE OF THE INCREASED COST OF CARE, have also increased suffering. We know that there have been most unfortunate cutbacks in public funds for prenatal care, which will result in more neonatal problems. If Dr. Nutt is concerned about decreasing pain and suffering, any competent physician can give him a list of programs that will do more to decrease pain and suffering, for the amount of money spent, than more helicopter rides will do. 41

Page 53. "this alternative does not meet the proponent's objective to minimize transport time and the number of transfers." COMMENT: If the proponent is so concerned to minimize transport time, why do they not join with other area hospitals and develop a regional plan that will assure that care is given at the closest hospital that can appropriately give the care; i.e., develop triage guidelines? If the concern is to limit the number of transfers, why not use ground transport--then there will be no transfer at either the referring hospital nor the soccer field? 42

Page 57. Does DCLU concur with COH's interpretation of the Washington Administrative Code as presented here? This is a key point in this issue. 43

Page 58. "The potential for non-aircraft property damage or personal injury is probably the least under the secured Intramural Field Helistop Alternative followed by either Children's or the hospital helistop locations." COMMENT: The safest place should be used for landing; as agreed to by the proponents here, the Intramural Field is the safest. 44

Page 63. Major vendors are defined as vendors serving three or more hospitals. COMMENT: Number of hospitals served seems like a less relevant figure than the number of flights per year. Use of that distinction makes this entire section seem of questionable value. 45

Page 64. "In familiar landing areas, pilots and support teams know the locations of wires and obstacles and are careful to avoid them." COMMENT: We are well aware that the Airlift Northwest flights, as well as those of other vendors, come in at greatly variable directions--we've seen every direction so far--so, it they would not know the ground hazards to avoid. Often the visibility is very poor, too, since the hospital and its surrounding area is located at the top of a hill, and often has mist around it. Also, the flights do come in at dusk and at night, when visibility is almost nil. 46

Page 67. "Gene Hill...noted that under bad weather conditions, such as the fog that enveloped Seattle in December of 1985, the company does not fly at all. In fact, during that fog, Airlift Northwest refused to answer twenty calls over a two week period because they did not believe it was safe to fly." COMMENT: Here is an opportunity for a limited research study! Have the records and outcomes of the 20 patients who were not flown in been compared with patients who have been helicoptered in? What did the comparison show? What was the patient outcome of this inability to respond to the calls for the helicopter? 47

Page 68. A marketing representative with Agusta is quoted as a source of information about the Agusta accident rate. This is hardly a credible source of information. In fact, there are too few Agustas 48

currently flying to allow any generalizations about their flight safety record. Attempts to claim that the Agusta is exceptionally safe cannot be accepted until proven. | 48

Page 69 (Dr.Poulton) "speculated that some of the smaller programs operate on; more restrictive budgets that might affect their judgments regarding which flights to take and which flights not to take." COMMENT: We are concerned that the parent company of Seattle Jet, which operates Airlift Northwest, is Thousand Trails which has been having financial difficulties. What assurance is there that the maintenance of the Airlift Northwest helicopter is not compromised to save money for this (failing?) company? We know that other airlines have cut back on maintenance, which is directly related to aircraft safety, when their budgets were in deficit. | 49

Page 71. Table 14. Expected frequency of accidents for helicopters transporting patients to Children's.
COMMENT: The statistical frequency of accidents in years, is the result of a number of assumptions that are made. I will first discuss the assumptions and then show the result of using more accurate figures in those assumptions.

1.Length of trip: The DEIS uses the figure of 48 minutes. 77 minutes appears to be a more accurate figure. Exhibit 1 is a copy of the ALNW flight logs for rotary wing aircraft to Children's. Using their figures, adding them and obtaining the average time, the result is 57.28 minutes round trip. The trip from Boeing to CDH and from CDH to Boeing is more like 10 minutes each way, according to Table 2 on page 14 of the DEIS. 57 plus 20 = 77 minutes. | 50

2.Number of flights per month: Since this is a worst-case scenario, why wouldn't the figure of 40 flights per month, as mentioned in the Nicola report (letter to Beatrice Ryan, page 5, para 4) be a more accurate figure to use? | 51

3. Accident rate: In the Table 14, a number of rates are given. Since we are not concerned here with general aviation, rates for lines 1. and 2. and 3. are irrelevant. We are not concerned only with ground fatalities, nor wiith only fatal accidents, so lines 4. and 6. are also irrelevant. ALNW is hardly a major vendor, as discussed above, so line 7 is not relevant either. Line 5 is the only relevant accident rate--22.9 per 100,000 flight hours. | 52

If we use those figures we get:

97 x 40 = 3880 ÷ 60 = 64.6 (615.9)

100,000 ÷ 615.9 = 162.34 years

÷ 22.9 = 7.08 years between each accident.

Page 73. "Children's could contact Washington Natural Gas to discuss the possibility of receiving the necessary equipment..." COMMENT: I | 53

wish to point this out as a much too casual approach to the question of safety. I would think that they would want to do everything they could to ensure maximum safety. SThat they COULD contact the gas co. is not very reassuring. | 53

Page 83. "The report assumed 20 patient transports or 40 round trip flights per month." COMMENT: I wonder why they didn't assume 80 trips over the community. They have stated (in the DEIS) that each patient transported would result in 4 flights over the community. | 54

Page 87. "...The helicopter noise..would not cause significant impact...due to its infrequent short-term nature." COMMENT: The noise is not very short term. The approach and the departure are noisy and continue for some time. It is not just the point at which it passes over a residence that the helicopter is noisy. Also, this noise study does not take into account the fact that we do like to be outdoors and the helicopter noise is very disruptive then. | 55

Recently, a helicopter landed at 11:30 p.m. and then left at 12:45 p.m. Another landed at 3:30 a.m. and left around 4:00 a.m. I can assure you that more than 15-20% of the persons residing in the closest, line-of-sight residences were awakened! People on the other side (south) of the hospital were awakened both times, as well as people all around the hospital. A poll would readily show how inaccurate the statement is of only 15-20 % disruption rate. | 56

Page 88. "to avoid existing trees." COMMENT: In the interest of safety, why hasn't CDH removed these trees" | 57

Nicola letter to B. Ryan, Attachment 1: This table states that 63% of the cases were admitted to "intensive/advanced care" Why are the advanced care unit cases included in here? According to the Directory of Professional Services, (Children's Orthopedic Hospital and Medical Center, page 36), "The 23-bed advanced care unit is used for less critically ill convalescing children." It is not appropriate to fly in convalescing children, is it? Also, please explain why it was necessary to use helicopter transport for the following categories listed in attachment 1: Advanced Care Unit, Infant Floor, Surgical Floor, Medical Floor, Adolescent Floor, NMC, UH L& D, Return Flights. If these are examples of the types of patients being flown in, a description is necessary. Otherwise, it looks like only about 50% of the patients go to Intensive Care Units and therefore are the only true life-threatening emergencies being transported. | 58

Dr. Howard Champion, MedSTAR Director, and Dr. Ken Mattox, Director of Emergency Surgical Services at Ben Taub Hospital in Houston and Professor of Surgery at Baylor College of Medicine, Houston, Texas, have developed a list of standards for EMS coordination. These are applicable to ALNW and we wonder how many of them have been actually put into place and if not, why not? Here is a partial list of the standards as they applied to ALNW:
1. How does ALNW coordinate with existing services? EMS services already exist in this area and resultant rivalries and "turf wars" must be avoided as they lead to confusion, conflicts, and increased costs. | 59

(a) We have seen that 21% of ALNW helicopter flights were within 70 miles of COH. How is that justified in terms of availability of MEDIC I in less than 10 minutes in some of these same areas? 59

(b) How can conflict between ALNW and MAST be avoided? What kinds of agreements do they have? What is in writing? 60

2. Are regular audits of the air-ambulance system taking place? These would provide a degree of quality assurance. Some experts suggest forming advisory panels. 61

3. What are the specific medical and surgical criteria for determining when an air ambulance (vs. ground equipment) should be used? Most air ambulance services have specific criteria in place. Does ALNW? If not, why not? 62

4. How are problems related to the legal implications of not using a helicopter to transfer a child going to be handled? 63

5. To assure that MedSTAR flights (out of Washington D.C.) only take place when there is a real need, a 10-page checklist must be completed before a flight is approved. (Some helicopter programs fly in order to keep the hours up and the program looking o.k. in a budget sense, rather than based on real need.) What is the procedure at ALNW? 64

6. What are the realistic time-and-distance relationships for the region to justify the use of an air ambulance? 65

QUESTIONS ABOUT SAFETY:

Throughout COH's recent history, they have displayed a lack of concern for safety problems:

--Why haven't they removed the tree(s) near the COH landing site, especially since they say they will continue to allow helicopters to land there, in spite of what DCLU decides? 66

--Why haven't they shown real concern over the gas meter located 48 ft. from the landing site, and not just suggest that they might talk to the Gas Co. about specific factors, but go ahead and do it without being asked to. 67

--Why weren't they willing to move the oxygen tank located contiguous to the proposed helipad? In fact, why didn't they assume a proper level of responsibility and foresee the problem before nearby residents did? 68

--Why do they not have a trained observer at the hospital who could inform the pilot at Boeing Field as to what the visibility/weather conditions are at COH, which might be very different from Boeing? 69

--Why didn't they inform ALNW personnel about their proposed medical office building, to be located only about 100 ft. from the proposed helipad and which would impact the landing conditions? The opinions of the ALNW and the flight crew would seem to be an important consideration. But COH has apparently ignored this. 70

--Why haven't they done a better job at training the guards who supervise the landings? They are now doing a better job of keeping pedestrians away from the helicopter, but during the first 6-9 months, they did not seem to know what was really expected of them. Also, why isn't there some sort of rope that could be quickly set up as a fence, to mark off the area? Generally, only one lone guard is standing there, directing the pedestrians and cars. Signs and props are needed to help that guard. Why haven't they been supplied? 71

--Have safety measures, such as fire extinguishers near the helicopter landing site, been installed? 72

If COH is displays such a lack of real concern for the safety of the landing area, what assurance do we have that other safety measures also won't be "overlooked?" COH has a responsibility to avoid overshadowing the obvious excellence of their care with this new technology that they seem not to understand. 73

Airlift Northwest is trying to claim some special exemptions from the poor safety record of the hospital helicopter services in the U.S. However, ALNW pilots will have the same stresses on them to save lives as other pilots do, and there is a lot of trouble with poor visibility in this area. How many foggy days and how many days with wind greater than 20 knots have been recorded in various parts of Puget Sound? The answer will give an indication of the weather problems faced around here. 74 75

Who does the maintenance mechanic who services the ALNW chopper work for? Is she/he part-time or full-time? What are his/her qualifications? Does the mechanic meet the ASHBEAMS standards? These include: "should possess 2 years of experience and must be a certified air frame and power plant mechanic. ..must be properly prepared and trained in a factory-approved program to maintain the aircraft designated by the flight service for its aeromedical program,...must be assigned to the flight service as a first priority of responsibility." 76

Do the pilots also meet the reasonable guidelines set forth by ASHBEAMS? 77

Since the number of flights that COH has will effect the safety and environmental impact, we are very concerned about the projected number. How does COH arrive at the number of 15-20 flights per month? Why does this differ from Nicola's statement that there might be 30 to 40? 78

If COH develops into a trauma center, wouldn't the number of flights increase dramatically? In COH's Directory of Professional Services, on page 21, Emergency Room Services, it is pointed out that "The Emergency Room provides 24-hour immediate care for children...it is especially equipped to handle all types of pediatric emergencies, including those of a major medical and surgical nature, as well as trauma." Nancy Greenawalt, in a letter to the Laurelhurst Community Club liaison committee, states that Mr. Katz, CEO of COH, has determined that COH will develop into a pediatric trauma center. How likely is COH to develop into a trauma center and when will it do so? What would the impact of the trauma center on the helicopter service be? 79

CONCLUSIONS

this hospital is not ready to be granted the right to have a helipad at its door. A feasibility study is needed which would show tangible benefits and numbers to show that it is worthwhile over the current system. 80

It is difficult to think of how such a system could be monitored without the baseline data that are so lacking in the DEIS. Once the service to the door of this hospital is established, it will become the standard of care. But, in fact, it hasn't been proven that it is beneficial and it may even be harmful to some patients, such as neonates and patients with pneumothorax. Unless the helicopter's value is proven or disproven, physicians will not have any defence in malpractice suits of saying that there's no proof of its value. A sequential randomized study could be conducted which would help to esblish the worth of this service. 81

We are concerned that the request for a permit to use the COH site could lead to abuse in terms of stretching of the meaning "emergency," as already shown by Dr. Neff throughout the DEIS. Our concern arises because of the whole past history of this matter and our perception of past abuses by COH--flying over Tacoma General/Mary Bridge Children's Hospital, flying in non-viable cases, and flying in cases who did not go to the intensive care units, specifically. 82

We ask that approval be <u>denied</u> for the following reasons:

a. The site for which the permit is being requested is not as safe as a nearby site, on the intramural fields, would be.
b. The helicopter has been used with increasing frequency to deliver "emergency" cases. We anticipate that this trend will continue. In years past we only had 5-6 flights per year, now, all of a sudden, COH finds it necessary to fly in as many as 17 in one month.
c. We are not convinced that the cases landed so far have benefited from landing at the COH door. No hard data are forthcoming to convince us of this. 83

Thank you for the opportunity to respond to the DEIS.

Anita Francis

Flight Information from ALNW logs

"46 COH - Rotary Wing"

1985	From	Hours	miles
5-11	Anacortes	0.9	120
5-25	Chehalis	1.1	123
6-8	Bremerton	0.4	34
6-22	Anacortes	1.0	118
7-1	Bellingham	1.2	174
7-16	Monroe	.4	43.8
7-26	Renton	.5	27.8
8-2	Omak	2.1	253
8-3	Bremerton	.6	43.4
8-11	Mt. Vernon	.9	113.6
8-14	Port Townsend	.8	81.6
8-20	Forks	1.9	215.8
8-27	Chehalis	1.2	141.5
9-15	Bellingham	1.3	174
9-16	Port Angeles	1.1	118.4
9-17	Enumclaw	0.5	59.8
9-20	Port Angeles	1.0	105.6
10-2	Bellingham	1.3	148.4
10-3	Bremerton	0.4	34
10-5	Aberdeen	1.5	157.6
10-10	Bellingham	1.4	147.6
10-31	Searo Woolley	1.2	114.8
11-10	Winslow	.4	25.6
11-11	Aberdeen	1.0	157.6

1985 (cont.)	From	Hours	miles	
11-11	Bremerton	.4	32.2	
11-19	Auburn	.6	52.8	
11-19	Bellingham	2.1	153.6	
11-19	Port Angeles	1.2	115.6	
11-21	Auburn	.7	52.8	
11-24	Oak Harbor	1.0	100.0	
11-27	Bellingham	1.2	148.4	
11-28	Olympia	.9	94.4	
11-28	Port Angeles	1.0	117.8	
12-4	Bremerton	0.4	38	
12-7	"	0.4	32	
12-13	Chehalis	1.2	133.6	
12-16	Port Angeles	1.0	114.8	
12-22	Mt Vernon	1.0	113.6	
12-27	Aberdeen	2.1	147.8	
12-31	Olympia	0.8	127.6	
1986				
1/3	Bremerton	0.4	47.6	
1/9	Centralia	1.0	129.6	COH (via Home)
1/12	Port Angeles	0.9	115.6	
1/17	Bellingham	1.2	151.6	
1/18	Everett	0.6	53.8	
"	Auburn	0.4	39.8	
1/22	Bellingham	1.3	149.6	
1/23	Bremerton	0.4	32.0	

198*

5-16	Medic 6 Auburn	0.5	47.6
5-17	Bellingham	1.7	148.4
5-18	Port Angeles	1.0	121.8
"	"	1.5	192.6
5-21	Bainbridge I.	0.4	31.6
5-26	Bellingham	1.4	149.6
5-26	"	1.2	147.6
5-30	Coupeville	0.8	86.4

Fiscal year '85-86	Chmc. 84	Hmc 257	Rsov. 17	UH 39	Other 94	
Program total	88	277	20	42	108	

1986 (cont.)	From	Hours	miles
4/24	Bellingham	1.1	153.6
4/26	Whidbey Island	0.9	100.0
2-1	Oak Harbor	0.8	99.6
2-9	Anacortes	1.0	117.8
2-9	Bremerton	0.4	36.6
2-13	Medic 6 Auburn	0.4	45.4
"	Coupeville	0.9	83.7
2-26	Bremerton	0.4	32.6
2-27	Forks	1.3	181.6
3-11	Bellingham	1.4	147.6
3-12	Poulsbo	0.4	36.6
3-14	Bellingham	1.2	149.6
3-21	Bremerton	0.4	41.3
3-24	Arlington	0.7	83.6
3-25	Port Angeles	0.9	111.8
3-26	Vashon I.	0.4	30.2
3-27	Bremerton	0.4	32.0
3-30	Bainbridge I.	0.4	24.0
4-5	M-8 - Federal Way	0.5	47.0
4-6	M-6 Ravensdale	0.4	45.8
4-11	Forks	1.8	195.0
4-11	Port Angeles	1.0	115.6
4-14	Bellingham	1.2	155.6
4-19	Bellingham	1.3	148.2
4-24	Aberdeen	1.3	152.8

ANITA FRANCIS

1. This transfer involves a distance of approximately 142 feet. Depending on the patient, the personnel involved would include the flight medical crew that rode with the patient, and the ground crew, who are Children's employees.

2. Please refer to the response to Liz Anderson Comment #133 regarding patient protection. Please refer to the response to Liz Anderson Comment #176 regarding transfer time.

3. Data on patient outcomes for all Airlift Northwest patients that had landed outside the entrance to Children's Emergency Room through June 10, 1986, are included in Table 2 of the Draft EIS. Appendix D of the Final EIS updates this information through March 26, 1989.

4. See response to Liz Anderson Comment #181.

5. See response to Liz Anderson Comment #39.

6. The University Medical Center, Intramural Field, Limited Landings, No Action, and Preferred Alternatives could result in the use of sirens. See response to Liz Anderson Comments #208 and 209.

7. See response to Liz Anderson Comment #40.

8. The risk of accident has been updated based on more current data and information that were not available at the time the Draft EIS was written. The update is contained in Chapter IV of the Final EIS.

9. It is acknowledged that most hospitals are involved in life-threatening emergencies. The patients that are being transported to these community hospitals generally can be transported effectively and appropriately by ground ambulance. The Final EIS has been revised in response to this comment.

10. There are approximately 1,000 physicians, including hospital staff physicians, who use the Children's Hospital and Medical Center to provide care and/or services to their patients. In addition, there are a large number of referring physicians located throughout the Northwest who use Children's for their patients.

    A determination of the number of Children's physicians that provide tertiary care is outside the scope of this EIS. Projections of the number of future patients, as well as the possible number of helicopter transports, are based on projected populations typically referred to Children's, not on the number of physicians that could refer patients.

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11. These cases were unique in that they were uncommon in the population of patients affiliated with the Blue Cross system. Some of these cases may have been trauma patients and/or patients in another life-threatening condition. See response to Liz Anderson Comment #57, above.

    The statement on unique cases was intended to illustrate the fact that many of Children's patients face medical conditions that are not common.

12. Swedish Hospital has verbally indicated that the hospital has 30 NICU beds. A written request for confirmation has not been responded to, although a 1988 newspaper article stated that Swedish Hospital has 24 NICU beds (Rhodes, 1988).

13. Comment acknowledged. Please refer to the response to Liz Anderson Comment #62.

14. Please refer to Liz Anderson Comment #70.

15. The designations on page 11 of the Draft EIS and in Chapter II of the Final EIS indicate the hospitals that provide medical control to paramedics in King County's service area. The King County Emergency Medical Services Division has not designated hospitals outside King County.

16. According to the Manager of the King County EMS Division, generally the most critical pediatric cases that are served by the County's EMS Division are taken to Children's. Although Harborview treats pediatric trauma (and burn) patients, the EMS Division apparently usually does not have patients taken to Tacoma General or Mary Bridge (Call, 1987).

17. Comment acknowledged. Given that Airlift Northwest already works to have the appropriate medical team reach the patient in a timely manner, then the objective for minimizing transport time of critically ill or injured patients is appropriate as a secondary objective of the Airlift service.

18. These data for the Children's-destined patients transported by helicopter to the campus prior to June 10, 1986, are presented in Table 2 of the Draft EIS and Appendix D of the Final EIS.

19. Please refer to response to Liz Anderson Comment #78.

20. No comparison between Korea and Vietnam, and Seattle is being made. The statements are appropriate as historical background information.

21. It is inappropriate to compare data between Seattle's and Denver's Children's Hospitals without first adjusting the two sets of statistics based on the acuity levels of the patients. In addition, Children's in Seattle receives referrals from a greater distance than does Children's

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in Denver, which has a bearing on the number of transports to the Seattle hospital.

22. The patients were taken to the hospitals that were designated by the referring physician to be the receiving hospital. See responses to Liz Anderson Comments #50 and 58.

23. Please refer to the response to Dr. Thomas Bell's Comment #2. The medical staff of Children's acknowledge that in most cases patients with severe infections can be transported in a manner not requiring the savings of minutes. The staff also have treated patients with infections, such as fulminating meningitis, in which the patiert's outcome was affected by the timely patient transport. Airlift Northwest staff indicate that "medical success with near drownings has yet to be achieved in the general hospital. The pediatric hospital is where medical success has been shown." (Childs, 1987b)

    With respect to Children's treatment of trauma, please refer to the response to Liz Anderson Comment #62.

24. Please refer to the response to your Comment #22, above and the response to Liz Anderson Comment #83.

25. It is acknowledged that the mortality rate for the patients described in Table 2 of the Draft EIS is high. Table 2 has been updated in the Final EIS, where it appears as Appendix D. It indicates a mortality rate of approximately 40% for the patients transported by helicopter to outside the entrance to the Emergency Room at Children's. These patients are the most critical of the patients being transported by helicopter. The overall mortality rate for all patients being transported by helicopter is substantially less, although the data have not been assembled for this analysis. Only the most seriously ill and injured patients are being transported directly to the hospital with the remainder being transported by helicopter to the Intramural Field or alternate landing locations. Based on Dr. Nicola's review of a partial, random sample of cases, the patients being transported by helicopter were appropriate according to Washington Medical Society's EMS Committee's Draft Guidelines.

26. A review of the article from which the quotation is taken does not identify whether M.D.s or EMTs were responsible. The important conclusion that the authors of the article made was that it was not possible to determine which patients would benefit based on the data available at the time of EMS transport.

27. In the absence of numerous case studies of neonatal and pediatric emergency medical transport, Dr. Nicola reviewed all documents relative to transport of patients by helicopter.

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In Dr. Nicola's revised report (see Appendix A) he states the following with respect to an article that was published after the Draft EIS was issued:

> "The American Academy of Pediatrics (AAP) Committee on Hospital Care has published general guidelines on pediatric patient transport ("Guidelines for Air and Ground Transportation of Pediatric Patients," Pediatrics, 1986 Nov.; 78(5): 943-50). The AAP guidelines indicate that the factor of paramount importance in selecting mode of transport is "the optimal interhospital transport time indicated by the nature and severity of the patient's clinical condition ... if a patient's medical condition is unstable, even a minimal shortening of transport time to the referring hospital by one mode of transportation rather than another may be lifesaving." The AAP guidelines also indicate that "referrals are made and accepted based upon the judgment of the referring physicians rather than upon a specific set of criteria."

28. Dr. Nicola's conclusion is based on his determination of the number of patients that would need to be transported by helicopter directly to Children's campus. In his revised report (see Appendix A) Dr. Nicola estimates that in the next decade six patients per month may have a medical condition warranting helicopter transport to the hospital doors. While other patients may warrant helicopter transport, the ability to land at the hospital is not as critical to their outcome. See response to Liz Anderson Comment #26.

29. Comment acknowledged. The primary air ambulance services have been identified and discussed in Chapter II of the Final EIS.

30. See response to Liz Anderson Comments #66 and 68.

31. Airlift Northwest is a service to the referring physician who has requested a patient transfer to a particular physician at a particular hospital. Based on Dr. Nicola's review, referring physicians are capable of appropriately referring patients via Airlift Northwest. Physicians in rural communities are aware of the medical resources immediately available to them and the length of transport by ground and air to the nearest appropriate medical facility. In addition, they are fully capable of assessing the most appropriate mode of transport given a patient's medical condition. The Washington State Medical Association guidelines that identify types of medical conditions that warrant air transport can be used to guide the physicians' determination of appropriateness. However, no guidelines under any situation can shield physicians from potential malpractice suits.

32. Comment acknowledged. Airlift Northwest does not dissuade referring physicians from using the helicopter to transport patients in an emergency. The Final EIS has been revised accordingly.

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33. In Dr. Nicola's updated report to the Director of DCLU, he quotes the American Academy of Pediatric's Committee on Hospital Care's guidelines on pediatric patient transport ("Guidelines for Air and Ground Transportation of Pediatric Patients," Pediatrics, 1986, November; 78(5):943-50). These guidelines state "referrals are made and accepted based upon the judgment of the referring physicians rather than upon a specific set of criteria." Likewise, Airlift Northwest has no specific set of written criteria, but accepts referrals based on the judgment of the referring fire departments/medic units and the referring physicians.

Airlift Northwest contacted MEDSTAR (spoke with Terry Costello, Chief Flight Nurse, on May 28, 1987) to discuss the article that appeared in Rotor and Wing International in December 1985. Apparently, according to Airlift Northwest, MEDSTAR was misrepresented by the magazine. MEDSTAR, similar to Airlift Northwest, does not have a specific set of written criteria that they use to evaluate the medical appropriateness of referrals. All pre-hospital referrals to MEDSTAR immediately activate the helicopter and flight team. Inter-hospital referrals go through a series of six to ten questions that are more administrative in nature than judging the medical appropriateness of the referral. The questions range from: 1) what type of patient is to be transported (medical, surgical, adult, obstetric, or pediatric), to 2) whether the caller is from an official EMS agency (i.e., not someone calling from home), to 3) whether a bed is available at the receiving hospital, to 4) who the receiving physician is, etc.

34. Comment acknowledged. This section has been updated in the Final EIS.

35. Airlift Northwest pilots have been given instructions regarding flight paths. The number of complaints expressed to Children's regarding deviations has diminished over time and dropped considerably following the removal of the trees that had prevented a straight-in approach to the temporary landing area in the grassy area outside the Emergency Room.

36. The decision to move the oxygen tank was made when the hospital's Administration determined that the perceived risk was of much concern to the neighborhood.

37. See response to Liz Anderson's Comment #17. According to Robert Neale, the Fire Marshal for the Bellingham Fire Department, the only safety equipment that the Department recommended was what the fire code required: one 4A60BC ten-pound multi-purpose fire extinguisher.

38. It is Children's position that, because the purpose of the medical review committee is to assess the medical appropriateness of transports to Children's campus by helicopter, the committee is best served by individuals from the medical community. Recognizing the neighborhood's interest in assuring the appropriate use of the helistop, Children's

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has proposed that the Mayor's office appoint a citizen representative to the committee. The Medical Review Committee as proposed by Children's is described in Chapter III and Appendix C of the Final EIS. The City Council will determine the ultimate composition of the review committee, if approval is granted.

39. Refer to the response to Liz Anderson Comment #183. According to Dan Davidson, Lead Pilot with Airlift Northwest, the noise abatement flight profile is not unsafe.

40. Adverse weather conditions are described in the sentences following the cited statement on page 45 of the Draft EIS. During a transfer, the patient could be exposed to rain, snow, wind, cold and heat during a transfer and not be in adverse weather conditions from the perspective of flying. (Note, however, that the patients are protected from exposure during their transfer.) The field conditions could be muddy even if the weather conditions do not pose a problem with respect to exposure.

41. Comment acknowledged. Please refer to the response to Kate Hemer Comment #8.

42. The sponsor's objectives are to minimize transfers and transport time of patients being transported by helicopter to Children's Hospital.

    A consortium of Seattle-based hospitals have joined to extend their tertiary care services to the region through Airlift Northwest. If a program to develop a regional plan for helicopter-based EMS services is initiated, Children's and Airlift Northwest indicate that they would be pleased to participate.

    Ground transports are not always in the best interests of critically ill or injured patients.

43. See response to Liz Anderson Comment #118.

44. Comment acknowledged. Please refer to the discussion of the new alternative (the Preferred Alternative) in Chapter III and the expanded helicopter safety section in Chapter IV of the Final EIS.

45. Your opinion is acknowledged.

46. The pilots are familiar with the topography, obstructions and meteorological patterns in the vicinity of Children's. The pilots follow a designated flight path and maintain altitude on their approaches and departures so as to avoid obstacles.

47. See response to Liz Anderson Comment #219.

48. See response to Ruth Engelberg Comment #16.

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49. Hospital AirTransport is obligated by their contract with Harborview Medical Center, as agents for the consortium, to maintain in good working order all contract-mandated equipment, which includes the aircraft. This contract is on file with DCLU.

Please refer to the response to Kate Hemer Comment #3 and to Liz Anderson Comment #27. Hospital AirTransport states it is a financially sound company. The maintenance program is described in the response to Liz Anderson Comment #190, above.

50. A review of the flight logs from May 1985 - June 1986 was conducted. The flights contained in your appended material were examined. The appended data have not incorporated shorter flights, particularly those helicopter transports from Boeing Field to Children's. This omission of additional data miscalculates the actual average flight time, thereby increasing the accident rate.

In any case, Chapter IV of the Final EIS contains updated data on accident rates based on patient transports, rather than flight time.

51. Please see response to Liz Anderson's Comment #41.

52. Line 5 is the rate used for computing the risk in the Draft EIS. Airlift Northwest is a major vendor as it serves more than three hospitals. Consequently, at the time the Draft EIS was prepared, the figure presented in Line 7 was relevant. Lines 1-3 are relevant for comparison purposes. The safety estimate has been updated to reflect updated accident rate data that were not available when preparing the Draft EIS.

53. Children's has contacted Washington Natural Gas in order to develop procedures to deal with a natural gas flare. Children's is also exploring the possibility of moving the natural gas meter house. Please refer to the response to Liz Anderson Comment #243.

54. Please refer to the response to Liz Anderson Comment #26.

55. The portion of the sentence that was not cited indicates that the noise would be noticeable. It would be audible for sever inutes during approach and landing and during take-off and departu e. These events last for several minutes and, therefore, are characterized as short-term.

The noise impact assessment in the Final EIS addresses outdoor noise.

56. It is acknowledged that a poll may lend limited statistical light on the number of line-of-sight residents whose sleep actually is disrupted. See response to Liz Anderson's Comment #260.

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57. Three trees have been removed in order to make the flight path to and from the landing area outside the entrance to the Emergency Room more safe. Additional trees would be removed under the development of a helistop at the Kitchen Garden site.

58. The cited statistics were for fixed-wing and helicopter transports for the Fiscal Year 1985 and are not reflective of the patients being transported by helicopter only.

59. Airlift Northwest provides a service to referring physicians and responds to their requests for inter-hospital helicopter transports. Unlike some areas of the United States where there are competing helicopter services, Airlift Northwest does not compete for pre-hospital transports with other vendors or the public EMS system. The closest private vendor, Med-Flight, is in Bellingham.

    Transports are based on the requests from medical personnel in community hospitals, Medic Units and Fire Departments. In most instances pre-hospital transports involve ground ambulances. In some cases, however, the attending medical team determines that a helicopter is the most appropriate means of transport.

60. Airlift Northwest and MAST do not compete for patients. See response to Liz Anderson Comment #92.

61. Dr. Copass, the Executive Medical Director of Airlift Northwest, informally reviews each of the missions in which Airlift Northwest aircraft participate. For those Airlift Northwest missions that have any reported irregularity Dr. Copass examines the mission in detail. Children's physicians and nurses also review each transport to assure that an appropriate level of care is provided. Children's has proposed that a Medical Review Committee, which is described in Chapter III and Appendix C of the Final EIS, examine flight logs and patient medical records of patients who are transported by helicopter directly to the Children's campus in order to determine whether the Kitchen Garden Helistop is being used appropriately.

62. The guidelines that have been established for South King County paramedics are presented on page 12 of the Draft EIS. Airlift Northwest does not have criteria for use by the referring physicians, nor is it true that most air ambulance services have criteria for use (see response to Comment #33 above). Airlift Northwest has determined that the decision to transport a patient by helicopter must rest with the referring physician. Please refer to response to Comment #27.

63. The legal implications of the decision to transport by helicopter are the responsibility of the attending medical personnel. See also response to Liz Anderson Comment #182.

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64. See response to Comment #33, above.

The financial health of the Airlift Northwest program is not dependent upon the number of transports that are undertaken by the service, consequently Airlift Northwest does not need to add flights in order to be financially sound.

65. A determination of this relationship is outside the scope of this EIS.

66. See response to your Comment #57, above.

67. Children's contacted Washington Natural Gas (WNG) prior to environmental review being initiated. During the SEPA process the Seattle Fire Department and WNG were again contacted in order to determine their concerns, if any, and to determine what safety steps were deemed appropriate. See response to Comment #53, above.

68. Please refer to the response to Liz Anderson Comment #11.

69. Please refer to the response to Liz Anderson Comment #6.

70. Airlift Northwest was informed and consulted about safety implications of the Medical Pavilion. The safety implications of the new Medical Pavilion has been considered in the Final EIS.

71. The security personnel have been instructed to provide more clear direction and limit access to the helicopter landing area, as appropriate. Airlift Northwest has requested that ropes not be used to secure the area. In general, there is concern about any loose objects in the operations area. Signs to warn motorists will be installed on Penny Drive, if the Council Conditional Use Permit is granted.

72. Fire extinguishers are installed inside the Emergency Room, and two more would be installed within the helistop. There is a fire hydrant adjacent to the site as well.

73. The Council Conditional Use Permit application to construct a secured, lit, and surfaced helistop is designed to make helicopter landings at the hospital as safe as possible for the aircraft crew and patient, and also for people and improvements on the ground. An important part of the permit review process includes a thorough examination of operational safety. Every effort has been made to be as comprehensive as possible in examining the safety issue.

74. Airlift Northwest is not trying to claim special exemptions from the overall safety record of air ambulance services. Please refer to Appendix B for discussion of Airlift Northwest operations' consistency with industry guidelines concerning safety.

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75. At Sea-Tac, there are an estimated 44 days with fog per year. At Sea-Tac wind speed exceeds 21 knots 0.2% of the time, and less than 0.1% of the time during IFR weather. Historic data for Sand Point indicate that fog occurs approximately 12.3% of the year, and that wind speeds in excess of 21 knots occurs 1.1% of the time.

A further climatological survey of the Puget Sound region is outside the scope of this EIS.

76. See response to Liz Anderson Comment #190.

77. A comparison of Airlift Northwest policies and guidelines with AAMS and NEMSPA guidelines is presented in Appendix B of the Final EIS.

78. Please see response to Liz Anderson Comments #26 and 41.

79. Please see responses to Liz Anderson Comments #62 and 63.

80. Your conclusion is acknowledged.

81. Dr. Nicola has determined that a helistop is beneficial (refer to his report in Appendix A of this Final EIS).

A Medical Review Committee, such as that proposed by Children's, would be able to assess the medical appropriateness of transports to the hospital.

By landing patients via helicopter at the door of tertiary care hospitals, it could be determined that a standard of care already has been established.

82. Your concern is acknowledged. The intent of the proposed Medical Review Committee is to ensure that the patients being transported directly to Children's are those that involve life-threatening emergencies. As Dr. Nicola acknowledges, a random review of helicopter transports both directly to Children's as well as to the hospital via helicopter and ground ambulance indicated that the patients were being sorted appropriately. As indicated above, it is the referring physician who makes the determination of the most appropriate receiving hospital. See also response to your Comment #58 regarding the helicopter transport of patients to intensive care units.

83. Your request for denial is acknowledged.

Thank you for your comments.

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Honolulu, Hawaii
Sept. 11, 1986

Julia Gibb
Department of Construction & Land Use
400 Municipal Bldg.
Seattle, Wa. 98104

RECEIVED
SEP 15 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb.

This is to express my concern about the possible banning of helicopter landing at Children's Hospital. My husband is a U.S.Air. surveyor and, while this is not necessarily his opinion in this case, we have been made aware many times of the great need for this service at many facilities in times of emergency. I believe the positive factors far outweigh neighborhood objections. Please convey my thoughts on this matter to the city Council. Thank you.

1

Sincerely,
Jane E. Feeney

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JEANNE E. GOSNEY

1. Your support of the project is acknowledged. Thank you for your comment.

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DCLV MAYOR'S RESPONSE DUE 10/28 LOG P5078
DCD
MC >F41

RECEIVED
OCT 13 1986
MAYOR'S OFFICE

10-7-86

Mayor Royer:

I'm writing you to urge you to support having the Heliport built at Children's Orthopedic Hospital. The good they do for the children in that hospital is remarkable and the heliport would get some children there faster when time is so important to an ill or injured child.

Thank you for reading this letter. I've never written to you before but this seemed such an important issue.

Marcia Gruber

Harley & Marcia Gruber
22304 Old Day Creek Rd.
Sedro Woolley, WA 98284

1

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MARCIA GRABER

1. Your support of the project is acknowledged. Thank you for your comment.

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Tuesday, August 26

Dr List
SAB
8405870

Ann Horner Houberg
1000 N. W. Northwood Road
Seattle, Washington 98177

RECEIVED
AUG 27 1986
DEPT OF CONSTRUCTION & LAND USE

Dear Julie.

As a mother of four children, I know what it is to have a very sick child. Therefore, I am very much in favor of building a helistop near The Children's Hospital emergency room. We live on Bainbridge Island in the summer and have many friends who are here all year. We are dependent on the ferries, but in an emergency too much time is lost.

Sincerely,
Ann H. Houberg

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ANN HOMER HAUBERG

1. Your support of the project is acknowledged. Thank you for your comment.

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October 17, 1986

RECEIVED
OCT 17 1986
DEPT. OF CONST. & LAND USE

Molly Miller, Director
Department of Construction and Land Use
408 Seattle Municipal Building
Seattle, WA 98104

Subject: DEIS on Helistop Proposed by Children's Hospital

Dear Director Miller:

The DEIS is seriously inadequate.

The environmental disclosure should be accompanied by a master plan to enable the community and the City Council to evaluate the proposed helistop in light of the proponent's long range planned use of the site. The major institutions policy states that a master plan shall be required when development is planned which, when taken into account with other recent development within the boundaries, creates a significant cumulative impact on the surrounding area. Recent development within the COH boundaries includes an increase in the Hospital's short stay facilities, doubling of its oxygen storage capactiy, development of an employee center and a proposed mixed use development to cover more than 132,000 sq.ft. and have more than 600 occupants and an undisclosed number of visitors. A program change to staff a trauma center is also underway. 1

The environmental effects of the proposed helistop operation must be analyzed in conjunction with the application for a helistop by the University of Washington Hospital and the proposal for a master plan by Harborview Hospital. SEPA requires that proposals that are related to each other closely enough to be in effect, a single course of action shall be evaluated in the same environmental document. SEPA also provides that agencies may analyze similar actions in a single environmental document. 2

The helistops proposed by all three hospitals are specifically intended to serve Airlift Northwest. Only through a consolidated review of the need, projected use, and environmental consequences can alternatives be evaluated which supercede the corporate turf and financial interests of the individual hospitals. One such alternative which should be evaluated to determine if it would provide superior medical care while minimizing adverse effects on residential communities is the proposal to centralize emergency medical care requiring helicopter transport at Harborview, the region's trauma center. 3

The DEIS does not address the City's residential land use policies or other pertinent policies such as Goals of Seattle 2000. A more complete discussion of the proposal in relation to the major institution policies is needed including a review of implementation guideline seven which calls for decentralization of facilities. 4

The proposal is based upon an unsubstantiated assumption of need making the projections for use and environmental impact determinations problematic. An analysis of the need must be accomplished. 5

If credibility is to be given Dr. Nicola's determination of need, it must be documented. What questions were asked? Of whom? What control of bias was maintained? How do Nicola's findings compare with other researchers investigating the relative benefits of interhospital transport of patients by helicopter compared with ground transport?

In light of testimony in September's AMA News by Dr. Ronald Stewart, (President of the National Association of EMS Physicians), the Nicola recommendation is highly questionnable. Stewart states that data is sparce and that "we are not certain that air transport improves patients outcomes; (in fact) preliminary data suggests that it may be detrimental."

Because it is natural to assume there is a need for helicopters when health and safety issues are involved, I will remind you of some local history. In the early 1970s, the Seattle Police Department operated two helicopters. As I recall, the hard questions on need came only after an accident during a "joyride" to view skinny-dipping off the Arboreteum freeway ramp. An analysis of need (the Clayton Report) established that for the police work, the helicopter was one-half as effective and twice as costly as the patrol car. It's been more than a decade since we've "needed" police helicopters. 6

Not only is the need unsubstantiated but the projections for use and therefore the expected environmental impacts are purely speculative. Children's Hospital, which advertizes widely on TV and in both Time and Newsweek, has proposed no limitations on the use of the proposed helistop. 7

How does the proponent intend to restrict occurrences to life threatening emergencies? What are the triage guidelines which will be used in the operation of helicopters coming into the helistop? What is the protocol which will govern the dispatch of service? What review of the use is proposed? 8

Do the projections exclude transfers of patients who could be safely transferred by ground or to a closer qualified 9

hospital? Do the projections exclude trauma and burn patients who should be sent to Harborview? | 9

What marketing activities will COH pursue which will affect the level of hallstop activity.? Has this proposal been integrated into state, and regional and local EMS programs to assure that the projections of COH's share of the market are reliable? | 10 | 11

What charges will be imposed on patients using the service? And what ramifications will the charges have on the patient or physician either in selecting the helicopter as a means of transportation or in determining that COH is the appropriate hospital? | 12

The hospital should define the patients for whom the service is intended, detail the triage practices it will impose, develop use projections which are tied to population data and regional service areas and provide for a strong internal audit function before a meaningful analysis of the environemntal impact can be made. | 13

Just as with the projections of use, the projections of impacts based on the proposed flight paths are speculative. No one but the pilot has control over landing and departure. | 14
The impacts projected based on the type of helicopter use is also conjecture as COH has no control over the type of helicopter landing at the site. | 15

Because of the impacts which cannot be mitigated, the proposal should be revised to strictly define the need, establish enforceable means of restricting occurences and give weight to alternatives which limit the number of sites and locate the site(s) so as to minimize impacts on residential communities. Such a revision is needed if the proposal is to be described in terms of the objective rather than the proponent's preferred solution. | 16

Sincerely,

Kate W. Hemer

Kate W. Hemer
4537 55th Northeast
Seattle, WA 98105

170

KATE HEMER

1. The short-stay unit and 55,000-square-foot Medical Pavilion were subject to environmental review. The referenced "employee center" was closed. Please refer to response to Liz Anderson Comment #242 regarding pending development on the Children's campus. The Department of Construction and Land Use has determined, based on the Master Plan "triggers" cited in the Land Use Code, that an Institutional Master Plan is not required at this time. With respect to trauma capabilities, please refer to response to Liz Anderson Comments #62 and 63.

2. The University of Washington does not have a pending application for a helistop on its campus; however, minor improvements may be made to the existing helistop at the Intramural Field.

   SEPA (Seattle Municipal Code 25.05.060(3)(b)) states that:

   > "Proposals or parts of proposals that are related to each other closely enough to be, in effect, a single course of action shall be evaluated in the same environmental document, if they:
   >
   > (i) Cannot or will not proceed unless the other proposals (or parts of proposals) are implemented simultaneously with them; or
   >
   > (ii) Are interdependent parts of a larger proposal and depend on the larger proposal as their justification or for their implementation."

   Although an inter-relationship between the institutions is acknowledged, the helistop proposal at Children's does not fall under the categories in 25.05.060(3)(b)(i) and (ii).

3. Airlift Northwest is a consortium of the three regional hospitals and Providence Medical Center. Since the issuance of the Draft EIS, St. Joseph Hospital and Health Care Center in Tacoma and Virginia Mason and Swedish Hospital in Seattle have become Associate Members of the Airlift Northwest Consortium. Airlift Northwest serves these hospitals and the physicians who refer their patients to these tertiary care centers. The hospitals do not serve Airlift Northwest.

   The EIS evaluates probable significant impacts of the Proposed Action and alternatives. These alternatives involve a variety of options for transporting the patients to Children's using helistops at Children's, the Intramural Field, University Medical Center and Harborview and, as necessary, using ground ambulance.

   Based on the Categorical Exemptions set forth in Section 25.05.800 of the Seattle Municipal Code, the granting of a business license to operate Airlift Northwest would be exempt from EIS requirements, which

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includes an exemption for (14)(f) "All [business and other regulatory] licenses for vehicles for-hire and other vehicle related activities, including but not limited to taxicabs, ambulances, and tow trucks..."

Section 25.05.448 of the Seattle Municipal Code states the following:

> "RELATIONSHIP OF EIS TO OTHER CONSIDERATIONS.
> (1) SEPA contemplates that the general welfare, social, economic, and other requirements and essential considerations of state policy will be taken into account in weighing and balancing alternatives and in making final decisions. However, the environmental impact statement is not required to evaluate and document all of the possible effects and considerations of a decision or to contain the balancing judgments that must ultimately be made by the decisionmakers. Rather, an environmental impact statement analyzes environmental impacts and must be used by agency decisionmakers, along with other relevant considerations or documents, in making final decisions on a proposal. The EIS provides a basis upon which the responsible agency and officials can make the balancing judgment mandated by SEPA, because it provides information on the environmental costs and impacts. SEPA does not require that an EIS be an agency's only decision-making document.
>
> (3) Examples of information that are not required to be discussed in an EIS are: Methods of financing proposals, economic competition, profits and personal income and wages, and social policy analysis..."

Thus, this EIS addresses the impacts from constructing the helistop and of flights associated with the transport of patients to the helistop. The issue of centralized medical services and relocating Children's equipment and staff is outside the scope of this EIS, although the issue of shared use of helistops is discussed.

4. Please refer to the response to Laurelhurst Community Club (Peter Eglick) Comment #2.

5. Please refer to the responses to Liz Anderson Comments #49, 124, 125, regarding medical need.

6. Please refer to the responses to Liz Anderson Comment #87 and Bart Baxter Comment #9 regarding helicopter transports having an adverse effect on patients. Police helicopters in an urban community and EMS helicopters that serve a large region with geographic obstructions to ground movement are not comparable.

7. See response to Liz Anderson Comment #26.

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Children's proposes that the use of the helistop be limited to patients experiencing life-threatening emergencies. Actual numbers of patients being appropriately transported by helicopter could vary from the estimates. Children's has deliberately not proposed limits on use in the recognition that a catastrophe or outbreak of some illness (e.g., meningitis) or change in medical technology may result in transports that would exceed projections over a given time period.

8. Please see response to Liz Anderson Comment #64 regarding the decision to transport by helicopter. As outlined in Chapter III and Appendix C of the Final EIS, a Medical Review Committee would examine flight logs and patient medical records in order to determine whether the Children's Kitchen Garden Helistop is being used appropriately. Please refer to Liz Anderson Comment #32 for discussion of decisions regarding the condition of the patient and the appropriate landing area. A description of the dispatch protocol is contained in the response to Liz Anderson Comment #77.

9. The projections exclude trauma and burn patients that would be treated at Harborview, and exclude those patients judged by the referring physician to warrant ground transport. Refer to response to Liz Anderson Comment #62.

10. Please refer to the response to Liz Anderson Comment #23.

11. The projections have been confirmed by Dr. Nicola, the former Director of the Seattle-King County Department of Public Health. There are no state, regional or local EMS programs that determine appropriate market shares of helicopter transported patients.

12. These questions are outside the scope of this document. Please refer to the response to your Comment #3.

13. The EIS provides information on patient profiles and areas of referral. It also describes the referral procedures and how referral decisions are made. Future use projections have been made based upon population trends in counties where referrals occur.

14. The proposed flight paths are assumed to be correct. It is acknowledged that the ultimate decisions regarding deviations from the proposed flight plan rest with the pilots. However, the Airlift Northwest pilots were primarily responsible for the planning of the proposed flight paths and would follow them whenever practicable. Consequently, the projections of impacts are reasonable.

15. See response to Liz Anderson Comment #35. Children's, as a member of the consortium that operates Airlift Northwest (ALNW), has some control over the type of helicopter used by ALNW.

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16. Your comment is acknowledged. The project sponsor has created a new alternative (the Preferred Alternative), which reduces the potential adverse environmental impacts by transporting the majority of Children's-destined patients to the Intramural Field helistop site, if allowed, or Harborview. Under this alternative, only the most critical patients would land at Children's.

Thank you for your comments.

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August 29, 1986

Julia Gibb
Dept. of Const. & Land Use
400 Municipal Building
Seattle, Wn. 98104

RECEIVED
SEP 02 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Re: CHMC Helipad

Dear Ms. Gibb:

Even though I can understand the residents' feelings, fears and concerns about the noise and possible devaluation of their property in that exclusive area, I feel that perhaps they have over reacted, as my understanding is that the helicopter would be used only for emergency purposes, so it would not be a constant thing and should not affect them that much. CHMC should have the latest and best facilities for saving lives and I would, therefore, like to add my support for building the helipad outside the emergency room of CHMC. 1

Please convey my support to the City Council.

Very truly yours

Liesa M. Jensen, Pres.
PBX Retirees Guild

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LIESA M. JENSEN

1. Your support of the project is acknowledged. Thank you for your comment.

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Sept. 30, 1986

Holly Miller, Director
Dept. of Construction And Land Use
400 Municipal Building
Seattle, Wa. 98104

RE: DEIS for Proposed Helipad at Children's Hospital
Comments due by October 17, 1986

The "Cumulative Impacts" section of the DEIS is deficient, inconsistent, inaccurate, and vague for the following reasons:

- It is deficient in failing to specify how Airlift Northwest and the proposed helipad would be integrated into the proposed Puget Sound Health Systems Agency (PSHSA) regional transport plan. Although the DEIS states on page 31 that the status of the PSHSA proposal is unclear, the DEIS goes on to say on page 91 that Children's would be included in a regional helicopter transport plan. What is the exact relationship between these two statements? 1

- It is inconsistent in asserting that the City's land use criteria so limit the use of helistops that they will discourage the improper use and proliferation of helicopter service (page 90), when it has previously cited WAC 248-18-285 to mean that a hospital cannot prohibit a helicopter from landing, even if by doing so it would violate land use laws (pages 41, 57). If this were indeed a correct interpretation of the WAC, what is to prevent other hospitals from also construing the WAC as permission to land helicopters and overriding City land use regulations? 2

- It is inaccurate in stating that University Hospital already has received its Certificate of Need for a helistop (page 90); in fact, UH has not yet prepared its Certificate of Need. 3

- It is vague in stating throughout that flights would be limited to "critically ill" cases, but that guidelines to restrict landings to critical cases haven't been established. It admits that guidelines are only now being discussed with MAST (page 42), Airlift Northwest (page 49) and the Washington State Medical Association (pages 31, 91). The DEIS says that as doctors hear of Airlift Northwest services, they will become more likely to use Airlift for inter-hospital transfers (page 41), but does not distinguish adequately between cases brought in from "the field" and those brought as interhospital transfers (page 42), and what guidelines would apply to any of these cases. 4

The Puget Sound Health Systems Agency has expressed concern about the proliferation of helicopter services in the region, and cautioned that there is no agreement on when medical conditions warrant helicopter use, and that triage guidelines have not yet been developed. In a February 1985 report to Major Royer (attached), from which the DEIS quotes on pages 17-19, PSHSA recommended transport to only the most specialized trauma centers in Seattle, namely University Hospital and Harborview, and that consideration of other sites should evaluate community costs and benefits in meeting patient needs. The PSHSA report stated that "...limiting the number of helipads may be an important component in ensuring limits on the growth of helicopter services..." and goes on to say that "...inappropriate use and proliferation of helicopter transport services [should] be discouraged," but that "...unfortunately, we are in the midst of 'air wars'...as hospitals vie with one another to establish helicopter programs." 5

Bud Nicola, author of the Seattle-King County Department of Public Health assessment of the proposed helipad, also encourages PSHSA to develop a statewide and regional helicopter transport plan. He wrote to PSHSA in April 1986, encouraging that agency to work with the Washington State Medical Association to develop triage guidelines for helicopter transport. 6

Unfortunately PSHSA's effort to conduct an assessment of helicopter transport and develop a regional plan has been delayed and scaled back. In May 1986 PSHSA proposed to develop a state plan that would integrate helicopter service with the statewide Emergency Medical Services (EMS) system; by September 1986 this proposal had been reduced to a mere data collection effort for King County only. 7

In order to correct the deficiencies and other problems in the "Cumulative Impacts" section of the DEIS Children's Hospital must:

1. Ascertain the status of the PSHSA proposed state and regional plan, and triage guidelines that will intregrate helicopter services with the existing statewide EMS system. 8

2. Await the completion of the regional and state plan before finalizing its EIS for its proposed helipad. If the plan and triage guidelines are not to be developed after all, then Children's should under no circumstances be allowed to build a helipad or land helicopters on its campus. 9

3. Explore jointly with University Hospital the possibility of landing patients at a joint pad in Graves Field, instead of simply assuming that UH would not allow Children's-destined patients to land (p. 53). 10

4. Demonstrate definitively that WAC 248-18-285 could not be used by other institutions as it has been used by Children's to violate City land use regulations. 11

5. Include copies of all material cited in the DEIS Bibliography and Personal Communications sections, since discrepancies exist. For example, a 1986 Thompson reference is cited on page 91, whereas the sole Thompson reference in the references sections is 1985. Is this a typographical error or a different reference? 12

Sincerely,

Jane L. Johnson
4323 NE 45th St.
Seattle, Wa. 98105

Attachments: Report from PSHSA to Mayor Royer
letter from Nicola to PSHSA

177

Report to Mayor from PSHSA

February 21, 1985

Charles Royer, Mayor
City of Seattle
1200 Municipal Building
Seattle, Washington 98104

Dear Mayor Royer:

The Puget Sound Health Systems Agency (PSHSA) has prepared the following in response to your questions about the appropriate use of helicopter transport in emergency medical situations.

1. In what circumstances is it appropriate to use a helicopter in emergency medical transport to Seattle health care facilities?

178

Helicopter transport is appropriate when it operates within a regional emergency medical service (EMS) system. It is most valuable in linking rural and other isolated populations and medical facilities to tertiary trauma centers in Seattle.

Medical conditions which require helicopter transport are those in which more rapid transport and the availability of highly specialized care enroute can affect outcomes when compared to alternative methods of transportation. Helicopter transport is not inherently better than ground transport in ensuring survival and recovery.

Emergency services have developed as part of a regional system in Washington, and helicopter transport is integral to the provision of these services. The EMS system features substantial ground transport services throughout the northwest region, each of which is capable of responding rapidly to calls in the area it serves. Military Assistance to Safety and Traffic (MAST) helicopters transfer patients from accident sites within a 100-mile radius of Fort Lewis to Harborview in Seattle and to St. Joseph in Tacoma. Interhospital transfers and service to areas outside the range of MAST are provided by the fixed-wing transport of Airlift Northwest. Private helicopter service operating out of Bellingham further supports counties in the northwest section of our region.

this much is quoted in DEIS — p.1719

The existing EMS system is founded on comprehensive ground transport services and has developed into a well coordinated regional network. As a result, the use of helicopter services can be managed within the present system to better ensure that their use is limited to cases not adequately served by ambulance or plane transport.

2. How frequently is this means of emergency transport required?

Agreement on when medical conditions warrant the use of helicopters has not been reached. The introduction of helicopter transport [illegible] that triage guidelines have not yet been developed which might help establish the frequency with which helicopter transport would appropriately be expected.

In the last year MAST completed approximately 220 field trips, most of which were to provide transport of patients from south King, Pierce, and Kitsap counties. Some of these patients were taken to St. Joseph Hospital. Approximately 120 were taken to Seattle hospitals, most of these to Harborview.

The extent to which this level of service approximates the expected need for helicopter transport is not presently known. Efforts are underway to formulate a method to determine the need for helicopter transport and to establish the resources necessary to meet that need. These efforts in Washington and in other parts of the country should be evaluated by clinicians, planners, and administrators in order to prepare guidelines tailored to the special requirements of our region.

3. How many facilities in Seattle and King County should be equipped with helipads to meet the medical need?

Which Seattle hospitals are best suited to meet the medical need?

Helicopter transport is only appropriate for the most critical cases. An evaluation of helicopter transport often cited to support its efficacy in improving outcomes suggests that major improvement occurs only in the more severe classifications representing a fraction of all trauma patients. This study by William G. Baxt and Peggy Moody indicates that helicopter transport is required for only a small subset of trauma patients especially when high quality ground transport systems are available.

MAST helicopters are presently transporting patients within King County directly to Harborview or to University Hospital (and occasionally other hospitals) by way of ambulance from the University of Washington soccer field.

While we cannot confirm that this arrangement is adequate, PSHSA recommends transport to only the most specialized trauma centers in Seattle, of which University and Harborview hospitals are excellent examples. Consideration of additional sites should evaluate not only unmet patient

care needs, but also the trade-offs which will result in meeting those needs. Limiting the number of helipads may be an important component in ensuring limits on the growth of helicopter services and in fostering effective and cooperative use of the EMS system as a whole.

It is critical that the inappropriate use and proliferation of helicopter transport services be discouraged. Unfortunately, we are in the midst of "air wars" throughout the country as hospitals vie with one another to establish helicopter programs. The number of programs in the country doubled between 1980 and 1983, and the National Medevac Conference in 1983 opened with spokesmen suggesting that the number of programs would (and should) double again in five years. It is not at all evident, especially in areas served by MAST, that additional programs are needed and the impact of further growth may be adverse for the community as a whole. Particular patient care requirements of an institution may not be sufficient to outweigh the additional direct and indirect costs which may result from expanded helicopter services.

PSRSA is especially concerned that individual institutions will establish helipads and eventually separate helicopter programs in an effort to meet particular patient care objectives which might be met satisfactorily under the current arrangement of emergency services.

A conservative approach to the development of helicopter transport programs is advised for several reasons:

a) The present system is extremely cost-effective. MAST operations are provided at no additional cost to residents above the support of federal tax subsidies.

b) In our region, the need for additional helicopter services which would be sufficient to support such an expensive service at an individual institution is unlikely. To justify the program, transportation services would tend to be over-utilized with transport provided in cases which would more appropriately be handled at other levels in the EMS system.

c) Facility costs would tend to increase since helicopter services are generally "loss leaders," powerful marketing tools which may increase hospital utilization but which would not necessarily guarantee the additional revenues required to cover the additional costs incurred.

d) If unnecessary and used inappropriately, helicopter transport services established outside the current system have the potential to adversely affect the EMS programs now serving the region. The development of private programs could result in the elimination of MAST (as specified in federal guidelines). Second, the ambulance

City of Seattle
Charles Royer, Mayor

King County
Tim Hill, *Executive*

Seattle-King County Department of Public Health
Bud Nicola, M.D., M.H.S.A., *Director*

April 25, 1986

Larry Thompson, Executive Director
Puget Sound Health Systems Agency
601 Valley Street
Seattle, Washington 98109

Dear Larry:

I am writing to give you my comments on the Puget Sound Health Systems Agency's proposed plan for air ambulance (helicopter) services. First, let me apologize for the delay in responding. In the last month, my staff and I have had an opportunity to review the proposal and the issue generally with County Executive Tim Hill, representatives of the Mayor's Office and key County Council members. I would summarize our general comments as follows:

1) There is a consensus on the need to develop such a plan. We are on the threshold of a major change in pre-hospital emergency medical services and in the relationship between providers and the hospital community. In addition, inter-hospital relationships are being affected by the introduction of air ambulance services. The relationship of local community hospitals throughout the Puget Sound basin to the tertiary care centers in the Seattle-Tacoma metropolitan area may be the major factor influencing the development of air ambulance services. what is that relationship + how is it changing?

2) There is a need to coordinate the development of such a plan with others who are already working on this issue. The Washington State Medical Association Emergency Medical Services Standards Committee has appointed a special Task Force to deal with helicopter medical standards. Their charge is to develop medical indications or "user guidelines" for the use of helicopters in patient transportation. I have attached for your information a memorandum from Lothar Pinkers, M.D., dated February 21, 1986, that outlines the Task Force's agenda.

   The WSMA Task Force will be addressing many of the items identified in your proposal. I believe they will be establishing a framework for further planning. They are hoping to have a final report by June, 1986.

   There is also talk of incorporating air ambulance service planning into a statewide EMS planning effort.

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3) It seems essential that any planning effort be broader in scope than just Seattle and King County. I realize this is a change from what we discussed previously, but upon further reflection, it just does not seem realistic to focus on Seattle and King County when the operation of air ambulance services will undoubtably be multi-county in scope. If the planning process is too narrow, it will lack credibility with other potential users on our borders and beyond.

In summary, it is my recommendation that the Puget Sound Health Systems Agency look to broadening the geographical scope of a plan for air ambulance services. It is imperative that those entities outside of Seattle and King County with an interest in such a plan be included in the process from the beginning. Secondly, the Health Systems Agency's planning effort should ~~compliment~~ complement the Washington State Medical Association's activities. In fact, it should probably follow and expand upon their work.

Finally, I understand your agency is involved in reviewing a Certificate of Need for helicopter services in Bellingham. How does that fit into this evolving situation?

I would ask that you contact Steve Call, Manager of the Emergency Medical Services Division, at 344-4293, to schedule a meeting to discuss where we go from here.

Thanks for your efforts to date. I look forward to working with you.

Sincerely,

Bud

Bud Nicola, M.D.
Director of Public Health

BN:SC:rh
Enclosure

cc: Steven Call, Manager, Emergency Medical Services Division
Katie Chaney, Director, Land Use Division, Department of Construction and Land Use
Jim Kruger, King County Council Staff

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JANE L. JOHNSON
(September 30, 1986)

1. See response to Liz Anderson Comment #52. The statements regarding the relationship of the Proposed Action and alternatives with the referenced statements have been clarified in Chapters II and IV of the Final EIS.

2. Comment acknowledged. It is unclear if the land use review process would prevent the landings of helicopters at medical institutions, based on WAC 248-18-285; however, the land use review process probably will prevent the inappropriate development of helistops at other medical institutions. See response to Liz Anderson Comment #118. This language has been clarified in the Final EIS.

3. See response to Liz Anderson Comment #266.

4. Critically ill or injured patients being transported by Airlift Northwest helicopter would be transported at the request of the referring physician whether they are inter-hospital transports or pre-hospital (in "the field") transports.

   According to Dr. Nicola's (partial) review of the Airlift Northwest flight logs and medical records, the transports appear to have been warranted based on the preliminary Washington State Medical Association guidelines. According to Dr. Nicola's review of randomly selected transports, the helicopter medical crew's determination of which patients being transported by helicopter should go directly to Children's campus and which could go to an alternate location and then be transported to Children's via ground ambulance have been appropriate.

5. Comment acknowledged. It should be recognized that the Proposed Action and alternatives address the establishment of a helistop and not the establishment of a new helicopter ambulance service. (See response to Kate Hemer's Comment #3.)

   Since February 1985 there have been two sets of guidelines that have been developed that can assist the referring physicians in making decisions regarding the appropriateness of transport modes. These are the pre-hospital and inter-hospital transport modes guidelines developed by the Washington State Medical Association (see Appendix A). It is agreed that "The inappropriate use and proliferation of helicopter transport services [should] be discouraged." The consortium approach is one means by which competition from a number of air ambulance services used by a number of hospitals can be discouraged. Mr. Thompson indicated that, "Unfortunately, we are in the midst of 'air wars' throughout the country as hospitals vie with one another to establish helicopter programs (emphasis added)." The private air ambulance service nearest to Airlift Northwest is Med-Flight in

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Bellingham. Because Airlift Northwest service is initiated by the referring physician, rather than emergency air carriers responding to aid calls, there is no other helicopter service vying for individual patients.

6. Comment acknowledged. See response to your Comment #5.

7. Comment acknowledged. The establishment of a helistop at Children's is intended to increase the safety and responsiveness of an existing (Airlift Northwest) program rather than to provide a helistop for a new program. See also the response to Montlake Community Club Comment #9.

8. The PSHSA is no longer an active entity (see Chapter II). The Cumulative Impacts section has been revised to reflect the current status of the proposed Washington State Medical Association Guidelines.

9. Please refer to the response to Montlake Community Club Comment #9.

10. Please refer to the response to the Seattle Department of Community Development Comment #3. The Draft EIS does not presume that the University Medical Center would not allow Children's-destined patients to land at the Intramural Field; rather, it indicates that it is unlikely that Children's-destined patients would be allowed to land at the University Medical Center Helistop, if its use were proposed. It should be noted that the University is not considering use of the rooftop helistop at this time.

11. Children's does not have the authority to control other medical institutions and, therefore, Children's contends they cannot demonstrate as a rationale that WAC 248-18-285 would not be used by other medical institutions to allow helicopters to land. Please refer to response to Liz Anderson Comment #118.

12. Correspondence cited in the "references" section of the EIS are available for review at DCLU. The 1986 reference is to a telephone conversation between Larry Thompson and Nancy Greenawalt. It has been deleted from the EIS.

Thank you for your comments.

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Oct. 10, 1986

Holly Miller
Director, DCLU
408 Municipal Bldg.
Seattle, Wa. 98104

RE: DEIS for Proposed Helipad at Children's Hospital:
Failure to address all issues specified in Feb. 1986 scoping list

The DEIS for the proposed helipad at Children's Hospital fails to address adequately the issues specified in the February 13, 1986, scoping letter from Julia Gibb of DCLU to Nancy Greenawalt of CCH. I quote from the scoping letter section regarding mitigating measures:

"MITIGATION MEASURES

Possible mitigation measures discussed in the EIS shall include the following:
- flight paths
- number of flights
- usage and location of U.S. Army (M.A.S.T.) or other agency helicopter landings
- off-campus pick-up of medical teams
- liability insurance
- criteria for use of helicopters
- plan for monitoring use"

Within the DEIS itself, mitigation measures referred to on pages 73 and 88 only address safety and noise impacts, and then only perfunctorily. These short sections in Chapter IV of the DEIS mention specifically only flight paths and number of flights, the first two of the seven topics in the passage quoted above. 1

Passing references were made in the DEIS to MAST helicopters and possible off-campus pick-up of medical teams, the third and fourth items. References were made obliquely to criteria for use of helicopters and plan for monitoring use (the sixth and seventh topics), but with no specific information given on how mitigation could be accomplished. 2 3 4 5

Lastly, the fifth item, liability insurance, was not addressed at all in the DEIS. If is most unfortunate that DCLU did not catch this major omission from the DEIS. Please make sure that the final EIS addresses this important topic, and that it also addresses completely and separately the six other mitigating measures included in the February 13, 1986, scoping letter. 6

Sincerely,

Jane L. Johnson
4323 N.E. 45th St.
Seattle, Wa. 98105

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JANE L. JOHNSON
(October 10, 1986)

1. Possible mitigation measures are presented in Chapters II and IV of the Draft and Final EIS. See also responses below.

2. MAST was discussed in detail on pages 20, 21 and 41, and throughout the remainder of the Draft EIS. In Chapter III of the Final EIS, there is an expanded discussion of other potential helicopter services and their aircraft that could possibly use the helistop. Refer to the response to Liz Anderson Comment #35 regarding the design of the helistop with respect to MAST aircraft. For additional discussion of MAST please see responses to Liz Anderson Comments #90, 91, 92, 93, 94, 95, 106, 107, 161, 251, and 257.

3. Off-campus pick up of the medical team is discussed on page 89 of the Draft EIS and in Chapter IV of the Final EIS. This is a mitigation measure that has been incorporated into current Airlift Northwest operations and the new alternative (the Preferred Alternative).

4. The topic of criteria for use of helicopters is discussed in terms of Dr. Nicola's findings, which have been updated and incorporated into the Final EIS.

5. Children's proposed Medical Review Committee is described in greater detail in Appendix C of the Final EIS.

6. Thank you for noting this omission. See responses to Liz Anderson Comments #29 and #44.

Thank you for your comments.

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LAURELHURST COMMUNITY CLUB

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4326 N.E. 42nd
Seattle, WA 98105
October 15, 1986

Holly Miller, Director
Dept. of Construction and Land Use
400 Municipal Building
Seattle, Wash. 98104

Dear Ms. Miller:

I would like to submit my testimony at the public hearing on September 23, 1986 to serve as my comments on the draft environmental impact statement by Children's Hospital.

"I am here to speak as the president and the representative of the Board of the Laurelhurst Community Club.

In my remarks, I intend to highlight two specific issues (1) the certificate of need (CON) process and the absence or lack of reliable information about the medical need for the proposed helipad and (2) the safety risks of 60 to 80 flights per month into and out of the facility; basically, the probability of a crash with an emergency medical helicopter which makes their use within a single-family neighborhood unacceptable.

186

Initially, I'd like to talk about the CON process. Children's Hospital has consistently tried to avoid the preparation of a CON application to such an extent that their attorneys filed a lawsuit against the state to prevent it. The Laurelhurst Community Club Board has requested the CON because it is our opinion that it would provide important information to the decision-making process in connection with this conditional use permit request. 1

In large part, the CON process would provide data or information about need that is not in the draft EIS or the Nicola report. There are 15 specific questions that the CON process would answer and which should be in the final EIS.

1. Identify and analyze the UNMET health services needs which the project would serve.

2. Identify the relationship of the project to the appropriate availability and accessibility sections of the State Health Plan, Health Systems Agency Plan, or the Annual Implementation Plan.

3. Define the population that is expected to be served for the next 10 years and its geographic location, broken down into age and sex categories.

4. Include a patient origin analysis for at least the most recent 3 month period with origins indicated by zipcode.

5. Provide information on the availability and accessibility of similar existing services to the defined population expected to be served. Identify all existing providers or services similar to those proposed and include sufficient information to prove that such existing services are not currently available or accessible. Time and distance factors are to be analyzed in detail in this section. 1

5. Provide utilization forecasts for at least five years following project completion, describe the methodology used to prepare the forecasts, identify and justify all assumptions related to changes in use rate, market share, and intensity of service.

7. Justify why the project does not constitute an unnecessary duplication of services, if existing services are available and accessible to the defined population.

8. Document the manner in which access of low income, racial and ethnic minorities and other underserved groups would be served in relation to their need for them.

9. Break out proposed capital expenditures in detail and explain fully the methods used to calculate them. Document the expected project impacts on capital costs, operating costs, and charges for health services.

10. Indicate the expected sources of financing and the expected sources of revenue associated with the operation of the service. Will cross-subsidies be required? (i.e., will one group of patients be asked to subsidize another group?)

11. Describe the relationship of the project to the appropriate cost sections of the State Health Plan, the HSA Health Plan or Annual Implementation Plan.

12. Show that there will be sufficient numbers of qualified health manpower and management personnel to operate a high quality service.

13. Show that the service will be provided in a manner that ensures safe and adequate care and in accordance with applicable Federal and State laws, rules and regulations.

14. Explore alternatives to the project, including postponing action, shared service arrangements, merger, and contract services. Alternatives should be compared with each other using specific criteria and the manner in which the preferred alternative has been selected should be indicated.

15. Show the specific ways that the project will promote staff or system efficiency or improve productivity.

The LCC Board specifically requests that the city (DCLU), require Children's Hospital to prepare Certificate of Need data within this process and include it in the final EIS

Safety concerns:

1. Should the data be true that between 1980 and 1985, one of every 10 emergency medical helicoptors in operation crashed, that accident rate is unacceptable. The accident rate suggests that the helipad should not be used in a narrow confined area between houses, apartments, and hospital, but in an area where the flight path is clearand unobstructed. 2

2. In effect, this proposal to save lives puts more lives at risk.

3. The proposed site is much too close to the houses in this area and to two elementary schools.

Thank you for your attention to these matters.

Sincerely,

Bob Klug

Robert Klug
President, Laurelhurst Community Club

LAURELHURST COMMUNITY CLUB - ROBERT KLUG

1. Please refer to the response to Liz Anderson Comment #53. The City of Seattle has requested that Dr. Nicola assist in the determination of whether the proposed helistop at Children's meets the medically-oriented criteria of the Council Conditional Use Permit. The City of Seattle has determined that the provision of the requested information, with the exception of the following items, is outside the scope of the EIS:

   Your points 3, 4, 6 - Please refer to the response to Liz Anderson Comment #26.

   Your point 5 - Please refer to the responses to Anita Francis Comments #59 and 60.

   Your points 7, 8, 9, 10, 11, 15 - Please refer to the response to Kate Hemer Comment #3.

   Your point 12 - Please refer to the response to Liz Anderson Comment #68.

   Your points 13 and 14 are discussed in the Draft and Final EIS.

2. Your safety concerns are acknowledged. Please refer to the discussion of the new alternative (the Preferred Alternative) in the Final EIS, as well as updated information on helicopter safety in Chapter IV.

   Thank you for your comments.

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CIVILIAN MAST

MILITARY ASSISTAN
IN SAFETY & TRAFF
COMMITTEE OF STA
OF WASHINGTON, IN

801 Broadway Suite 927 Seattle, Wash 98122 (206) 682-5:

RECEIVED
OCT 20 1986
DEPT OF CONSTRUCTION AND LAND USE
LAND USE DIVISION

October 15, 1986

Ms. Julia Gibb
Seattle Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Re: Comments on DEIS Children's Hospital Heli-Stop

Dear Ms. Gibb:

I have reviewed all MAST Flights for the past ten years as a part of my regular duties with the MAST Coordinating Committee. 1

On only one occasion, in the winter of 1986, was it necessary to deliver an infant directly to the hospital's door, rather than landing at Graves' Field.

My data shows no other bad patient outcome resulting from landing at the Grave Field site.

Last winter I asked the Seattle Fire Department, Chief Jerry Burt and Shepard Ambulance, Mr. Ken Ruef, if they knew of any bad outcomes occuring during the transport of pediatric patients from a MAST helicopter at Graves' Field to Children's Hospital. 2

Neither activity knew of any of any bad result at that time.

Warm regards,

Jay M. Kranz, MD., Chairman
MAST Coordinating Committee

cc: Capt. Dan Madden

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JAY M. KRANZ, M.D.

1. Comment acknowledged.

2. Comment acknowledged.

Thank you for your comments.

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SEP 29 1986
DEPT. OF CONST. & LAND USE

September 27, 1986

Holly Miller, Director
Department of Construction and Land Use
408 Municipal Building
Seattle, WA 98104

Re: Children's Orthopedic Hospital
Helipad

To Director Holly Miller:

I am the owner of an apartment in the Laurelon Terrace Condominium complex, which is next door to the proposed Children's Orthopedic Hospital helipad.

I was present at the meeting of September 23, held at Laurelhurst Elementary School, at which this plan was discussed. According to COH there should be about ten emergency cases brought in by helicopter a month - a total of twenty trips. I believe there will be many more than that once the helipad is in place. Doctors will order helicopter service for their patients more often than they now anticipate as a defense against the possibility of any legal action against them by the child's parents in the event the child does not survive. 1

There is great concern by the residents of this condominium about having these helicopters coming down for a landing next door to us. Many have shown their concern by moving. I have lived in many neighborhoods in my life but never before have I seen so many "For Sale" signs appear in one neighborhood as there have been here since we all became aware of the proposed helipad two years ago. The Port of Seattle has been in the practice of buying up houses of people living in the flight pattern of SeaTac when they have been unable to sell them to anyone else. Now the City of Seattle is finding itself obligated to buy houses of people living near the Midway landfill. Will Seattle also come to the rescue and buy up the apartments of Laurelon Terrace residents when the frequency of helicopter flights overhead becomes unbearable and we are unable to find buyers? Had I known three-and-a-half years ago when I bought my apartment that there would be helicopters landing next door, I wouldn't have even made the trip over here to see the place. 2

Yours very truly,

Marjorie D. Kresge

Marjorie D. Kresge
4014 NE 46th Street
Seattle, WA 98105

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MARJORIE D. KRESGE

1. Comment acknowledged. Please refer to the responses to Liz Anderson Comment #26 and Montlake Community Club Comment #7.

2. Your concerns are acknowledged. The City of Seattle has no intention of purchasing the houses of individuals who live in proximity to the helistop.

Thank you for your comments.

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5043 Sand Point Place N. E.
Seattle, Washington 98105
October 1, 1986

RECEIVED
OCT 3 1986
DEPT. OF CONST. & LAND USE

Holly Miller, Director
Department of Construction and Land Use
408 Municipal Building
Seattle, Washington 98104

Dear Ms. Miller:

It is becoming quite apparent that the Childrens Orthopedic Hospital is making every effort to proceed with a Heliport on the C.O.H. grounds without d e regard to the risk to the surrounding neighborhood. 1

First of all, the Laurelhurst Elementary School, containing approximately 250 children, is located less than two blocks from the proposed Heliport. 2

The physical risk to these children cannot be ignored. Also let us not overlook the noise and vibration factor that would surely disrupt school activities during landings and takeoffs. In addition to this, there is no approach route to this proposed landing site that would not jeopardize residences and business in the surrounding area. 3

The fact that many structural obstructions, as well as trees, in the area certainly do not enhance the safety of this proposed landing site. 4

One accident would certainly negate any value claimed by the use of this proposal. 5

For years the C.O.H. has been using the University of Washington East Campus Intramural Field for emergency helicopter landing sites. This area is totally unobstructed and approaches over water would certainly be safer with no risks to any ground personnel or structures. Transportation by ambulance from the Intramural Field to the hospital has been timed at two and a half minutes. This includes during rush hour traffic. Two and a half additional minutes to a forty-five minute or so helicopter trip is quite inconsequential particularly when we consider the overall risk. The jostling of the patient in the transfer is certainly no greater than the jostling suffered during the helicopter ride. 6

There can be no apparent advantage to transferring a patient from the Harborview Trauma Center to C.O.H. by helicopter--in these cases the time element is not a factor. 7

We must also consider a proposed heliport for the University of Washington Hospital. A centrally located heliport on the University of Washington Intramural Field would serve both institutions very well. 8

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If these proposals for individual heliports are not controlled, it is not inconceivable that many hospitals in this area (Seattle) will claim the necessity of such a convenience and the precedent will have been established. 9

Finally, it has come to our attention that the C.O.H. has filed Application #8602396 to build a four story medical office. Should not this application be included in the same Environmental Impact Statement as the one for the Heliport? 10

Let us please consider objectively the overall risk to the many as opposed to any claimed advantages to a few. 11

Thank you.

Sincerely,

Harold Kurtz

Mildred Kurtz

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MILDRED KURTZ AND HAROLD KURTZ

1. One of the purposes of preparing this EIS is to assess any risk to the surrounding neighborhood that may exist. The City permit process will ensure the hospital takes reasonable and prudent measures to protect the surrounding neighborhood from undue risk.

2. Comment acknowledged. Please refer to the response to Liz Anderson Comment #18 with respect to the relationship of flight paths to schools, and Laurelhurst School PTA Board Comments #1 and 2 regarding noise. The risk to school children is not ignored.

3. It is not possible to eliminate the risk of accident, anywhere. Please refer to the response to Bruce Balick Comment #10.

4. Comment acknowledged. Please refer to the response to Liz Anderson Comment #24 regarding tree removal and to Comment #149 for a comparison of the relative safety of the alternatives.

5. An accident may or may not involve injury/fatality or property damage. It is not apparent that an accident would negate the benefits of the proposal.

6. Please refer to the responses to Bart Baxter Comments #2 and 16 regarding transfer times and Liz Anderson Comment #37 regarding patient outcome of landing at the Intramural Field. Although there are obstructions at the Intramural Field (see response to Liz Anderson Comment #244), there is an acceptable level of safety at that facility (see response to Liz Anderson Comment #149). See response to Liz Anderson Comment #132 regarding patient jostling.

7. In the vast majority of cases, a patient at Harborview could be effectively transported to Children's by ground ambulance. In some limited instances, it may be medically necessary to transport the patient by helicopter.

8. Comment acknowledged. The University has not submitted an application for a Council Conditional Use Permit that would allow for the development and use of a new helistop. However, the University may make minor improvements to its existing helistop at the Intramural Field. Please refer to the response to Seattle Department of Community Development Comment #3.

9. Please refer to the response to Liz Anderson Comment #210.

10. The Medical Pavilion received a separate environmental review. See response to Kate Hemer's Comment #1.

11. Comment acknowledged.

Thank you for your comments.

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3650 42nd Ave. N.E.
Seattle, Wa. 98105
October 13, 1986

RECEIVED
OCT 15 1986
DEPT. OF CONST. & LAND USE

Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

To whom it may concern:

I am concerned about the possibility of small, private helicopters landing in a residential neighborhood within two blocks of an elementary school and several apartment complexes. It is my understanding that the MAST helicopter service which COH has utilized for the past ten years has been more than adequate to cover all emergencies. I question the motivation of people involved in this new project, and I hope you will vote against granting a conditional use permit to Airlift Northwest or any other private company to land on the grounds of COH. I am in favor of continuing the current helicopter service exactly the way it is now operated or constructing a new helipad in a less residential location. 1 2 3

Sincerely yours,

Carolyn Margon

Carolyn Margon

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CAROLYN MARGON

1. Please refer to the response to Liz Anderson Comment #92.

2. Your opposition to the project is acknowledged.

3. The new alternative (or Preferred Alternative) seeks to limit the adverse impacts of helicopter transports by landing the majority of the patients at the Intramural Field, if allowed, or Harborview.

Thank you for your comments.

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To: Katy

October 1, 1986

Holly Miller, Director
Department of Construction
400 Municipal Building
Seattle, Washington 98104

RECEIVED
OCT 1 - 1986
Dept. of Construction & Land Use

Re: Helistop, CHMC
4800 Sand Point Way N.E.

Dear Ms. Miller:

The DEIS on CHMC Helistop raises many questions which are not answered sufficiently and ignores many more which have been raised during the hue and cry over this extremely sensitive issue. Time permits me to raise only a few items which bother me.

1 P.x indicates that only 3 of the 46 Elements of the Environment were reviewed by DCLU. These elements are set forth in the Seattle Municipal Code. Unexplained is who/what the determinant of non-review is/was. Yet, some of these are discussed in the text, but hardly reviewed, since they are "deemed nonsignificant."

2 The most specious nonsignificant is d.iii. Schools are dismissed as "no significant increase in school population is anticipated from development of this project." Of course not! The obvious significance of schools has been raised in every hearing, newspaper/tv discussion: parents do worry about their children's safety. This safety has threats in any community with accidents, whether by car, bus, bike, playground, now compounded by an omnipresent fear of threat to either Laurelhurst School or the Villa Academy in the immediate vicinity of Children's proposed helistop. If DCLU had reviewed schools, it would have found that parents in neighboring communities worry about the possibility of harm to their schools near the proposed flight patterns depicted in the DEIS. This worry and fear must not be dismissed as irrational nor should DCLU believe that accident rates given in the DEIS immediately calm these worries and fears. Pp. 66 and 67 offer cold comfort with "flew into the ground" statistics predominantly in daytime hours.

3 DCLU's Distribution List, pp. xiv and xv, shows strange omissions. None of the neighboring community organizations, whether club or council in Montlake, University District, Windermere, Belvedere Terrace, Ravenna-Bryant, Hawthorne Hills, View Ridge, not even Laurelhurst! were included. Also omitted were Seattle School District, Villa Academy, management boards of Burke-Gilman Place, Laurelon Terrace and other living groups, as well as neighborhood businesses and the University Herald. No wonder there are loud outcries.

4 I question the omission of any statistics for the first alternative, the UW Intramural Field, equivalent to those provided in Table 2, pp. 14-16, for direct landings at CHMC (albeit they are contrary to City regulations).

5 Other omissions: MAST landings at the UW area have been a long-time emergency provider for the CHMC, yet MAST is summarily treated and dismissed. Nothing is stated, except in an appendix letter about comparative costs of ground travel teams and Airlift Northwest. Presumably, meaning I don't know, costs are billed to parents, hospital involved, medical insurance? Nothing is stated, nor is mention made that MAST traditionally does not charge for its services. Will MAST

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coexist with Airlift Northwest?

Also omitted is any correlation of jurisdiction over helistop siting and emergency airborne patient services with CHMC's assertion that it will continue to land on its property despite regulations. It cites its authority as WAC 248.18.285 and RCW 7.70.040 yet neither one is presented, pp.41,57. They should be. 6

It is unclear what medical support is provided to a patient who has been removed from monitoring/sustaining equipment in a helicopter to a gurney for the 120 feet journey to the CHMC Emergency Room. 7

If the UW Hospital is"unlikely to allow CHMC" use of its proposed building-top helistop, then it ceases to be a feasible alternative and should not be listed as such, p. 53. Conversely, and not addressed, will CHMC allow the UW to use its helistop? 8

In view of so many omissions (and even commissions) raised above, as those which will be raised by other DEIS readers, I believe a Supplemental EIS is necessary and so request. 9

Sincerely,

Dorothy McCormick

Dorothy McCormick
6639 58th Avenue N.E.
Seattle, Washington 98115

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DOROTHY McCORMICK

1. The three elements of the environment that are examined in the EIS (Noise and Vibration, Safety, and Cumulative Impacts) were determined by the Department of Construction and Land Use as a result of the scoping process. These elements were identified as ones that could be significantly adversely impacted by implementation of the Proposed Action.

2. Please refer to the response to Liz Anderson Comment #18.

3. See response to Liz Anderson Comment #22.

4. See response to Liz Anderson Comment #80.

5. MAST helicopter flights are examined on pages 20, 21, and 41 of the Draft EIS and in Chapters II, III, and IV of the Final EIS. MAST could continue to coexist with Airlift Northwest. Children's would encourage MAST missions to land at the Intramural Field helistop, rather than at Children's. The issue of the relationship of MAST and Airlift Northwest also is discussed in the responses to Liz Anderson's Comments #92, 94 and 95.

   As identified in the response to Kate Hemer's Comment #3, the issue of economics does not need to be addressed in this EIS.

6. Comment acknowledged. The WAC was presented in the Draft EIS (see page 27), however, the cited RCW was not. Both citations are included in the Final EIS. Please refer to the responses to Liz Anderson Comments #118 and 207.

7. Patients in isolettes could be sustained by the systems in the isolette, which would be battery-powered during the 142-foot journey. Depending on specific medical conditions, other patients could be receiving forced respiration, have CPR being administered or be receiving other treatment (e.g., IVs) during the transport. The patient also would be supported by the medical transport team and by ground-based medical personnel, as warranted.

8. Although the project sponsor indicated that the University Medical Center rooftop helistop was not an acceptable location for landings of Children's-destined patients, the City of Seattle required that the alternative be explored in the EIS. Contact with representatives of the University Medical Center during the process of analyzing the alternative in the Draft EIS revealed that the University probably would not allow Children's-destined patients to land on the roof of the University Medical Center, if permitted. It should be noted that the University is not considering use of the rooftop helistop at this time.

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Children's has not received a request from the University to land helicopters at the Children's campus. Children's and the University have initiated discussions to share a helistop on the Intramural Field, where the majority of Children's-destined patients being transported by helicopter could land without sacrificing appropriate medical care.

9. Your request is acknowledged. A Supplemental EIS has been determined by DCLU to be not necessary.

Thank you for your comments.

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Ms. Holly Miller
Director
Dept. of Construction and Land Use
Municipal Building
Seattle, WA. 98104.

Oct 14, 1986

RECEIVED
OCT 20 1986
DEPT OF CONSTRUCTION & LAND USE

Dear Ms. Miller

Re. Children's Hospital, DEIS.

202

I would like to question Children's objective as stated in the EIS introduction (page 1 par. 2) "to create a landing pad for helicopters transporting critically ill or injured children" or "the specific objective of this proposed action is to minimize both the patient transfer time and the number of potentially destabilizing patient transfers---." Children's position in this EIS is that they are transporting patients in critical condition (page 13 bottom). The County EMS Guidelines defines the conditions for helicopter use page 12 #1 the patient "must be an extremely ill patient such that the arrival at a hospital capable of providing specialized care will immediately save their life or reverse their medical deterioration." 1

In Reference to table II, pages 14, 15, & 16, titled "Key characteristics of critically ill patient transfered by ALNW directly to Children's Aug 1, 1985, to June 10, 1986", I looked for references to table II in the text and where the patients were transported from. I found the following references:
Page 17 par 1. "table II presents data on the medical condition of patients who where transplated directly to CoH by helicopter".
Page 24 par. 4. "table II describes ALNW helicopter transports to CoH through Mid June 1986" from this table's data, CoH states that 63% of the transports to CoH were newborns. The data agreed, 13 of the 21 listed transports were newborns.
P A1. par. 1 "Based on data from existing flights (table II) it is estimated that 20% of the flights would occure at night time hrs. (10pm-7am)." The data does not agree. Table II is used to extract data for use in other sections of the EIS, therefore this table must be accurate. 2

Now's the time to ask two questions: is the table accurate? and were all the patients transfered to the nearest capable hospital? I've subsequently found the answer to both questions to be No. 3

In Reference to table II, pages 14, 15, & 16, titled

The ALNW pilots log shows 64 not 21 flights 2

FROM AUG 1, 1985, & MAY 30, 1986. COH ACKNOWLEDGES ONLY 21 IN TABLE TWO. CALENDARS MARKED BY LOCAL RESIDENTS PROVIDE A NUMBER OF FLIGHTS IN THE THIRTY'S. COH'S NUMBERS ARE INCORRECT, I'LL USE NUMBERS FROM ALNW PILOTS LOG (G4). 2

OUT OF THE 64 FLIGHTS 17 OR 25% EITHER OVERFLEW TACOMA GENERAL - MARY BRIDGE (A CAPABLE FACILITY) OR THE FLIGHT DISTANCE WAS CLOSER TO TACOMA THAN COH. THERE MAY HAVE BEEN MORE FLIGHTS AS IT IS DIFFICULT TO DETERMINE FROM THE FLIGHT LOGS FLIGHTS THAT ORIGINATED VIA FIXED-WING AND THE LOG DATA DOES NOT INCLUDE JUNE 1986. 3

THE EIS STATES THAT "ALNW ALSO WILL TRANSPORT PATIENTS TO NON-CONSORTIUM HOSPITALS" (PAGE 22 two) WHICH ACCORDING TO THIS DATA IS NOT BEING DONE. COH CLAIMS ITS OBJECTIVE IS TO SAVE LIFES BY SAVING TRANSPORT TIME. DR NEFF, COH'S MEDICAL DIRECTOR, SAID "FOR CRITICAL PATIENTS EVERY MOMENT LOST INCREASES MORTALITY" (PAGE 19 PART). THE EIS CONTAINS SEVERAL STATEMENTS LIKE "THIS TIME SAVINGS CAN REDUCE SUFFERING, DECREASE HOSPITAL STAY TIME AND IN THE MOST SEVERE CASES CAN MEAN THE DIFFERENCE BETWEEN LIFE AND DEATH (PAGE 46 PS) 4 5

IF 25% OF THE PATIENTS TRANSPORTED BY CHOPPER TO COH COULD HAVE BEEN IN ANOTHER CAPABLE HOSPITAL SOONER, THIS IS NOT SAVING LIFES; THIS IS MARKETING, AND BY COH'S DEFINITIONS, IN THIS 25% THEY ARE INCREASING SUFFERING, INCREASING HOSPITAL STAY TIME ETC. 5

ON JAN 22, 1986, DAVID HUNTER, SPEAKING FOR COH, GAVE A PRESENTATION TITLED "COH STRATEGIC DIRECTION STUDY" IN SECTION 5, STRATEGIC DIRECTIONS, PART A. NETWORKING. FIVE GOALS ARE SET, TWO OF WHICH ARE DECENTRALIZATION AND EMERGENCY TRANSPORTATION SYSTEM, GROUND, FIXED-WING AND ROTARY TO COH AS WELL AS BACK TO THE COMMUNITY OF ORIGIN. I GAVE A COPY OF A COH OUTLINE OF MR. HUNTER'S PRESENTATION TO JULIA GIBBS. 6

MR HUNTERS TALK WAS A GENERALIZATION OF A REPORT TO A GOVERNMENTAL AGENCY WHICH HE SAID WAS CONFIDENTIAL. PLEASE OBTAIN THIS REPORT AND DISCLOSE YOUR OPINION AS TO THE EXTENT THAT MARKETING, NOT SAVING LIFES, IS COH'S INTENT FOR OBTAINING HELICOPTER SERVICE.

TO REPEAT MYSELF, DATA SHOWS THAT THIS IS MARKETING, NOT SAVING LIFES, OR TO QUOTE DR. PINKER FROM HIS LETTER IN THE EIS APPENDIX "DIVIDING UP THE BABIES"! 7

IN SUMMARY I ASK THAT COH CORRECT TABLE II

AND CONCLUSIONS FROM THE DATA, INCLUDE ALNLO PILOTS ECG IN THE APPENDIX, AND THAT ALL REFERENCES LISTED IN THE APPENDIX BE INCLUDED IN THE APPENDIX IN TOTAL. 7

John Mandenhall
5033-44th N.E.
SEATTLE, WA. 98105

JOHN MENDENHALL

1. Please note that the full statement referenced in your comment is the following: "The specific objectives of the Proposed Action are to minimize both the patient transport time and the number of potentially destabilizing patient transfers from place of patient pickup to the Emergency Room entrance at Children's while maintaining appropriate medical treatment and to construct a helistop and to operate the medical service so as to minimize potential environmental impacts (emphasis added)."

   The new Preferred Alternative would limit use of the on-campus helistop to transports involving the most critical patients. A Medical Review Committee would review flights to ensure the helistop is used appropriately.

2. See responses to Liz Anderson Comments #39, 80, and 101.

   Table 2 has been updated and is included as Appendix D of the Final EIS. It indicates that 18.4% of the transports directly to Children's Emergency Room entrance occurred during the nighttime.

3. The patients being transported by Airlift Northwest are being transported to the facility that has been designated as the receiving hospital by the referring physician. The helicopter is being used to reduce the amount of transport time from the patient's place of origin to the receiving hospital. Please refer to the response to Liz Anderson Comment #50.

4. Airlift Northwest does transport patients to non-consortium hospitals. Data on these transports are not provided in the EIS.

5. Please refer to the response to Liz Anderson Comment #180.

6. As noted in the comment, David Hunter's full report is confidential. David Hunter's report was an internal hospital document prepared for the Board of Directors and key management staff of Children's Hospital and Medical Center. It was not prepared for a governmental agency. Please refer to the response to Liz Anderson Comment #23.

7. Please refer to the response to your Comment #2. The Airlift Northwest log of all transports is outside the scope of this EIS and is not included.

   Thank you for your comments.

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SEPT 23, 1986

I WOULD APPRECIATE THE FOLLOWING QUESTIONS BEING RAISED/ANSWERED AT THE SEPT 23 DCLU HELISTOP HEARING. THE QUESTIONS PERTAIN TO STATEMENTS IN THE COH DRAFT E.I.S. REGARDING HELICOPTER OPERATIONS.

1. Pg 45, para 2 : WILL THERE BE NIGHT LANDINGS AT COH? 1
   para 3 : SURFACE WIND DATA FOR LANDINGS AT COH SHOULD NOT APPLY AS SANDPOINT IS APPROX 1½ MILES N.E. ON FLAT TERRAIN. WILL AIRLIFT NORTHWEST OR COH HAVE A TRAINED WEATHER OBSERVER AT THE HOSPITAL TO ACCURATELY REPORT ACTUAL WEATHER CONDITIONS AT THE HELIPAD DURING ADVERSE WEATHER? IF NOT, WHY NOT? 2

   ARE ALL AIRLIFT NORTHWEST PILOTS INSTRUMENT QUALIFIED? I.E. "IFR RATED" PILOTS. 3

2. pg 67, para 3 : WHY DO AN PILOTS HAVE THE "OPTION" OF USING FAA WEATHER MINIMUMS OR A.N. WEATHER MINIMUMS? TWO SETS OF STANDARDS MAY LEAD PILOTS TO FEEL PRESSURE TO FLY UNDER MARGINAL WEATHER CONDITIONS. 4

3. pg 68, para 1 : "AIRLIFT NORTHWEST WOULD ONLY LAND AT COH IN CONDITIONS OF GOOD VISIBILITY." WHAT EXACTLY DOES A.N. CONSIDER "GOOD VISIBILITY"? CEILING AND HORIZONTAL VISIBILITY? 5

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2-

. 6 para 3 : EIS STATES THAT "AIR TAXI HELICOPTERS ARE EXAMINED AND FLIGHT TESTED BY THE FAA AT LEAST ANNUALLY." THIS STATEMENT IS INCORRECT. FAA DOES NOT FLIGHT TEST HELICOPTERS ANNUALLY. AIRLIFT NORTHWEST SHOULD CLARIFY THIS STATEMENT. 6

THANK YOU.

RICHARD L. MERRELL
4541 51st AVE NE.
SEATTLE 98105
523-7005

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RICHARD MERRELL

1. Updated transport data (see Appendix D) indicate that over an extended period approximately 18.4% of Children's-destined transports occurred during nighttime hours (between 10:00 p.m. and 7:00 a.m.).

2. See the response to the Laurelhurst School PTA Board Comment #4 regarding weather data, and the response to Liz Anderson Comment #6 regarding weather observers stationed at Children's.

   In adverse or marginal weather, Airlift Northwest would not attempt landing at Children's. In marginal weather, instrument guided landings would occur at locations capable of accommodating instrument-guided aircraft, such as Boeing Field or Sea-Tac Airport.

3. Please refer to the response to Ruth Engelberg Comment #7.

4. The Airlift Northwest weather standards were instituted specifically so the pilots would not be pressured to fly under marginal weather conditions. The Airlift Northwest standards are more stringent than those imposed by the FAA.

5. See response to Liz Anderson Comment #221.

6. Correction noted. Please refer to the response to Liz Anderson Comment #193.

   Thank you for your comments.

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Julia
To: Haley

September 29, 1986

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OCT 2 1986
DEPT. OF CONST. & LAND USE

Ms. Holly Miller, Director
and Ms. Julie Gibbs
Department of Construction & Land Use
Room 400, Municipal Building
Seattle, Washington 98104

Re: Helipad proposal at
Children's Orthopedic
Hospital (COH)

Dear Ms. Miller & Gibbs:

I am enclosing my correspondence with Dr. Nicola to show you my concern about disrespecting the health and lives of a whole neighborhood, including two schools, apartment buildings which border the proposed helipad site at COH. Also, electrical wiring is overhead on the parking lots of COH and a park with high trees and a substation on it is nearby. 1

Dr. Nicola could not or did not volunteer even how many lives were saved in endangering us all. As a matter of fact, he gave the hospital permission to land up to eight times per month, which the hospital finds unsatisfactory. They want about 50-60 landings a month. I call this an airport. And all this without knowledge of how many lives are saved. 2

This is incredible carelessness of the appointed health directors and shows lack of investigation into the situation. 3

I hope you all will intervene to make a bad situation better.

Thanks for listening.

Sincerely,

Helen Newman

Mrs. Helen Newman
4252 N.E. 50th
Seattle, WA. 98105

525-4817

CC: George Benson
Virginia Galle
Jan Noland
Paul Kraabel
Norm Rice
Dolores Sibonga
Sam Smith
Jim Street
Jeanette Williams

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City of Seattle
Charles Royer, *Mayor*

King County
Tim Hill, *Executive*

Seattle-King County Department of Public Health

Bud Nicola, M.D., M.H.S.A., *Director*

August 29, 1986

Ms. Helen Newman
4252 Northeast 50th
Seattle, Washington 98105

Ms. Helen Newman:

In your letter of August 23, 1986, you asked me to respond to three specific questions regarding the transport of patients to Children's Orthopedic Hospital by helicopter: 1) How many children have been helped by helicopter transport?; 2) How many children have died?; and, 3) What medical problems have there been with landings at the nearby soccer fields?

When I was asked by the Department of Construction and Land Use to comment on the medical need for helicopters at Children's Orthopedic Hospital, I reviewed the previous year's transport records of Airlift Northwest, talked to transporting physicians, and witnessed the helicopter and emergency department staff in operation. All of the six patients per month transported to Children's Orthopedic Hospital by helicopter during 1985 were "helped."

Was a landing at the hospital parking lot rather than the soccer field the difference between life and death? This question is not possible to answer given the number of variables involved in the care of an acutely ill or injured child. We do know that time is an extremely critical variable in determining the outcome of persons acutely ill or injured. As a generalization, helicopter transport can reduce the time for a patient to receive definitive medical care.

It is my opinion after reviewing the diagnoses of the ill children transported by helicopter and speaking to their attending physicians that one might expect 5% of comparable cases to develop life-threatening complications during flight where several minutes difference in reaching care may indeed be the difference between life and death or severe disability.

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The main problem associated with landing at the soccer field has been the trauma involved on a fragile incubator baby in making mechanical connections with oxygen, ventilator, intravenous equipment between the helicopter and the ambulance in an open field. This is one more variable which may increase the risk of problems in an ill baby. I do not have sufficient information to answer your questions more definitively.

I would reiterate that the Draft Environmental Impact Statement to be released by the City of Seattle Department of Construction and Land Use addresses many of the questions you have raised.

Thank you again for writing.

Sincerely,

Bud Nicola

Bud Nicola, M.D.
Director of Public Health

BN:rh

cc: Seattle City Councilmembers

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HELEN NEWMAN

1. Your concern is acknowledged.

2. Please refer to the responses to Liz Anderson Comments #49 and 124. It should be noted that Dr. Nicola has not provided the hospital permission to land helicopters.

3. Your opinion is acknowledged.

Thank you for your comments.

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Jackie
Bessie
Myrtle
Ida
Pat
Florence
Esther
Ole

RECEIVED
OCT 15 1986
DEPT. OF CONST. & LAND USE

Oct. 13 1986

Holly Miller - Director
Dept of Const. & Land Use
Seattle

Dear Ms Miller:

It seems apparent that the Helipad concern by Laurelhurst residents, including myself, is quite high. In addition it seems questionable as to the benefit it would provide.

I am opposed to this effort: the safety aspect, increased congestion and noise and questionable benefits vs all costs, are the reason.

Sincerely -

Charles B Nichols
5126 NE 42 st
Seattle WA 98105

213

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DANILOS B. NICHOLS

1. Please refer to the response to Liz Anderson Comment #49. Your opposition is acknowledged.

   Thank you for your comment.

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Oct 15 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Department of Construction & Land Use
City of Seattle
Rm 408 Municipal Bldg
Seattle, Wa 98104

Dear Director:

I am writing to register my comment on the Draft EIS for the Children's Hospital Helipad.

The inadequacies of the DEIS has been pointed out by many residents who testified at the hearing. I simply want to say that the way the document was prepared tends to focus on the helipad rather than on the helicoptors which will use the pad and which are the cause of concern. In other words, the DEIS does not dwell firmly enough on the question of the risk of helicoptor accidents and why the risks are worth-taking. 1

Also, the DEIS goes through the routing of "addressing" various impacts but totally misses the point.

Examples:

Page xiii, d.i. Fire. "...service not significantly affected."

-- Granted that fire services may not be affected by the HELIPAD. Would the HELICOPTOR not cause additional fire concern? 2

Schools. "... no significant increase in school population...." Funny! No one has ever raised a school population question here. But we have asked a lot of questions about what happens to the schoc' and students in case of a helicoptor accident. Why not dwell on the impact from the HELICOPTORS instead of HELIPAD? 3

Similar ironies abound in the DEIS.

In sum, do you really think it is good land-use to introduce emergency helicoptors with their high rate of accidents to a residential neighborhood of mostly wooden-frame houses? 4

Please address these questions and demonstrate why the Hospital needs such a facility when there is already a good alternative site at the University of Washington grounds ~~five~~ 9 1/2 minutes away. 5

Sincerely,

S. Kenneth Pai

S Kenneth Pai

4331 NE 45 Street
Seattle, WA 98105

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S. KENNETH PAI

1. The issues of helicopter noise and safety have been addressed in the EIS. Updated information regarding these topics has been incorporated into the Final EIS.

2. The issue of fire impacts is discussed in the EIS and further in the response to Liz Anderson Comment #17. A description of fire suppression equipment at the helistop also has been incorporated into Chapter III of the Final EIS.

3. See responses to Laurelhurst School Board Comments #2 and 3, Liz Anderson Comment #18, and Dorothy McCormick Comment #2.

4. Helistops are an allowed (conditional) use within major institutional boundaries.

5. Please refer to the response to Liz Anderson Comment #49 and to Dr. Nicola's updated report on medical need, which is appended to this Final EIS (Appendix A).

Thank you for your comments.

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Lothar H. Pinkers, M.D.

GENERAL SURGERY
TRAUMA

1201 - 116th NORTHEAST
BELLEVUE WA 98004
206 - 454-5331

16 October 1986

RECEIVED

OCT 21 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE SECTION

Holly Miller, Director
Seattle Construction and Land Use
400 Municipal Building
Seattle, WA 98104

RE: Comments on Draft EIS Statement for Children's Hospital Helistop

Dear Ms Miller,

I have read the material in the environmental impact statement and additional material submitted to me by one Jerry B. Schneider who is a member of the Laurelhurst Citizens Group discussing this issue. The additional material that Mr. Schneider submits is a letter from Kenneth L. Mattox, M.D., professor of surgery, Baylor College of Medicine, and a photocopy of an article in the Journal of Emergency Medicine date May 30, 1986 by Dr. Mattox.

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First of all, let me say that issue is quite complex, it is heavily clouded by emotion, both on the part of the Children's Orthopedic Hospital, Airlift Northwest, and the Laurelhurst citizens. In doing an extensive literature search on the use of Helicopters for prehospital transportation and interhospital transportation, the bibliography of which has been used in part by Dr. Nicola has shown clearly that there are not adequate criteria for the use of helicopters as a mode of transport. Most of the articles are self serving written to demonstrate how good that particular service is. The Washington State Medical Association, since it is a State wide organization which looks at the needs of the entire State cannot specifically deal with local issues. However, I believe that I can as a well educated observer, make comment on the Children's Orthopedic program. These comments stem from opposite areas. In the first place, helicopters are expensive to own and operate. This tends to ask for over utilization in order to offset costs. There is an inherent danger in their operation, particularly with pilots that have inadequate training and hours of flight time. On the opposite side of the coin, these instruments are exceedingly useful when properly employed both in prehospital and interhospital care. It is this very latter question which is so difficult to really assess. The comments made by Dr. Mattox and by Dr. Nicola summarize the problem quite well. 1

Children's Orthopedic as a tertiary care center needs to have the ability to deliver critically ill or injured children to its door. For a small number in any years time, there needs to be direct transportation without an intervening additional ambulance ride. Children's Orthopedic Hospital has been placed in a residential area long years ago and, shy of moving it out of that area completely, the primary mission of the hospital has to be recognized. That time of discussion has long since passed. I am quite skeptical about the commentary made by the Children's Orthopedic administration. They tend to overinflate their importance and try to bulldoze the community into submission by waving the flag of suffering children. Dr. Nicola, I think, has a better handle on this and utilization figures that he discussed seem reasonable to me. The Laurelhurst Community, on the other hand, is equally over emotional in its opposition to helicopter flights and their attempt to simplify the transportation of critically ill children or adults to mere safety factors. I personally believe that there is a combination of points which are really the more satisfactory. One, I think Dr. Nicola's suggestion for limited access is quite good. On the other hand, I think the Children's Orthopedic Hospital needs to construct an adequately safe and permanent landing ground outside of its emergency entrance so that those limited permitted flights can arrive directly and safely without intervening ground transportation. 2 3

Lastly, I will send to you under separate cover what is only a working copy of WSMA committee dealing with helicopter standards. These are really not for publication yet, because they will be couched in terms of Washington Administrative Code in the relatively near future. Significant points however, are as follows:

1. Helicopter transportation or air transportation services should be integrated completely with the EMS program in the county of origin. 4

2. The dispatch should be under medical control and follows the same guide lines and criteria (and be integrated with) the dispatch guidelines existing in the County for land units. 5

3. The run reviews specifically should be reviewed by the County Medical Program Director or his designé. In a politically sensitive area like King County and the City of Seattle, I would advise that Dr. Nicola not only to do this himself, but make sure that a non involved [illegible] joins him in the review of these run records for appropriateness and quality of care. It would be totally inappropriate if the the review was only by Children's Orthopedic Hospital and the medical director for Airlift Northwest. 6

4. There is great concern in the Washington State Medical Association EMS Standards Committee for the safety of flights on emergency runs. We are currently looking at a recommendation of three thousand to four thousand pilot hours of additional training for EMS helicopter pilots. It 7

is felt that this additional training may well reduce the hazards. 7

5. It will be a point of the administrative code that the decision to lift off, will be that of the pilot's alone, protecting that pilot from the overzealous orders of the air transport unit's medical director. 8

It is my impression that allowing the Children's Orthopedic hospital to construct an adequate heliport for safety is necessary. It is also necessary in their conditional use permit to insist upon adequate run review, dispatch standards, preplanned interplay between the proposed helicopter unit and existing EMS systems to minimize "overutilization" and focus public attention on the appropriateness of air transport when it is properly used. 9

I would be happy to discuss any of these concepts with you or the draft material which I will submit to you as additional resource material.

Sincerely yours,

L.H. Pinkers, M.D. FACS

LHP:ys
Enclosure

218

LOTHA H. PINKERS, M.D.

1. Comment acknowledged.

2. Comment acknowledged.

3. Comment acknowledged. Children's has developed a new alternative (the Preferred Alternative) that would allow for the helicopter transport of the majority of patients to a paved, secure helistop either at the Intramural Field or at Harborview, with the most critical patients landing at a paved, secure helistop at the Kitchen Garden site, at Children's which is approximately 142 feet from the Emergency Room entrance.

4. Comment acknowledged. Please refer to the response to Central Seattle Community Council Federation Comment #3.

5. Comment acknowledged.

6. Comment acknowledged.

7. Please refer to the response to Liz Anderson Comment #187.

8. Please refer to the response to Ruth Engelberg Comment #11.

9. Your comments are acknowledged.

Thank you for your comments.

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COM 2

3812 48TH AVENUE. N.E.
SEATTLE. WASHINGTON 98105

RECEIVED
SEP 29 1986

Holly Miller, Director
Seattle Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Miller,

I attended the public hearing last Tuesday evening on the Draft Environmental Impact Statement for the proposed helipad at Children's Orthopedic Hospital.

As a result of that hearing I ask you, I beg you, to order a new draft that is less full of inaccuracies, specious judgments, undocumented conclusions, and prejudicial statements. I find it impossible to understand why DCL accepts an EIS prepared by a firm employed by one of the conflicting parties. An impartial draft is impossible under such a system. 1

Since the city bears responsibility for the document, won't you order a new draft in the interest of justice to both sides and urge that it be as accurate and impartial as is possible to obtain under the present system? 2

Very sincerely yours,

Helen R. Pinkney

Helen R. Pinkney

September 26, 1986

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

HELEN R. PINKNEY

1. As the lead agency, the Seattle Department of Construction and Land Use (DCLU) has the full responsibility for the EIS. The topics contained in the EIS are stipulated by DCLU through the scoping process, and the preparation of the EIS document is directed by DCLU. All language is reviewed and approved by DCLU.

2. DCLU and the consultant have made every attempt to ensure that the EIS is a credible, impartial document that presents the environmental information necessary for the City to make a decision on the Proposed Action. DCLU has decided neither a new Draft EIS nor a Supplemental EIS is warranted.

Thank you for your comments.

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Mark D. Plunkett
Janette K. Plunkett
4100 36th NE
Seattle, WA 98105

RECEIVED
SEP 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

City of Seattle
DCLU Office
408 Municipal Bldg.
600 4th Ave.
Seattle, WA 98104

Sept. 15, 1986

To Whom It May Concern:

Please incorporate the following comments into your EIS on the proposed Children's Hospital Helipad.

For starters, let it be known we are NOT opposed to the development of health care services generally at Children's Hospital. We applaud the expertise and care of this institution to children of the Northwest. 1

What we DO object to though is the unreasonable expansion of the hospital into the community under the guise of improved health care. It has NOT been clearly demonstrated yet that there exists substantial benefits to patients in helicopter transit directly to the hospital versus landing at Graves Field and being ushered into the care of an awaiting team of physicians, etc via an ambulance. 2

Secondly, are we to believe the hospital personnel that the helipad will be used for only extreme cases once the proposed service begins? Will the expense of this service be paid for by using the helipad route for non-emergent cases simply because its there and it's an "advanced " way to handle a case? Physicians in my neighborhood have serious doubts that either of the above two concerns are satisfactorily met with the proposed helipad. In our opinion it is high tech above reasonable judgement. 3

Next,we are angered with the arrogant attitude of COH displayed towards the community in resisting the proper channels of documenting their needs for the proposed helipad. Why have the administrators objected to complying with a standard documentation of need for this helipad? Are they concerned that we will become educated and protest this action en masse? Let's play by the rules of a free and open democracy and discuss the issue honestly and openly. 4

Lastly, we look to you to fairly portray our concerns and not be unduly affected by the deserved admiration of the entire community towards COH. Yes...they are a valuable part of the Northwest, but this stature must not obscure their responsibility to all our citizens to develop in a fair, honest way, accountable to all. We urge you to deny COH the helipad permit. 5

Sincerely,

Mark Plunkett Janette Plunkett

P.S. Please send a copy of the final EIS.

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MARK PLUNKETT AND JANETTE PLUNKETT

1. Comment acknowledged.

2. Please refer to the responses to Liz Anderson Comments #49 and 124.

   Children's believes the best alternative from a patient care perspective is that all patients transported to Children's by helicopter land outside the entrance to the Emergency Room; nowever, Children's further believes that without inordinately sacrificing patient care, the majority of Children's-destined patients can land at the Intramural Field, if allowed, or Harborview and then be transported to the hospital by ambulance. According to Dr. Nicola (see Appendix A), only the most critical patients would have a medical need to land at the hospital. These foundations are the premise of a new alternative (the Preferred Alternative) that is presented in the Final EIS.

3. Your opinion is acknowledged. The Preferred Alternative that has been advanced in the Final EIS is designed to allow only the most critical patients to land at the Children's campus. A Medical Review Committee, as described in Chapter III and Appendix C of the Final EIS, would review transports that land patients at the hospital in order to ascertain their medical appropriateness.

4. Please refer to the response to Liz Anderson Comment #53.

5. Your request for denial is acknowledged.

Thank you for your comments.

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4134 42nd N. E.
Seattle, WA 98105
October 10, 1986

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

RECEIVED
OCT 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Re: Draft Environmental Impact Statement
for Children's Hospital Helistop
4800 Sandpoint Way N. E.
Application #8405870

Dear Director Miller:

I attended the Hearing on September 23, 1986 at the Laurelhurst Elementary School where ample evidence was presented to establish the fact this is only a commercial endeavor by the three hospitals. 1

I live on 42nd N. E. about half a block directly south of the hospital. The helicopters are presently still making landings in violation of City ordinances. Their approaches are often made directly over our house as they swing around into the hospital grounds. 2

I have called Ms. Greenawalt at the Hospital and she first tries the tear-jerking need to save lives. When pinned down she will not confirm that an extra ten minutes for the maximum possible use of Graves Field would make any difference. 3

Then she swings into their usual arrogant explosion of not needing a permit because of their size, and that the citizens of Laurelhurst will just have to put up with the problem.

PLEASE, in the interest of safety for the school, the school children, and home-owners in this area, do NOT issue a permit for this heliport, but leave it at Graves where it has been for many years. Also, be sure that the approaches are restricted to Union Bay and the playfield. 4

Thank you for your consideration in this very important matter.

Sincerely,

A. WESLEY ROBERTS

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A. WESLEY ROBERTS

1. Your opinion is acknowledged.

2. Please refer to the response to Liz Anderson Comment #51 with respect to Children's compliance with the City of Seattle Land Use Code.

   Please refer to the response to Anita Francis Comment #35 with respect to flight path deviation.

3. Please refer to the responses to Liz Anderson Comments #49 and 124.

4. Your request is acknowledged.

Thank you for your comments.

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14 October 1986

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

OCT 17 1986

Dear Ms. Miller

The following are comments on the Draft Environmental Impact Statement prepared by Children's Hospital as part of its application for a permit to build and operate a helistop on its campus:

1. The DEIS contains information only on those Airlift NW helicopter flights that landed on the CHMC campus. During the past 15 months, the great majority of patients transported to CHMC via helicopter were landed at Harborview's helipad. The FEIS should include a full description of the total travel times (from the time the call for service was received until the patient entered CHMC), the flight times, the origins, the diagnosis and other pertinent characteristics of the patients and the reasons why the patient was not taken to Mary Bridge Children's Hospital for those cases where it was closer than CHMC (for all cases transported by helicopter to CHMC) since the service was initiated by Airlift Northwest. This data should be reviewed by a group of persons not directly connected with any of the actors and institutions involved in providing the transport service to ascertain the appropriateness and effects on the patient of the method of transport in each case. Particular attention should be give to revieving the experience gained with transferring patients at the Harborview helipad as it is expecially relevant to the analysis of the East Campus helipad alternative. 1

The results of this review should be included in the FEIS as should the basic elements of the data used by the review group. This review would provide a much better basis for making judgments about the need for the proposed helipad and its likely level of use in the future than is currently available.

2. A full discussion of the interrelationships between the medical and research activities at the UW Hospital and CHMC in treating pediatric patients is needed in order to assess the prospects for a helipad that could be used by both hospitals. Such a helipad could be located somewhere in the East Campus area of the UW. Since the UW Hospital is currently preparing a DEIS for a permit to operate a helipad on the roof of its new East Wing building, it is apparent that DCLU should require that both permits be considered jointly rather than sequentially. This is not a new idea. You will find several letters in the file that have suggested that DCLU require that these two permit requests be considered together. The DEIS has not given serious 2

consideration to the alternative that calls for a joint use helipad located somewhere in the East Campus area of the UW. The FEIS should contain a much more detailed investigation of this alternative. 2

3. The DEIS contains no discussion of the standards and procedures for dispatching the Airlift NW helicopter. Dispatching is a vital part of the operation of any EMS service and can strongly influence the frequency with which the helicopter is used, decisions regarding the use of MAST instead of ALNW helicopters, decisions regarding the use of MEDIC I or private ambulance vehicles instead of the helicopter and the selection of landing sites when a choice exists. Ideally, the dispatching of all EMS services in the Central Puget Sound Region should be centralized and integrated. This is particularly important with regard to helicopters which can range up to 150 miles (i.e. south to Portland and north to the Canadian border). When emergency transport is required, a well-trained dispatcher should be able to quickly determine which EMS service can provide the appropriate assistance at the scene most rapidly so that the patient can be properly stabilized for transport. The DEIS provides no evidence that this most difficult problem has been solved in a way that will assure that the needs of the patient are given top priority. The FEIS should provide such evidence because of the close relationship between dispatching standards and procedures and the prospective use of the proposed helipad. 3

4. The DEIS does not mention the capabilities of Mary Bridge Children's Hospital to handle emergency pediatric cases. Yet, even the scant data on the actual use of the helicopter shows that many of the patients flown via helicopter to CHMC could have reached the facilities at Mary Bridge Children's Hospital much sooner, even if they had been transported by ground ambulance. A comparison of the capabilities of both hospitals to treat emergency pediatric cases should be included in the FEIS. Without this information, sound judgements about the proper role of each hospital in the care of the emergency pediatric patients that arise in the region cannot be made. 4

5. Throughout the DEIS, no distinction is drawn between the needs of different kinds of patients. There are at least three types that ought to be recognized: neonates, infants and pediatric patients. Neonates have special problems that most infants and pediatric patients do not have. Yet the discussion of alternatives in the DEIS seems to assume that all patients are alike and have the same problems that neonates have. All patients do not arrive in an isolette and do not have the same intubation problems as premature neonates. Data are needed on the number of emergency cases expected by patient type before one can properly assess many of the questions raised regarding the transfer of the patient from the helicopter to a nearby ground ambulance. This 5

transfer requirement is a key issue in evaluating the East Campus helipad alternative. Neonates are already a very small proportion of the patient population that is expected to transported via helicopter. As the perinatal programs at UW Hospital, Swedish and other regional hospitals grow and develop, one can reasonably expect even fewer premature neonates to arrive by helicopter in the future. 5

6. An extensive assessment of the noise study included in the DEIS has been prepared by JGL Associates, Inc. located in Redmond, Washington. A copy of this study is enclosed with this letter. Its overall conclusion is that the noise study contained in the DEIS is quite inadequate and should be redone. As noted in the DEIS, there have been 21 landings on the COH campus during the past several months. If acoustical monitors has been installed inside and outside of several of the nearby residences during this period, some substantial amount of data would be available to assess the noise impacts associated with the operation of the Augusta 109. The noise testing accomplished to date by the applicant is clearly insufficient to provide the City Council with the information it needs to make its decision on this issue. This is especially true with regard to the Blackhawk helicopter that MAST expects to be using in the near future. 6

7. It is the purpose of an EIS to identify and describe the attributes of alternative solutions to the "problem" at some point in the future and then to compare them using a set of evaluation criteria. The results of this comparison provide a basis for the selection of the "preferred alternative" which is then normally discussed in some greater detail. The DEIS contains no such comparison, as the selection of the preferred alternative is identified early on in the document. This choice has not resulted from a careful and through comparison of alternatives. This deficiency should be corrected in the FEIS so that the City Council will have a clear presentation of the reasons why the Preferred Alternative is superior to the other possible solutions to the "problem". 7

8. The DEIS contains no discussion of the liability of the parties involved in the operation of the helicopter in the event of a crash in a residential or other populated area. It is known that Hospital Air Transport is required to carry liability insurance of $20 million dollars. Does this mean that Hospital Air Transport (headquartered in Beaverton, Oregon) is solely liable? Or, since Hospital Air Transport is a subcontractor to Seattle Jet, does Seattle Jet share in this liability? Are Harborview, Airlift Northwest, the other participating hospitals or the State of Washington liable in the event of a crash? It would be especially helpful to know how the insurer calculated the risk factors used to determine the premiums for this policy and who the insurer is. These questions are relevant to the safety issue and answers should be provided (in depth) in the FEIS. 8

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9. Airlift Northwest has been bringing patients to COH via helicopter for about 15 months. There have been approximately 100 patients transported during this time. A review of the appropriateness of these transports conducted by an independent review panel should be included in the FEIS. This review should include at a minimum the following items: reason for transport, mechanism of injury or illness, interventions performed or maintained, outcome of patients transported and timeliness of transport. An analysis of these data by a well-qualified and credible panel would provide a much more reasonable basis for making judgments about the medical need and selection of destination hospital questions that are such key elements in matter. A case in point is data on the total travel time involved in these helicopter transports. How can one assess the disutility of the time required for a transfer at the UW East Campus area without being able to compare it with the total travel time involved? Does the transfer add 2%, 5% or some other figure to the total travel time? The DEIS does not contain this vital information. Please ask that it be included in the FEIS. 9 10

10. The forecasts of the probable use of the helipad contained in the DEIS are supported by no visible methodology. It is not reasonable to use data for the first 15 months of a start-up operation to extrapolate 10 years into the future. The only reasonable approach to this important problem is to forecast by analogy. This means that other Children's Hospitals that are similarly situated in a metropolitan area of comparable size that have some similarities in terms of topography should be located and their experience with pediatric transports over several years examined. Ideally, a population-based methodology should be developed that could be used to estimate the numbers of emergency cases that can be expected to be generated by a population as it evolves through time in response to the variety of factors that together define its demographic and socioeconomic characteristics. Examples of metropolitan areas that have characteristics similar to Seattle are San Diego, the San Francisco Bay Area, Portland and a few Eastern coastal cities. 11

11. The DEIS contains no references to the publication entitled Air Ambulance Guidelines published in May 1986 by the U.S. Department of Transportation and the American Medical Association. The FEIS should discuss in detail how the proposed air ambulance service would satisfy these guidelines. A copy of the table of contents of this publication is enclosed with this letter for your interest. 12

12. The DEIS includes a description of the time required for transport of a patient from Enumclaw to Children's (Table 3, page 18). This illustration should be modified to include the dispatch time for the helicopter which can be considerable. It should also include estimates for transport to Mary Bridge 13

Children's Hospital in Tacoma. If minutes do make a difference, then it may be that this patient would be better off being transported to the closer hospital. Beyond these obvious deficiences of this part of the DEIS lies the larger and more important question of how one defines the appropriate service area for helicopter transport. Dr. Nicola uses a figure of 75 miles as defining the distance from Children's within which ground transport is probably going to be superior. How many times has Airlift Northwest been used to transport patients originating within 75 miles of Children's since June of 1985? The FEIS should contain such data as well as several analyses of the comparative advantages of ground versus helicopter transport from several representative locations in Western Washington. It is obvious that if minutes matter, all but very exceptional patients from Bremerton and other Kitsap County locations should be taken to Mary Bridge Children's hospital via ground ambulance. Yet, the information in the DEIS suggests that just the opposite is happening - they are being taken to Children's via helicopter. Such comparative advantage studies are needed to establish service area boundaries for those few pediatric services available only at Children's and Mary Bridge. Once such service area boundaries are established, population-based forecasting of patient volumes becomes much more feasible and rational planning becomes more possible. 13 14

13. A serious deficiency in the DEIS is its total unconcern with where the helicopter is supposed to land when it is sent to some hospital in Western Washington. Since about 90% of the helicopter flights are supposed to be interhospital transfers, one must assume that every hospital in Western Washington will need a helipad. A survey should be conducted that will show how many of these hospitals now have or contemplate having a helipad. For those that do not now have a helipad and have no plans to construct one, some other suitable landing place that has the approval of the FAA and other local and state officials should be identified in the FEIS. 15

There is much information that is still needed before the City Council can be expected to make an informed decision on this issue and I hope that you will require that the DEIS be largely redone in the near future. 16

Yours sincerely,

Jerry Schneider

Jerry Schneider
5003 45th Avenue NE
Seattle, Washington 98105

DOT HS 806 703
Revised Mr 1986

NTS-42

U.S. Dept. of Transportation
National Highway Traffic Safety Administration

and the
American Medical Association
Commission on Emergency Medical Services

Air Ambulance Guidelines

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JGL ACOUSTICS, INC.
14750 N.E. 95th • Redmond, WA 98052 • (206) 881-5522

September 17, 1986

Laurelhurst Community Club Executive Board
5003 45th Ave. N.E.
Seattle, Washington 98105

Attention: Mr. Jerry Schneider
Subject: Children's Hospital and Medical Center Helistop
Review of Noise & Vibration Studies

Gentlemen:

At your request I have reviewed the following documents relative to the previous noise studies prepared for the subject project:

232 Helipad Noise Evaluation for Children's Orthopedic Hospital
prepared by: Seton, Johnson & Odell, Inc.
dated: October 8, 1985.

Children's Hospital and Medical Center Helistop
Draft Environmental Impact Statement, Chapter IV, pp. 74-89
prepared by: Towne, Richards, & Chaudiere, Inc.
dated: September 1986.

Based upon this review, I have the following comments:

1. Determination of the existing ambient noise characteristics of the residential properties affected by the project is inadequate to accurately determine the acoustical impact. There are several reasons for this:

   a. The instrumentation used in the measurements is not suitable for determining the acoustical parameters of interest (i.e. Leq and Lmax). The B&K 2209 sound level meter can only display the instantaneous sound pressure level (slow or fast response); it is up to the operator to view the indicating needle and estimate "by eye" the average and maximum noise levels during the measurement period. | 17

   b. The measurement period at each location is inadequate to determine the necessary acoustical parameters with the required degree of accuracy. For this type of project the absolute minimum monitoring period should be 24 continuous hours at each location. The recommended monitoring period is 3 days at each location. The 10 to 15 minute measurement period used by Seton, Johnson & Odell cannot even begin to determine the necessary statistics about the existing Lmax levels in the area. The existing and predicted Lmax levels in the adjacent residential community is one of the most important parameters necessary to evaluate impact (particularly sleep interference). The DEIS suggests that existing Lmax levels are in the 75 to 85 dBA range. This should be verified by direct measurement. The short measurement period (along with the improper instrumentation) also lends considerable doubt to the accuracy of the Leq values reported. It is certainly presumptuous (and misleading) to publish an estimated monthly Ldn based upon less than 2 hours of data. | 18

   c. The ambient noise measurement locations are not adequately specified in either of the reviewed reports. The precise location of the microphone should be specified at each measurement location. From the verbal description presented in the Seton, Johnson & Odell report it appears that some of the measurement locations were inappropriate. For example, site 1 is said to be "in the parking strip on the east side of 44th Ave. N.E. between N.E. 47th St. and N.E. 50th St." Ambient noise measurements should never be made this close to a street because of the effect of street traffic. It is a well known fact that the Leq and Lmax levels close to the street are not representative of the levels which occur at typical house setbacks. I suspect that this same problem occurs with all of the five sites reported in the DEIS. | 19

2. Presumably, the helicopter noise tests conducted in May of 1985 were run to determine the pertinent helicopter noise descriptors as they pertain to the impact on the adjacent residential property. Unfortunately, the measurements were taken at only one point with only one landing/take-off, and the data was not analyzed for frequency content. The frequency content of the noise is critical if projections of interior noise levels are to be made. The interior/exterior noise reduction estimates presented in the DEIS and the Seton, Johnson & Odell report are taken from the EPA Noise Guidelines Document which is based on a national average for all types of noise. It is a well known fact that typical exterior construction provides more noise reduction at high frequencies (above 500 Hz) than low frequencies. The fact that helicopter noise has more low frequency energy than typical traffic noise would suggest that the interior/exterior A-weighted noise reduction values for helicopter noise would be below that of the national average for all types of noise. The only way to legitimately estimate the interior noise levels (without direct measurement, which is the preferred technique) is to measure the frequency content of the helicopter noise at carefully selected receiving locations as the helicopter goes through its typical operating maneuvers. From these data it is possible to calculate the interior noise levels as a function of frequency assuming typical exterior building construction for the residential area in question. A minimum of three landing/take-offs should have been measured (and tape recorded) in order to get an estimate of the frequency content and range of noise levels created by the helicopter due to slight changes in flight path, approach rate, and altitude. | 20

3. Estimates of the average exterior Ldn from helicopter traffic using the proposed helistop are based upon FAA noise test data which provides Lmax and SEL statistics for various maneuvers with the Agusta A109 Mark II. All noise level predictions are apparently based upon 100% use of this aircraft. If other aircraft are expected to use the facility, the noise levels and percentage of use for each of these aircraft should be factored into the analysis if an accurate assessment of the impact is to be made possible. 21

4. Estimates of the maximum exterior noise levels from helicopter traffic are based upon the field test conducted in May 1985 as well as the FAA data on the Agusta A109 Mark II. Unfortunately, the maximum noise levels presented in this report are not clearly reported. There are three different maximum noise level statistics in common use: 22

   i) Lmax (slow response). This is the maximum sound pressure level detected during a measurement period with the sound level meter time weighting factor set to "slow response". The "slow response" setting causes the meter needle to respond slowly to rapid changes in the noise level (missing the true maxima) and it is normally used to determine compliance with environmental noise ordinances. It should not be used to estimate actual maximum noise levels when sleep interference is an issue. It is commonly used with non-integrating sound level meters (such as the Bruel & Kjaer 2209 which was used by Seton, Johnson & Odell) because the indicating needle movement is too rapid to follow with the eye using other settings.

   ii) Lmax (fast response). This reading is similar except the meter time weighting is set to "fast response". Lmax values determined with the "fast response" setting are almost always higher than those taken with the "slow response" setting, and the difference between the two depends upon the nature of the noise.

   iii) Lmax (peak detector). This reading bypasses the rms detector circuit in the sound level meter and captures the true "peak" sound pressure level. This setting is normally used to measure impulsive noise, but it is of interest here because some researchers have conducted laboratory sleep interference studies using the peak A-weighted sound pressure level as the primary control variable.

   There is a significant difference between each of these noise descriptors (as much as 15 dBA between Lmax (slow) and Lmax (peak) for any one single event), and unless the existing and predicted future Lmax levels are based upon the same time weighting factor, it is not possible to assess the impact.

5. The methodology used to evaluate impact in the DEIS is generally appropriate, but there are two major omissions:

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   a. The DEIS fails to compensate for the character of the helicopter noise. It is a well known fact that some types of sound create higher levels of annoyance than others even if the A-weighted sound pressure level of the two sounds is the same. Sounds containing single frequency components (tones) and impulsive sounds generally fall into this category. Helicopter noise is known to possess both of these characteristics. The City of Seattle Noise Ordinance accounts for this fact by applying a 5 dBA penalty in determining compliance. Even though emergency helicopters are exempt from meeting the requirements of the noise ordinance, it would be necessary to apply a similar penalty if the intent of the study is to determine true impact by the use of Lmax and Ldn noise descriptors. 23

   b. The DEIS fails to provide a projected helicopter noise contour map and a discussion regarding the geographical area of impact. Reading these reports one gets the impression that the helicopter noise will impact only the front row of houses directly adjacent to the helistop. This is probably not the case, and in fact, if a significant or moderate impact is expected at Site 1, I would expect the impacted area to include most of the homes bounded by N.E. 50th St. on the north, 46th Ave. N.E. on the east, and N.E. 45th St. on the south. 24

In summary, my opinion is that these noise studies rely too much on general data and not enough on information which is specific and relevant to the project in question. This is sometimes the case for an environmental checklist report, but it is not at all appropriate for an environmental impact statement. 25

If you have any questions regarding these comments, or if I can be of any further assistance, please give me a call.

Very truly yours,
JGL Acoustics, Inc.

Jerry G. Lilly

Jerry G. Lilly, P.E.
President

JERRY SCHNEIDER

1. Please refer to the response to Liz Anderson Comment #32 with respect to the presenting conditions of patients transported by helicopter to Children's.

   Please refer to the response to Liz Anderson Comment #50 with respect to overflight of other hospitals.

2. A full discussion of the interrelationships between the medical and research activities at the two institutions is not necessary to determine the environmental effects of a shared helistop. A helistop that could be shared by both institutions is discussed as the Intramural Field Alternative in the Draft and Final EIS and also as the Preferred Alternative in the Final EIS. The University Medical Center Rooftop Helistop Alternative also provides for shared use and is analyzed in this Final EIS. However, the Rooftop Helistop is not considered a feasible alternative at this time.

   Please refer to the response to Kate Hemer Comment #2.

3. See response to Liz Anderson Comment #77. The development of a regional plan for dispatching EMS helicopter services theoretically would reduce the potential for different helicopter services to "compete" for patients. In actuality, there are three primary EMS helicopter services that can transport patients in the Puget Sound area: Airlift Northwest, Med-Flight out of Bellingham, and MAST. MAST does not compete with private EMS transport systems. The Airlift Northwest service also provides benefits that are not available with MAST (see response to Liz Anderson Comment #92). Because transports are initiated by the referring physician, the selection of the most appropriate carrier is the referring physician's responsibility (see response to Jane Johnson Comment #5 in her letter of September 30, 1986). A central dispatcher or set of transport protocols that are available to referring physicians in the region could provide a benefit to their patients; however, an analysis of the value of an integrated central dispatching system is beyond the scope of this EIS.

4. Please refer to the responses to Liz Anderson Comments #50 and 58 for a discussion of the capabilities of the two institutions.

   It should be noted that Airlift Northwest transports are initiated by referring physicians. An analysis of the relative role of these hospitals in treating emergency pediatric patients is beyond the scope of this document.

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5. It is acknowledged that there are medical distinctions among the different types of patients being transported to Children's by helicopter. Irrespective of whether the patient is necnatal, infant or pediatric, the key distinction for the purposes of evaluating the helistop alternatives is whether for medical reasons the patient needs to be transported by helicopter and, if so, then does the patient need to land directly at the Children's campus.

   Administrative staff of Children's indicate that approximately one-half of the patients landing at the Children's campus are neonates. It is not known if this pattern would continue.

6. Please refer to responses to Comments #17-25 in this letter for discussion of these topics.

7. The purpose of the EIS is to provide the public and decision-makers with an objective discussion of reasonable alternatives, their environmental impacts, and mitigation measures that would avoid or reduce adverse impacts. The Proposed Action, as discussed in the Draft EIS, was one of three development alternatives evaluated in the document, along with a No Action Alternative.

   Subsequent to the issuance of the Draft EIS, a new alternative has been proposed. This new alternative would result in the majority of patients landing at Harborview or the Intramural Field, if permitted, with the most critical patients landing at Children's campus. This alternative is advanced as the Preferred Alternative, as it reduces noise and risk of accident for the neighborhoods surrounding Children's without inordinately sacrificing patient care. No decision has yet been made as to which, if any, alternative will be approved.

8. See responses to Liz Anderson Comments #29, 35, and 44.

9. DCLU requested that Dr. Nicola assist DCLU in its deliberations regarding the medical need for the helistop. In response, Dr. Nicola stated that a "review of the case files of the children flown directly to Children's indicates that with one possible exception, all presented life-threatening conditions that warranted transport right to the doors of the hospital. Review of 30 additional randomly selected cases flown by helicopter to Harborview for ground transport to Children's shows that all cases met the State's proposed criteria for use of air tranport but were less severe than those flown directly to the hospital" (Nicola, 1987). Please refer to the response to Central Seattle Community Council Comment #4.

10. The relative disutility of the additional time and manipulation associated with the transport of a patient from the Intramural Field site to the Children's Emergency Room entrance has less to do with the percentage of the total transport time that this transfer represents than with the medical condition of the patient. A review of what

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percentage of time traveled would have been represented by the transport of patients from the Intramural Field site to Children's is not within the scope of this study. Please refer to the response to Liz Anderson Comment #37 with respect to transport time savings.

11. Please refer to the response to Liz Anderson Comment #26.

12. This document was examined for the preparation of the Final EIS. A detailed examination of Airlift Northwest's consistency with the voluntary guidelines is outside the scope of this document. It should be noted, however, that the consistency of Airlift's operations with AAMS and NEMSPA guidelines has been addressed and is incorporated into Appendix C of the FEIS.

13. Please refer to the response to Liz Anderson Comment #38.

14. Dr. Nicola indicated in his original report to DCLU that "Less than 70 miles, depending on geography, ground transport is the generally agreed preference." Because of topography and the characteristics of the road/ferry networks, distance is not the only factor that influences travel time. In his revised report to DCLU, Dr. Nicola deleted the reference to a distance limit.

    Airlift Northwest is a service that allows specialized medical teams to reach patients and also to enable referring physicians to transport their patients to advanced care facilities. Airlift Northwest transports patients to the facility identified by the referring physicians. This facility may be Mary Bridge. Please refer to response to Liz Anderson Comment #58.

    This document is not intended to address the environmental impacts of the provision of an air ambulance service. Please refer to the response to Kate Hemer Comment #3.

15. An examination of potential landing facilities at other hospitals in western Washington is beyond the scope of this study.

    The proposal is for the approval of a helistop to enable critically ill and injured patients to be transported to Children's.

16. Please refer to the response to Ruth Engelberg Comment #1.

17. The instrumentation used in the measurements is suitable and is commonly used in the acoustics profession to measure the acoustical parameters of interest (i.e., Leq and Lmax). The operator does not estimate "by eye" the average and maximum levels. Instead, the instantaneous sound level displayed by the sound level meter is tabulated by the operator at fixed intervals, such as every ten seconds. These levels are then used to calculate the Leq and other descriptors of interest. The Lmax is at least as high as the highest

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sound level recorded, but may be higher if the number or duration of events causing Lmax is small relative to the number of measurement samples. In such cases, the Lmax can be estimated by knowing the types of noise sources that would typically cause the Lmax (e.g., trucks, buses or aircraft operating at known distances from the receiver). The noise measurement procedure and method for determining existing noise are consistent with recommendations of Guidelines for Preparing Environmental Impact Statements on Noise (National Research Council, Committee on Hearing, Bioacoustics and Biomechanics, 1977).

The technique for measuring existing noise used by Seton, Johnson & Odell, Inc. (SJO) was to sample the instantaneous sound level at 10-second intervals over four 10- to 15-minute periods separated by approximately six hours. The 60 to 90 samples for each period were used to calculate the equivalent sound level, Leq, for the period. The Leq's for the four periods were then used to calculate the day-night average sound level, Ldn. This measurement procedure is a commonly accepted procedure that is consistent with recommendations on pages IV-7 and IV-8 of the National Research Council guidelines. In locations such as those near Children's, existing noise is substantially the same from day to day, since the noise is caused primarily by well-established motor vehicle traffic patterns. At such locations, noise measurements during a single 24-hour period are considered adequate, based on the guidelines.

The SJO measurement procedure did not provide true measurements of existing maximum sound levels, Lmax, because of the limited number of measurement samples and the brief and infrequent occurrences of the noisiest events during each day. The National Research Council guidelines do, however, allow prediction of existing noise based on current noise source data, as was done in the Draft EIS, to estimate the existing Lmax based on U.S. Department of Transportation motor vehicle noise emission data.

18. See response to Comment #17, above, for a discussion of the measurement procedure and method for determining existing noise.

There is no strong evidence that Lmax is "one of the most important parameters necessary to evaluate impact." Noise impact criteria used by governmental agencies, such as the U.S. Environmental Protection Agency (EPA), U.S. Department of Housing and Urban Development (HUD) and U.S. Department of Transportation (DOT), are not based on the Lmax, but instead are based on the average energy descriptors Leq and Ldn. The reason for adoption of these descriptors rather than Lmax is the overwhelming evidence from studies over the past 15 years that activity interference (including sleep interference) and annoyance reactions correlate most closely with average or cumulative sound energy, as measured by Leq and Ldn, whereas correlations with Lmax and various other noise descriptors are not as good. Although some researchers have proposed use of an Lmax noise descriptor, social surveys have

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indicated that the noise impact correlation for this descriptor is especially poor.

The Lmax has been used in studies of sleep interference. These studies have been conducted under a variety of conditions. For example, some are laboratory studies in which subjects are motivated to awaken in response to noise, whereas others are conducted in residences or institutions. The types, levels and durations of sound have differed from one study to the next. The thresholds and rates of sleep interference relative to sound level, therefore, have been variable from one study to the next, as shown by the differences between Figures 10 and 11 in the Draft EIS and Figures 19 and 20 in the Final EIS. There are no commonly accepted criteria for sleep interferences or other environmental impacts based on Lmax.

Criteria based on the Leq and Ldn descriptors are commonly accepted by acoustics professionals and governmental agencies. They, nevertheless, have been difficult to accept by some lay persons and consultants who believe that an average sound level does not show "true" impact of noise, since individual noise events become a part of an average. It should, therefore, be noted that Leq and Ldn are not arithmetic averages of the sound level, influenced equally by the lower and higher sound levels, but are instead more heavily influenced by the higher noise events. It also should be noted that criteria using Leq and Ldn were developed initially using aircraft noise and, therefore, intermittent higher sound levels, rather than the more constant surface traffic noise. The use of Leq and Ldn descriptors, and the concept that impacts of noise (whether steady or fluctuating) are best gauged by the average or cumulative sound energy, are today generally accepted throughout the world.

19. Measurement Locations 1 and 2 were in parking strips along 44th Avenue N.E. and 45th Avenue N.E., respectively. These streets are residential streets with relatively light traffic. Based on the small amount of fluctuation as indicated by standard deviation in measured sound levels at these two locations (see Table 2 in the SJO report), it is evident that the measured noise was caused by distant arterial traffic on Sand Point Way and N.E. 45th Street, not by local traffic. The measured noise at the two locations, therefore, would be similar to the noise at a house setback.

The remaining three measurement locations were at representative residential distances from Sand Point Way N.E., the predominant noise source in the area.

The estimated existing Lmax discussed in the Draft EIS were for receptor location 15 meters (about 50 feet) from traffic, not locations in parking strips.

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20. Measurements of the frequency content were requested from the manufacturer of the Agusta 109 Mark II, but were not available. The frequency content for the Bell UH-1V, however, were provided by Bell Helicopter. The Bell would be expected to have more low frequency noise than the Agusta, since it does not have the low-noise design features of the Agusta for controlling the low frequency blade noise. The Bell data indicate that the octave band sound pressure levels at the low frequencies of 31.5 and 125 hertz are 10 dB and 2.5 dB higher, respectively, than the A-weighted sound level. Measurements of surface traffic noise by Towne, Richards and Chaudiere, Inc. and others indicate that octave band sound pressure levels at 31.5 and 125 hertz are about 1 to 3 dB and 2 to 3 dB higher, respectively, than the A-weighted sound level. (For trucks, however, the low frequency noise is higher still.) Therefore, the primary differences between the Bell helicopter spectrum and a typical traffic spectrum with similar A-weighted sound levels is the Bell's 7 to 9 dB higher sound pressure level compared to traffic noise at 31.5 hertz.

The typical outside-to-inside sound level reduction of residences in the Northwest is 25 dBA. The outside-to-inside sound level reduction in the 31.5 hertz octave band is about 10 dB less than the sound level reduction of A-weighted levels, based on measurements by Towne, Richards and Chaudiere, Inc. in 12 rooms with different window configurations.

In calculating the 31.5 hertz octave band's contribution to the A-weighted sound level, 39 dB is subtracted from the 31.5 hertz octave band sound pressure level because of the human ear's relative lack of sensitivity at this low frequency.

Considering all of these factors, the indoor A-weighted sound level contribution of the 31.5 hertz octave band for the Bell UH-1V producing an exterior A-weighted sound level of 84 dBA would be 84 plus 9 minus 25 plus 10 minus 39, or 39 dBA. The A-weighted indoor sound level, including all of the higher frequencies, would be 84 minus 25, or 59 dBA. Because of the way sound levels combine, the 39 dBA contribution of the 31.5 hertz low frequency octave band increases sound levels by only 0.1 dBA compared to the 59 dBA contribution of the higher frequencies. This amount of increase is imperceptible. The contribution of the low frequencies also would be small with windows partly open for ventilation. The fact that the Bell helicopter has more low frequency sound energy than typical traffic noise, therefore, does <u>not</u> have any significant effect on the predicted interior sound levels.

The SJO report indicated that helicopters configured similarily to the Agusta have sound pressure levels in the 31.5 hertz octave band, which are 0 to 10 dBA lower than the A-weighted sound level. Low frequency noise is, therefore, expected to have less effect with the Agusta, which would be the aircraft used in the vast majority of the transports.

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21. For the purpose of this analysis, it is estimated that approximately 10% of the flights would be MAST Bell UH-1V helicopters (which rarely would land on the Children's campus), and about 90% Airlift Northwest Agusta 109 Mark II helicopters. The A-weighted noise emissions of these two helicopters are not significantly different. For example, noise monitoring at Harborview Medical Center indicated that the sound levels were similar for landings, and that the MAST helicopter was 3 dBA noisier when taking off. These small differences, and the fact that MAST flights would comprise less than 10% of total flights, would have negligible effect if factored in.

22. The measurements discussed in the Draft EIS were made on either a "slow response" or "fast response" sound level meter setting. Environmental noise measurements are generally made using the "slow response" setting, which has a time constant of 0.5 seconds. Sometimes a "fast response" setting is used in situations where there may be rapid changes in sound level. The "fast response" time constant is 0.25 seconds. If measuring a single brief noise event lasting only a fraction of a second, the "fast response" setting would usually give a slightly higher reading than a "slow response" setting. When measuring traffic noise or helicopter noise, however, there would generally be no difference between the "slow response" and "fast response" readings.

    The "peak" meter setting was not used in the Draft EIS study. The "peak" time constant is 50 microseconds (50 millionths of a second). This time constant is primarily used to measure very short impulse noises caused by blasts, gunshots or metal-to-metal impacts in industry. The peak linear sound pressure level of these short, high-level noises is used to evaluate their potentially damaging effect on structures or on hearing in the 3,000 to 4,000 hertz frequency range, which are critical for speech intelligibility. The current occupational noise limit for impulse noise is 140 dB measured on the peak linear setting. A safe airblast level for structures is about 135 dB. The proposed helistop would not result in sounds calling for measurements using the "peak" setting.

    Researchers often use the term "peak A-weighted sound level" incorrectly when they are in fact referring to a maximum A-weighted sound level, Lmax, measured using either the slow or fast meter setting. This common but incorrect usage of the term "peak" should not be confused with the "peak" meter setting and its limited applications.

23. Helicopter noise is usually considered to be impulsive because of its discrete blade passage sounds. Towne, Richards and Chaudicre, Inc. are unaware of any evidence that there would be single frequency tone components. It is currently the common practice not to include any tone corrections when evaluating A-weighted aircraft noise.

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As discussed in the Draft EIS, research to determine whether an adjustment should be made to the sound level based on the impulsivity of the helicopter sound has led to conflicting results. The current position of the FAA and the International Civil Aviation Organization is that an impulsivity adjustment is unnecessary to certify aircraft properly and assess human response adequately.

It is not clear that the blade noise from the Airlift Northwest Agusta 109 Mark II, which would comprise at least 90% of the flights, should be considered impulsive. Because of the persistence of auditory stimuli, sound separated in time by less than 50 milliseconds (thousandths of a second) are not heard as discrete signals, but merge into a single signal. The Agusta, with four-bladed roto., operates at 393 revolutions per minute, which yields a blade passage interval of 38 milliseconds. The blade sound of the Agusta helicopter, therefore, would be heard as something approaching a single, continuous signal.

The MAST Bell UH-1V with two-bladed rotor operates between 294 and 324 revolutions per minute, which yields a blade passage interval of 93 to 102 milliseconds. The blade sound of the Bell helicopter, therefore, would be heard as discrete signals and considered impulsive. It should be noted, however, that the Bell UH-1V would comprise less than 10% of the flights, and that MAST is currently planning to replace the Bell UH-1V with a Sikorsky UH-60, which has a four-bladed rotor and, according to FAA data, is slightly quieter than the Agusta 109 Mark II.

24. The Draft EIS analysis is a "worst case" analysis that evaluated impacts at the residential and hospital locations closest to the helistop. The few nearest residences would be within about 200 feet of the flight path. For each doubling of distance from the flight path, helicopter sound levels are reduced by 4 dBA or more (for Leq and Ldn) to 6 dBA or more (for Lmax). Residences even one block away, therefore, would receive significantly less helicopter noise than the nearest residences. This difference is evident by comparing the predicted helicopter noise at Location 1 and the more distant Location 2.

25. The noise studies relied on:

    a. measurements of existing sound levels at five locations near the helistop site, selected in coordination with the City of Seattle Department of Construction and Land Use and the Seattle-King County Department of Public Health

    b. identification of the exisiting noise-sensitive land uses and of existing noise sources and sound levels in the site vicinity

    c. identification of the noise standards, guidelines and governmental policies that might be applicable to this project

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d. field measurements of the helicopter noise at Children's and at Harborview Medical Center

e. development of detailed flight path and flight speed data for Children's and the alternative landing sites, and development of preferred flight paths, based on several meetings and communications with the helicopter operators

f. independent predictions of helicopter noise by SJO using helicopter noise data measured at Children's, and by Towne, Richards and Chaudiere, Inc. using Federal Aviation Administration (FAA) measurements verified by additional measurements made at Harborview Medical Center

g. evaluation of noise impacts using EPA noise impact criteria, sleep interference data, and various governmental criteria.

The letter of comment from the Seattle-King County Department of Public Health in this document indicates the noise information is adequate.

Thank you for your comments.

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August 26, 1986

RECEIVED

AUG 29 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb
Dept. of Construction &
Land Use
400 Municipal Bldg.
Seattle, WA 98104

Dear Ms. Gibb:

It is time to resolve the question of making it possible for critically sick children to be lifted by helicopter to Children's Orthopedic Hospital and Medical Center. Any critically sick child residing in the vicinity of Puget Sound or areas depending on bridge access risk not reaching the Hospital in time to save a life, with the expertise offered there by its physicians, surgeons, and equipment. 1

It only requires the imagination of a parent or grandparent to find the answer which resides in the use of a tool like the helicopter to save a life.

Sincerely,

Emilie Schwabacher

Emilie Schwabacher

2209 38th Place East
Seattle, WA 98112

ES:db

cc: Mr. Paul Kraabel

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EMILIE SCHWABACHER

1. Comment acknowledged. Thank you for your comment.

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Business/Asia
4339 NE 45 Street
Seattle. WA 98105
USA

October 5, 1986

RECEIVED
OCT 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Holly Miller, Director
Department of Construction and Land Use
408 Municipal Bldg.
Seattle, WA 98104

Dear Ms. Miller,

I have just returned to Seattle after nine months of teaching at Shanghai University in China. As on my previous trips to China, I was deeply impressed with the friendliness and perseverance of the Chinese people. But, much more than on my earlier trips, I was impressed with the absolute power of the Chinese government.

I mention the above only because of the resemblance of the methods used by the Chinese government and those methods used by the Children's Orthopedic Hospital in its recent project - the helistop. The methods I mean are secrecy and almost total disregard for the consensus of the citizens concerned.

1. Secrecy - Unlike past COH expansion projects for which somewhat advance notice was given to the community surrounding the hospital, the helistop was shrouded in mystery from the beginning. Only after the understandable indignation of the community was aroused two years ago did COH slowly acknowledge a vague outline of their plans to fly helicopters "a few times a month" into the densely populated area around the hospital. Recently we have been told that the hospital administration has admitted that flights may occur as frequently as 80 times a month. 1

COH has repeatedly refused to give information or else has given only partial or misleading information to persons asking about the legality and funding of and the adequate exploration of alternatives to the helistop. 2

2. Disregard for Citizens - After a demonstration flight for which little advance notice was given and in which a light, single-blade helicopter landed at COH, large double-blade helicopters have begun to land at the hospital before even the most preliminary requirements (i.e. the draft EIS) have been considered fully. 3

The statements above cannot begin to encompass the myriad powers COH has assumed in its campaign to install its helistop. Yet these statements are adequate evidence of the kind of battle being waged by COH with its undisclosed moneys to hire lawyers to try to justify its goal - and all under the guise of helping little children.

A neighbor of mine said recently, "Would it be possible to set up a small airport in downtown Seattle without meeting every require- 4

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Business/Asia
4339 NE 45 Street
Seattle. WA 98105
USA

ment for safety and for environmental concern?" The answer is obvious. Yet this is just what COH is determined to do. And the losers in the establishment of this thinly-veiled marketing device, should a helicopter accident very possibly occur, will be the neighbors along the flight path, the children at nearby elementary schools, and the little patients that COH has promised to protect.

We are not living in China. This is supposedly a free country where the voice of the people counts for a lot. Our city government must realize the truth about a helistop at COH, no matter how smoothly its supporters speak. A helistop at COH is unnnecessary, unjustifiably expensive, and clearly dangerous to the community, most of all to the children in COH itself.

Sincerely,

Joy Scott

Joy Scott

4

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JOY SCOTT

1. Please refer to the response to Montlake Community Club Comment #2.

2. Children's has cooperated with the regulatory agencies in providing the information necessary to consider the required permit applications.

3. Children's scheduled the demonstration for the benefit of Dr. Nicola, so that he could observe Airlift Northwest landing procedures for the purpose of preparation of his report to DCLU. Since the flignt referred to was not intended as a public demonstration, Children's did not provide advance notice to residents regarding the flight.

   The Agusta 109 used for the demonstration flight has been used for nearly all of the helicopter transports directly to Children's campus. The four-bladed Agusta rotor creates less impulsive noise energy than a rotor with two blades. (See response to Jerry Schneider Comment #23.)

4. A similar sized helistop proposed for a downtown Seattle location would be required to undergo environmental review. The City of Seattle issued Environmental Declarations of Nonsignificance for helistops on Elliott Avenue and Airport Way that would be used more often than the Children's helistop.

   An inventory of existing helistops and pending applications for helistops and heliports in Seattle has been incorporated into Chapter IV of this Final EIS.

   Your opposition to the project is acknowledged.

   Thank you for your comments.

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OCT 3 1986
DEPT. OF CONST & LAND USE

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

Robert Haney Scott, Ph.D.
Professor of Economics and Finance
Schools of Business Administration, DJ-10

Phone: (206) 543-4867 office
(206) 523-2941 home

Telex: (910) 474-0096 UWUI

October 1, 1986

Ms. Holly Miller, Director
Department of Construction and Land Use
408 Municipal Bldg.
Seattle, WA 98104

Re: COH's Proposed Helipad Draft Environmental Impact Statement

Dear Ms. Miller:

One environmental impact that should be addressed, because it is of great concern to the city and its people, is the liability incurred by the City if the Impact statement were approved.

Does the City have liability insurance? Would the insurance premiums rise if the Helipad goes into operation? Would the city incur liability in case an accident occurred -- liability because the City failed to enforce its laws on land use. 1

I believe the City may currently be exposed to great risk of liability because knowledge of risk exists but landings are now taking place. Even if permits were issued, the City would still be at risk because it could be argued that the City was negligent in issuing a permit. Just what is the City's exposure and what is its insurance situation? 2 3

These questions should be addressed and brought to the attention of those responsible for making decisions about land use.

Sincerely yours,

Robert Haney Scott

RHS:js

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ROBERT HANEY SCOTT

1. The City of Seattle is self-insured. Please refer to the response to Laurelhurst School PTA Board Comment #7.

2. Comment acknowledged.

3. The City can not prevent law suits. It can exercise its judgment in carefully evaluating information in order to ensure that its decisions are informed and in the interests of the public.

   It is not evident to what risk the City could be exposed. Granting, denying, or conditional approval could expose the City to liability risks.

   Thank you for your comments.

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Sept. 28 1986

Holly Miller, Dir.
Dept. of Construction & Land Use
404 Municipal Bldg.
Seattle, Wn.

RECEIVED
OCT 2 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Miss Miller,

I wish to inform you of our objection to the proposal by Children's Hospital Hospital to construct & use a helipad at their site. We, as long time residents of this once quiet residential neighborhood, are so very concerned. The objections at the hearing by the D.C.L. were the same as ours:

Safety factor - dangerous flight over school, condominiums & private homes.
Weather factor - Pilot error
Expense to patient - $2000.00 per hour
Need for frequent landings - one to pick up pedestrian team, depart, one to land & discharge patient & one to depart.
Heat of turbulence to a newborn baby.
Horrendous noise over neighborhood.

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No certificate of need
Graves field is most adequate for
both University Hospital & C O H.
It only takes 2½ min. to drive to
C O H from Graves and if it were
my grandchild that method is
safer.
Any hospital, anywhere, can
stabilize a child and I'm speaking
as a registered nurse.

Thankyou,

Sincerely

(Mrs. Ben J.) Barbara H. Smith
5169 N.E. Laurelcrest Lane
Seattle,
Wash 98105
Tel. 523 9997

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BARBARA H. SMITH

1. Your objection is acknowledged.

2. Although safety is an important factor, the Airlift Northwest helicopter would not fly directly over neighborhood schools. The helicopter, however, would follow a flight path close to dwellings, particularly on those rare occasions when the secondary approach and departure paths are followed. See Chapter IV of this Final EIS for an updated analysis of helicopter safety.

3. Please refer to the response to Ruth Engelberg Comment #11.

4. See response to Kate Hemer Comment #12.

5. The four flight segments per patient transport are characteristic of the Proposed Action. One mitigation measure that has been implemented already is to have the medical team based with the Airlift Northwest helicopters located at Harborview or Boeing Field. In the event that a specialized medical transport team is located at Children's, those team members could be picked up at Children's or the Intramural Field. Thus, only flight activity that would occur at the Children's helistop would be to deliver the patient and then to depart.

6. See response to Bart Baxter Comment #7.

7. Noise is addressed in Chapter IV of the Final EIS.

8. Please refer to the response to Liz Anderson Comment #53.

9. Please refer to the response to Liz Anderson Comment #124.

10. Your opinion is acknowledged. Especially complex illnesses and injuries may exceed the ability of some personnel at community hospitals to stabilize the patient.

Thank you for your comments.

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September 26, 1986

To: Kutz
J.

RECEIVED
SEP 30 1986
DEPT. OF CONST. & LAND USE

Ms. Holly Miller, Director
Department of Construction & Land Use
Room 400, Municipal Building
Seattle, Washington 98104

Re: Proposed helipad at Children's Orthopedic Hospital & Medical Center (COH)

Dear Ms. Miller and Ms. Julie Gibbs:

In addition to the recorded testimonies heard at the draft EIS hearing held 9-23-86 in the Laurelhurst Elementary School auditorium, and in addition to previous letters from me, please read and add this letter to your permanent files on the above-named issue.

By definition, the word environment means "one's surroundings or external circumstances collectively." Be it noted in the draft EIS on the proposed helipad at COH that the phrase "no significant impact" is repeatedly used per page. "No significant impact" is not the same as "no impact," which phrase is not used. Collectively, the repeated "no significant impacts" add up to great cumulative impact on the surrounding neighborhood--the environment of individuals, families, school children. 1

The draft EIS document is inadequate coverage of the serious impacts on the neighborhood. It is based on faulty research and statistics. Dr. Nicola is often quoted--and he quotes himself as reference. The document shows a strong bias (COH); it is not an objective, impartial review; it does not equally present the two sides. I hereby concur with specific citings and details and examples to support the claim of deficient data as presented in testimonies at the 9-23-86 public meeting. the the draft EIS 2

The most serious problem is that of safety (or lack of same). Frequency rate of helicopter crashes exceeds other aircraft as well-documented nationally by news media (magazines, newspapers, radio and TV). Factors causing crashes include pilot error, pilot fatigue, obstructions (such as power lines, building and trees), weather conditions. 3

The proposed landing site is located in a high-density, residential neighborhood including: single-family homes; an elementary school (200 children plus faculty and staff); Laurelon Terrace Condominiums (136 units); Laurel Crest Condominiums (82 units); Laurelhurst West Condominiums (54 units). The Laurelon Terrace units are contiguous to COH property and helicopter site. The 60-80 landings--estimated at 15-20 patients per month with 4 flights-landings for each patient--would be a mini-airport in our midst. It would be like a helicopter landing on Laurelon Terrace rooftops or landing in Laurelon residents' yard. These could occur any time day or night. 4

A helicopter crash at COH site would kill: patient, pilot, medical personnel aboard; children and personnel in COH; neighborhood residents; school children. 5
In addition to loss of life and property damage, fire could rage as a result of a crash on this site. An oxygen tank and a natural gas main are located near site on COH property. 6

Weather is another factor which could cause crash. Weather is unpredictable, uncontrollable, including wind, fog, mist, rain making for poor visibility. 7

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-iler and Gibbs; from Spangler

Noise of the helicopter is far greater than traffic--auto or ambulance (latter shuts off siren in neighborhood). Helicopter noise decibels are above health and acceptability levels for individual residents, school classes, hospital patients' welfare. 8

Another real concern is the lack of standards for decision-making processes involved in helicopter usage and flights. Lack of designated/named responsible persons to make decisions is a serious flaw in the proposed plan(s). 9

I am also concerned about the lack of reference related to insurance. For example: Who carries policy/policies? Who pays the premiums? What is the amount of coverage? Who and what is covered? 10

The extreme expense related to initiation and maintenance of helicopters and their services is another concern. The millions spent on this marketing tool to be competitive with other hospitals could and should better be spent on patient care, programs, personnel, research. Duplication of these expenses across city and state as hospitals compete for business is wasteful and wrong. 11

The helipad proposed at COH is just one more example of institutional encroachment in a residential neighborhood. The helipad would be a veritable mini-airport wantonly endangering the lives of hundreds of residents each time a flight was made (often circling several times--losing precious time--over homes, condos, school before landing at a rate of approximately 1,500 feet per minute endangering the life of baby patient aboard). 12

In the face of mounting evidence of: (a) the unsafe record of factors involved in medical helicopter crashes; (b) the uncertain benefit derived from usage of helicopters for critical patients--documented by the medical profession; (c) the lack of standards for decision-making; (d) the excessive expense of helicopters; and (e) strong and widespread community objection, this proposal must be rethought and cancelled permanently. 13

I thus recommend:

1. <u>Absolutely NO helicopter landings at COH</u>.

2. OOH and University Hospital-UW Medical School cooperatively construct and use a helipad on UW soccer field or adjacent UW land only if a need can be proved for this unsafe and expensive service. (The jostling and rapid descent by helicopter is far more injurious to patient than ambulance transport -- Seattle ambulance service second to none in the nation.) 14

   The University Hospital and UW Medical School currently are doing and plan to expand research on COH campus. COH could share a helipad with University Hospital on UW property where the approach is wide open. It is ridiculous that there be two helipads within one mile of each other.

We all -- citizens, neighbors, COH--have a moral responsibility to <u>STOP TRAGEDY BEFORE IT HAPPENS</u>. A helipad at COH must not be further considered a viable option and never constructed. Helicopter landings in parking lot and/or any part of COH grounds must not be permitted, must be stopped. 15

Thank you.

Sincerely,
Maryann E. Spangler
Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

cc:

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1. For the purposes of complying with SEPA, the City defines environment as "... those elements listed in [SMC] 25.05.444, as required by RCW 43.21C.110(1)(f). Environment and environmental quality refer to the state of the environment and are synonomous as used in these rules and refer basically to physical environmental quality." It is acknowledged that "no significant impact" is not the same as "no impact;" however, those elements that are judged to have no significant impact do not combine to result in a significant cumulative impact. The elements that have been determined to have potential significant adverse impact were determined by the City of Seattle and are the topics of this EIS.

2. Your concurrence with the statements regarding the data that were presented by commentors at the public hearing is acknowledged.

3. The EIS identifies that the frequency of EMS helicopter accidents has exceeded the frequency of helicopter accidents, as a whole. See Chapter IV of this Final EIS for updated analysis of helicopter safety.

4. Children's is located in an urban residential area. Discussion of the land uses that are in the vicinity of the alternate helistop locations and flight paths has been incorporated into Chapter III of the Final EIS.

5. An EMS helicopter accident at Children's may or may not involve fatalities, injuries or property damage.

6. With respect to the oxygen tank please refer to the response to Liz Anderson Comment #11. With respect to the natural gas meter house please refer to the responses to Liz Anderson Comments #46 and 243, and Anita Francis Comment #53.

7. Please refer to the response to Ruth Engelberg Comment #11.

8. As presented in Table 18 of the Draft EIS and Table 19 of the Final EIS, the noise levels of the helicopter landing or taking off (Lmax) are greater than the average conditions (monthly Ldn) at all receptor locations. The Lmax, however, at each receptor location was not always caused by the helicopter; some other noise source, such as a particularly loud vehicle, may have been the cause of the loudest sounds measured at three receptor locations (along Sand Point Way N.E. and on N.E. 45th Street). Section 25.08.510 of the Seattle Municipal Code exempts emergency vehicles from the Seattle Noise Ordinance.

9. Medical and aviation decisions are being made by the referring physician, the medical transport team, the Airlift Northwest Medical Director, and the pilots, all of which are responsible for components of the flight and/or medical care. The Washington State Medical

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Association has generated guidelines to assist in the decision of selecting an appropriate transport mode. FAA has regulations for aircraft, pilots and design guidelines for helistops. NEMSPA and AAMS have developed guidelines with respect to aeromedical services (see Appendix C for Airlift Northwest's consistency with these guidelines).

10. See responses to Liz Anderson Comments #29 and 44.

11. Airlift Northwest was initiated to provide a service to referring physicians throughout the region. Please refer to the response to Liz Anderson Comment #23 with respect to helicopters as a marketing tool. Please refer to the responses to Liz Anderson Comment #269 and Anita Francis Comment #59 with respect to competition. It is acknowledged that the duplication of Airlift Northwest services would generate competition and might have adverse financial impacts on health care.

12. Noise from the aircraft would encroach upon the neighborhood. The aircraft in its approach to the helistop descends at a rate of 1,500 feet per minute. It does not land at that descent rate.

13. Your opposition to the landings of helicopters at Children's is acknowledged.

14. Your recommendation that a shared (Children's and University Medical Center) helistop be constructed and used, if the need can be proved, is acknowledged.

    Please refer to responses to Bart Baxter Comments #7 and 9. The jostling of the patient caused by aircraft vibration is expected to be minimal in the Agusta. If the medical outcome of a patient would not be affected by the availability of a specialized medical transport team provided through Airlift or by reduced transport time to advanced care capabilities, then ground ambulance would be a superior mode of transport for the patient.

15. Your opposition to the landings of helicopters at Children's is acknowledged.

    Thank you for your comments.

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JOHN B. STIMSON, M.D.
4710 40TH AVENUE N.E.
SEATTLE, WA 98105

RECEIVED
OCT 15 1986

October 13, 1986

Polly Miller
Director, Dept. of Construction and Land Use
408 Municipal Building
Seattle, WA 98104

Dear Ms. Miller:

I am concerned about the proposal to allow construction of a helipad in the Laurelhurst community on the Children's Hospital grounds. Making this decision involves balancing the resulting disruption and safety risk to the transported patients and to the neighborhood against the benefit that patients might receive from transport that would be more rapid than that by ground. The decision has greater than simply local implications, in that many other hospitals in the state are clearly interested in transporting patients to their institutions by helicopter as well. Others will look to this decision for guidance. It will become a precedent, whether justified of not. 1

My overriding concern about this situation is that the EIS is not the proper forum in which to consider this decision. Unfortunately, it appears that it is the only approval that Children's will be required to obtain. Assessment of the environmental impact cannot adequately address issues of medical need and medical decision-making, which are the real issues in this case. However, since medical justification of this undertaking is addressed in the text and in Dr. Nicola's appended letter, I wish to take issue with some of the conclusions reached, and request some revisions. 2

I have reviewed the literature cited in the EIS and Dr. Nicola's letter regarding medical justification, and disagree strongly with the conclusions reached. The EIS clearly states (p. 8) that Children's Hospital is not a trauma center, and that emergent trauma and burn cases in children go to Harborview. Therefore, the patients for whom Children's is requesting their helipad are critically ill children and neonates outside of the trauma or burn setting. The literature cited in the EIS and Nicola's letter, however, examines primarily helicopter transport of trauma victims. The only studies allowing conclusions to be drawn about whether helicopter transport of patients is better for them than ground transport deal soley with trauma cases. The only study cited outside of the trauma setting is mentioned in passing in Dr. Nicola's letter, but not commented upon. (p. 3: Resp Ther 15(2): 47-50, 1985). This is published in a journal that is not considered of 3 4 5

JOHN B. STIMSON, M.D.
4710 40TH AVENUE N.E.
SEATTLE, WA 98105

sufficient quality to be carried by the Health Sciences Library at the UW (approximately 3300 journals carried), or the respiratory therapy departments of the University of Washington, Harborview Hospital, or the VA Medical Center. It is viewed as more of a magazine than a scholarly journal. 5

The justification offered for construction of the helipad, therefore, is no justification at all. I ask that the DCIU alter their sections of the EIS on pages 19 and 20 to state clearly that, although some trauma cases appear to benefit from helicopter transport, there is no published evidence that such transport of non-traumatized children or neonates improves, or in fact is not detrimental, to their health. In addition, it would be appropriate to ask Dr. Nicola to re-examine the literature and direct his conclusions to the type of patient that Children's proposes to transfer, rather than to helicopter transport in general. 6

The latter possibility, that helicopter transport could be detrimental to some patients, is quite real. (Am Med News, p. 33; Sept 5, 1986). This evidence has appeared since Dr. Nicola's letter, and I cannot fault its omission, but I think it should now be included and addressed. 7

Lastly, table 2 in the EIS (pp. 14-16) is extremely misleading, and should be corrected or clarified. Attatchment "A" suggests that about 20% of patients transported in 1985 (once return flights have been eliminated) were admitted to floors and not to an ICU. However, all of the cases in table 2 are listed as either expiring in the ER, or admitted an ICU. This suggests that the cases have been selected for severity of illness, and are not in fact representative of all patients transported directly to Children's Hospital. If this is the case, the table should read that the cases are selected, and state what characteristics they have been selected for, or be altered to show consecutive unselected cases transported. If I am in error, then the table should state that these are in fact unselected, consecutive cases. 8

I wish to emphasize that I have the utmost respect for our emergency medical service and its supervisors, and I recognize the contribution that Children's makes to the care of sick children in our state. However, in order to make a major change in the manner in which patients are cared for, it should be necessary to show that patients will benefit from the change, and that it can be done without undue risk to others. Children's has refused to do the former, and has not done a good job of doing the latter. If it is not within the scope of the DCIU to address these specific deficiencies, then it should be taken up by a more appropriate section of city or state government prior to approval. If helicopter transport of non-traumatized children and neonates turns out not to be in 9

JOHN S. STIMSON, M.D.
4715 45TH AVENUE N.E.
SEATTLE, WA 98105

patients' best interest, it will be very difficult to alter hospital behavior and patient expectations after the fact. Please consider wisely. 9

Sincerely,

John S. Stimson, MD

1. Comment acknowledged.

2. The issue of medical need is directly related to the criteria for the Council Conditional Use Permit that is required in order to construct the helistop. The EIS is intended to serve as a forum for the presentation of reasonable alternatives and to evaluate probable significant impacts on the environment. Also see response to Kate Hemer Comment #3.

3. Your disagreement with the conclusions reached by Dr. Nicola is acknowledged.

4. Children's does treat some trauma cases. The EIS states that "traumatized and severely burned children in the Puget Sound region generally go first to the region's trauma center, Harborview Medical Center..." (emphasis added). See also responses to Liz Anderson Comments #56, 60, 62 and 63.

5. Comment acknowledged.

6. Please refer to Dr. Nicola's updated report to DCLU, which has been appended to this Final EIS Appendix A. This report acknowledges that "there is very little in the literature concerning the hospital transport of non-trauma patients."

7. Comment acknowledged. See responses to Liz Anderson Comment #87 and Bart Baxter Comment #7.

8. Please refer to the response to Liz Anderson Comment #80.

9. Comments acknowledged.

Thank you for your comments.

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SEP 08 1986

DEPT OF CONSTRUCTION AND LAND USE
LAND USE DIVISION

5038 Sand Point Way N.E.
Seattle. WA 98105
September 1, 1986

Director
Department of Construction and Land Use
400 Municipal Building
Seattle. WA 98014

Dear Director:

I have a unique perspective on the issue of the helistop at CHMC. I. my wife and two children are neighbors of the hospital. living about two blocks from the site of the proposed helistop. In addition to this I am a physician employed at the hospital. who also works as a flight physician with Airlift Northwest.

Children's Hospital and Medical Center offers unique services to patients throughout Washington and the Northwest. Children who are critically ill often can not be treated appropriately anywhere else in Western Washington. These critically ill children should not be put at added risk by having them endure multiple transfers in and out of ambulances. let alone the added time needed to reach the hospital. necessitated by landing elsewhere. 1

I am glad that as a Laurelhurst resident my two girls are so very close to one of the nation's outstanding children's hospitals. In my experience as a flight physician I know that residents throughout Western Washington are also very grateful that it is possible to get their child to Children's Hospital rapidly and safely through the use of air transport. This helistop is for them and their children. 2

The risk of having a helistop in the Laurelhurst neighborhood and the inconvenience of the sound of a helicopte landing are trivial in comparison to the good it provides children throughout this state and beyond. It should be built well, to provide the maximum safety and minimal disturbance to the neighborhood. but it must be built and put into service as soon as possible. 3

Thank you for your consideration.

Sincerely.

Thomas L. Strandford

Thomas L. Strandford. M.D

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THOMAS P. STRANDJORD, M.D.

1. Comment acknowledged.

2. Comment acknowledged.

3. Comment acknowledged.

Thank you for your comments.

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September 5, 1986

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SEP 17 1986

DEPT OF CONSTRUCTION AND LAND USE

Julia Gibb
Dept. of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a heliston outside their emergency room. 1

I just became a parent last month to a healthy baby boy. If something where to happen, such as an emergency situation, I would really appreciate knowing that he could be rushed over to COHMC via helicopter to receive emergency treatment. This service is especially needed in places like Port Townsend, which is where we live, because we do not have the emergency facilities that COHMC has. And if we where to have to drive over to Seattle in an emergency situation it might just be too late. 2

I understand the concerns of those who are objecting, but I truly believe that having this helistop service could save many lives, maybe even the life of my own son! 3

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Lisa Talley

Mrs. Lisa Talley
101 Chotwell Rd
Redlech, WA 98283
(206)283-6710

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MRS. LISA TALLEY

1. Your support is acknowledged.

2. Comment acknowledged.

3. Comment acknowledged.

Thank you for your comments.

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MRS. WILLIAM L. TRUDGIAN
8600 MANDUS OLSON ROAD N.E.
BAINBRIDGE ISLAND, WASHINGTON 98110

RECEIVED
OCT 28 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

October 27, 1986

Seattle City Council
Mr. Sam Smith, President
600 Fourth Avenue, Seattle 98104

Dear Mr. Smith and City Council Members:

Please allow me to add my voice to many others you must be hearing, in favor of allowing a permanent heliport at Childrens Hospital & Medical Center. 1

We all already owe you tremendous thanks for permitting helicopters to land at the Hospital during the past year. The privilege was not used more often than absolutely negessary to save a life; and the infrequent landings were neither heard nor noticed by the neighborhood above the usual high-decibel background of daytime city sounds.

Our darling grand-daughter became crucially ill last summer, and was rushed by ferry (which waited!) and by car out to the Hospital in time for her life to be saved. If this emergency had occurred very late when the ferries are several hours apart, we would surely have hired a helicopter, and have been forever grateful that it could take her right out to the Hospital. 2

We are lucky: our little one is now fine. But we do think about other frantic parents (and grand-parents).

PLEASE DO ALLOW THE PERMANENT HELIPORT.

Very sincerely yours,

Prudence L Trudgian

Mrs. W.L. Trudgian

Copies to: Ms. Julia Gibbs
Mr. Paul Kraabel
Mrs. Gilbert Anderson

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MRS. WILLIAM L. TRUDGIAN

1. Your support is acknowledged. The City has not given Children's permission to land helicopters; rather it has extended the compliance date for a land use violation until such time as the Council Conditional Use Permit process is completed.

2. Comment acknowledged.

Thank you for your comments.

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RECEIVED OCT 2 1986

OCT 21986

DEAR DIRECTOR

I AM WRITING TO ~~PROTEST~~ THE HELISTOP PROPOSAL FOR CH MC. THERE IS NO MEDICAL NECESSITY FOR IT: IT IS A PUBLICITY MANEUVER BY THE CH ADMINISTRATION. THEY WANT TO ADVERTISE IT TO HELP FILL BEDS. THE PHYSICIANS KNOW THERE IS NO NEED FOR LANDING ON THE GROUND, & SAID SO IN A P.I. INTERVIEW LAST YEAR.

I WORK IN THE NEONATAL ICU AT UNIVERSITY HOSPITAL. WE RECEIVE THE SAME TYPE OF TRANSPORTS, BUT THEY LAND AT HARBORVIEW, OR IN EXTREME EMERGENCIES, AT UW SOCCERFIELDS. THE TRANSPORT BY AMBULANCE IS FAR BETTER FOR THE PATIENT: HELICOPTERS ARE TOO NOISY FOR THE DOCTOR TO HEAR THE HEART & LUNG SOUNDS, WHICH ARE CRUCIAL TOOLS FOR THE CORRECT TREATMENT OF THE BABY.

BUT BEYOND THE FACT OF THE LACK OF NEED FOR THE HELISTOP, IS THE LOCATION. IT IS A SMALL AREA WITH A LOT OF PEDESTRIAN & VEHICULAR TRAFFIC, & IN A HEAVILY POPULATED AREA. TO INSIST ON LANDING HELICOPTERS THERE IS TO CREATE POTENTIAL DISASTER. A WITNESS TOLD ME OF ONE INCIDENT WHERE A MAST HELICOPTER WAS UNABLE TO SET DOWN ON THE FIRST TRY, & WENT UP THE HILL TO HOVER OVER THE GRADE SCHOOL & TURN AROUND. CONSIDERING THE HIGH NUMBER OF HELICOPTERS THAT CRASH, I THINK THAT IS NEEDLESSLY ENDANGERING THE SCHOOL CHILDREN — THEY COULD HAVE LANDED ELSEWHERE WITHOUT ENDANGERMENT.

SEVERAL MONTHS AGO I WAS WAKENED @ 3 AM BY ONE FLYING OVER MY HOUSE — I WAS TERRIFIED, AS IT WAS VERY LOW & THERE ARE MANY TALL TREES AROUND HERE. THEN I WAS SO ANGRY I NEVER DID GET BACK TO SLEEP. THEY WEREN'T FOLLOWING THE "APPROVED" ROUTE, WHICH IS OVER THE MONTLAKE FILL & ALONG THE CITY STREETS. THAT WAY, ONLY A HAPLESS MOTORIST OR TWO & A STRAY PEDESTRIAN WILL BE WIPED OUT IN EVENT OF A CRASH. FAR LESS THAN IF THEY CRASH ON A HOUSE OR ONE OF

266

III

THE ADJACENT APARTMENTS & CONDOS. THERE THE EXPLOSION & SUBSEQUENT FIRE CAN TAKE A GREAT MANY LIVES. I JUST DON'T THINK SUCH A DANGEROUS SET-UP SHOULD BE PERMITTED. 7

THE UH HELIPAD IS NOT IN SUCH A STUPID LOCATION AS THE CH MC, BUT THAT ROOF ISN'T ALL THAT BIG, & I FOR ONE WOULD HATE TO BE BROUGHT IN THAT WAY. LAST YEAR 62 PATIENTS WERE TAKEN TO UH BY AIRLIFT NORTHWEST. ALL LANDED AT HARBORVIEW OR THE IMA FIELD, & SURVIVED INTACT. I DON'T THINK ANY ADDITIONAL HELIPORTS ARE NEEDED. 8

THANKS FOR YOUR ATTENTION.

8

MARY L. VANECEK
3524 W. LAURELHURST DR. NE.
SEATTLE, WA.
98105

MARY L. VANECER

1. Your opposition is acknowledged.

2. Please refer to the response to Liz Anderson Comment #23.

3. Please refer to the response to Liz Anderson Comment #49.

4. See response to Liz Anderson Comment #65.

5. It is acknowledged that the proposed helistop is relatively small and that there is considerable pedestrian and vehicular traffic in the campus area. The area of the helistop is sufficient to safely accommodate the Agusta 109, which is the primary helicopter that would be using the helistop. A secured helistop would reduce the potential for pedestrian and vehicular conflicts, while signage would inform motorists of possible helicopter operations in the Children's campus area.

6. The referenced MAST mission involved a communications equipment failure that resulted in no attending ambulance being available to transport the patient from the Intramural Field to Children's. The MAST crew then elected to transport the patient directly to the Children's campus. It is not evident whether there were landing difficulties at the campus and subsequent overflight of Laurelhurst Elementary School.

7. Comment acknowledged.

8. Comment acknowledged.

Thank you for your comments.

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October 12, 1986

RECEIVED
OCT 15 1986
DEPT. OF CONST. & LAND USE

Ms. Holly Miller, Director
Department of Construction & Land Use
Room 400, Municipal Building
Seattle, Washington 98104

Dear Ms. Miller and Ms. Julie Gibbs,

I am writing to you in regards to the proposed helipad at Childrens Orthopedic Hospital. I am particularly concerned about the safety issue. My son attends Villa Academy which is located in the Laurelhurst neighborhood, near Childrens Hospital. My fear is that a helicopter crash could seriously jeopardize the life of my son and other children. The proposed landing site is in a high density, residential neighborhood. 1

I strongly oppose helicopter landings at COH. I also oppose landings at the University Hospital. I do not believe that helipads have been proven safe or cost effective. We have excellent ambulance transport in Seattle. Let's stay safe and sane. 2 3

Thank you.

Sincerely,
Carol Wilkinson

CAROL WILKINSON
1637 E. Shelby
Seattle, WA 98112

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CAROL WILKINSON

1. Please refer to the response to Liz Anderson Comment #18.

2. Your opposition is acknowledged.

3. The ambulance service in the City of Seattle is acknowledged to be excellent. The helistop is intended to provide a service to referring physicians in community hospitals outside the City of Seattle, and not to replace ambulance service for transports within the City limits.

Thank you for your comments.

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Sept 24, 1986

RECEIVED
SEP 26 1986

To Whom it my Concern:

We hope a careful study will be made of the Evidence & Testimony given at the Scoping Sept 23, 1986 at Laurelbrook School regarding the Helicopter; by several people who are Experts in the use of helicopters - This has been a major Concern to us - The weather and winds make it impossible to predict which way an aircraft approaches a Landing Site -

One point we did not hear addressed at the hearing was the close proximity of the large Oxygen storage tank to the Helipad site - This could be Hazardous.

Our city and its residential areas are already impacted by too many (private planes flying at uncontrolled altitudes) Should another be added When the need for the Helicopter has not been proven.

Again we say who will pay for the service?

Sincerely
Mr and Mrs Fred M Wright
271 [illegible] Ave NE

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MR. AND MRS. FRED M. WRIGHT

1. The testimony presented at the Public Hearing on the Draft EIS along with other sources will be considered by DCLU when preparing their report and recommmendation to the Hearing Examiner.

2. Wind socks at the Children's campus would allow the pilots to judge local wind conditions when operating in the area and to determine whether to use the primary flight path or, when winds in excess of 17 knots are from the northwest quadrant, to use the secondary path. Please refer to Chapter IV of the Final EIS for more detailed information on how weather conditions affect Airlift Northwest helicopter operations.

3. Please refer to the response to Liz Anderson Comment #11.

4. See the response to Bruce Balick Comment #12 for a discussion of air traffic in the area near Children's.

5. The issue of economic cost is outside the scope of this document. Please see response to Kate Hemer Comment #12.

Thank you for your comments.

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FILE COPY

Children's Hospital & Medical Center Helistop

Final Environmental Impact Statement

Volume III
Appendices

Department of Construction
and Land Use

April 1991

The intent and purpose of this final environmental impact statement is to satisfy the procedural requirements of the State Environmental Policy Act (RCW 43.21c) and City Ordinance 114057 as amended. This document is not an authorization for an action, nor does it constitute a decision or a recommendation for an action: in its final form it will accompany recommended actions and will be considered in making the final decision on the proposal.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

FINAL
ENVIRONMENTAL IMPACT STATEMENT
FOR CONSTRUCTION
OF A HELISTOP
AT CHILDREN'S HOSPITAL AND MEDICAL CENTER

VOLUME III

APPENDICES

City of Seattle
Department of Construction and Land Use

Prepared in Compliance with

The State Environmental Policy Act of 1984
Chapter 43.21C, Revised Code of Washington

SEPA Rules, Effective April 4, 1984
Chapter 197-11, Washington Administrative Code

Seattle SEPA Ordinance,
Ordinance 114057, effective August 14, 1988, as amended
by Ordinance 114090, effective August 16, 1988.
Chapter 25.05 Seattle Municipal Code

Date of Issue: April 25, 1991

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APPENDIX A

...ED

City of Seattle
Charles Royer, *Mayor*

King County
Tim Hill, *Executive*

Seattle-King County Department of Public Health

Bud Nicola, M.D., M.H.S.A., *Director*

...D ASSOCIATES, INC.

RECEIVED
MAR 27 1987
DEPT. OF CONST. & LAND USE

March 25, 1987

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Miller:

This letter responds to your request for an updated response to Beatrice Ryan's August 30, 1985 request for an opinion about the medical need for the Children's Hospital and Medical Center to establish a helistop on hospital grounds. I've enclosed a copy of Ms. Ryan's letter for your convenience.

As indicated to me by the Department of Construction and Land Use (DCLU), the City of Seattle's Land Use Code permits the establishment of a helistop at a major institution like Children's as a conditional use, if the City Council finds that:

a. The helistop is needed to save lives;
b. The helistop is located so as to minimize impacts upon surrounding residential property; and
c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

I was asked for my opinion on the question of medical need in my role as Director of the Seattle-King County Department of Public Health, as a licensed physician, and as Medical Program Director for Emergency Medical Services in King County, pursuant to State law. My response should be viewed as an informed opinion rather than an expert opinion, however, since I am not a pediatric or emergency medical specialist.

In order to review the facts of this issue, I have spoken with numerous physicians, administrators, community residents, and former patients. Because this is an informed opinion, and not a scientific survey, I did not employ formal bias control techniques or a standard question format. I have

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reviewed the medical literature on emergency medical services delivered by helicopter, viewed a simulated transport/helicopter landing at Graves Field and near the Children's proposed helistop site, examined helicopter and transport equipment, toured the Children's facility, and reviewed Airlift Northwest logs and individual patient charts. To obtain additional information, I also held a fact-finding public hearing October 24, 1985 in the City Council chambers from 6:00 to 9:00 p.m. The written testimony and tape recording of this hearing are available upon request.

Existing Pediatric Emergency Medical Services System in Seattle

Personal health care can, in general, be subdivided into three functional levels: a primary level, where the health care system is entered and basic service received and where all health services are mobilized and coordinated; a secondary level, represented by ambulatory services of a specialist nature and inpatient services provided in a community hospital-type facility; and the tertiary level, which includes the highly complex and sophisticated services available only at a "medical center" (Alberta Parker, "The Dimensions of Primary Care" in Primary Care: Where Medicine Fails, 1974, New York, John Wiley and Sons).

Although there is no formal classification system, by industry standards Children's is a tertiary care center. Based on a self-assessment questionnaire prepared by nearly all Washington hospitals, the State of Washington's Profile of Critical Care Hospital Facilities (Second Edition, January 1980) lists Children's as a level 3 facility for all services profiled (trauma, burns, cardiac, respiratory, neonatal, and head and spinal). Under the State's classification scheme, level 3 generally indicates in-house, 24-hour availability of a physician, supervision and 24-hour on-call availability of specialists, specialized facilities, capability to perform specialized surgery and special therapies, and availability of special transport teams. The State's level 3 corresponds with the generally accepted definition of tertiary care.

One of the purposes of the State's Profile of Critical Care Hospital Facilities is to provide assistance to physicians in selecting the most appropriate facility and corresponding treatment level for their patients. Physicians caring for critically ill patients in areas served only by secondary or community hospitals will refer those patients to tertiary care centers when their conditions require treatments that other hospitals cannot provide. Another source of assistance in making patient referrals is the referral "hotline" offered by the University of Washington (UW) Hospital. By calling this hotline, attending physicians can obtain help making diagnoses and planning treatment, including transport of their patients to more appropriate facilities for their presenting condition. In some cases, attending physicians will refer their patients based on professional associations with specialists affiliated with particular tertiary facilities.

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Pediatric and neonatal emergencies within Seattle which are hospitalized are generally admitted at one of the 19 neonatal intensive care (NICU) or 17 pediatric intensive care beds (PICU) at Children's or one of the 19 neonatal intensive care unit beds at the University of Washington Medical School Hospital. Other pediatric intensive care units in the Western Washington region are a 25-bed NICU at Tacoma General Hospital, a 6-bed PICU at the affiliated Mary Bridge Children's Hospital, and an NICU at Madigan Army Medical Center. Tacoma General and Mary Bridge have a wide range of pediatric specialties represented on their staff, and handle most neonatal and pediatric emergencies, generally referring only those patients requiring sophisticated pediatric surgery, such as cardiac surgery, to Children's or the UW Hospital. According to Dr. Robert Scherz, President of Medical Affairs at Mary Bridge, and Dr. John Coombs, Vice President of Medical Affairs at Tacoma General, most of the patients admitted to these hospitals come from South King, Pierce, Thurston, and Mason Counties. The only other pediatric or neonatal intensive care beds in the State are located in Spokane. Pediatricians and neonatologists from within the State and from surrounding states (Alaska, Montana, Idaho) generally use Children's and the UW as referral centers for the most seriously ill children and neonates requiring tertiary specialty care. Most highly sophisticated pediatric surgery in the region is done at Children's.

The University of Washington has a program which admits high-risk mothers so that low birthweight babies do not have to be transported between hospitals. This method of delivering high-risk mothers has been found to substantially reduce the morbidity and mortality associated with the delivery of low birthweight babies (Hickok, D. et al., "Decreased Mortality of Very Low Birthweight Infants After Maternal Transport," Department of Obstetrics and Gynecology, University of Washington School of Medicine, unpublished paper).

But even with an excellent maternal transport program, there will still be individual patients who deliver small birthweight babies at small community hospitals throughout the State, where the infant needs to be stabilized and transported to a tertiary care hospital. Children's is the hospital generally designated for the care of these infants. The University Hospital and Children's also refer patients to each other, when beds are full. The same pediatric medical staff, including interns and residents, delivers services at both hospitals. In addition to small birthweight babies who have undeveloped lungs and intestines and require intensive support for survival and growth, there are transfers from hospitals around the State to Children's for pediatric surgery or acute infection. Trauma patients generally go first to the region's trauma center, Harborview Medical Center, but may be transferred to Children's for follow-up after surgery and stabilization.

This referral pattern exists regardless of transportation mode.

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Helicopter Transport

The American Academy of Pediatrics (AAP) Committee on Hospital Care has published general guidelines on pediatric patient transport ("Guidelines for Air and Ground Transportation of Pediatric Patients," Pediatrics, 1986 Nov.; 78(5): 943-50). The AAP guidelines indicate that the factor of paramount importance in selecting mode of transport is "the optimal interhospital transport time indicated by the nature and severity of the patient's clinical condition...If a patient's medical condition is unstable, even a minimal shortening of transport time to the referring hospital by one mode of transportation rather than another may be lifesaving." The AAP guidelines also indicate that "referrals are made and accepted based upon the judgment of the referring physicians rather than upon a specific set of criteria."

The State Medical Society's EMS Committee is working on the delineation of medical necessity or medical reasonableness for medical transport and under Dr. Lothar Pinker's direction is hoping to have guidelines published into the Washington Administrative Code (WAC) in 1987. As proposed in the enclosed February 18, 1987 draft of the guidelines, the selection and utilization of an air ambulance service should be based on the level of medical care the patient's illness or injury requires during the transport, the urgency of transport, and on dispatch protocols adopted in each county. The proposed guidelines include general examples of critical cases and conditions, and require review of treatment protocols, assessment of field performance, and critique of air ambulance runs by an air ambulance medical director functioning through the delegation of statutory responsibility by the local Medical Program Director. As Medical Program Director for King County, I would be responsible for developing and supervising the review process.

There are several studies in the literature that assess the severity of illness and injury in pediatric air transport. In one study, Mayer and Wallie prospectively evaluated 636 patients transported over 79 months of service to a regional children's center. Of these patients, 57.5% were transported by helicopter. Eighty-one percent of patients were taken to surgery or admitted to the intensive care unit immediately on arrival at the regional children's hospital. Overall mortality was 9%; a trauma score was used to classify patients (Ann. Emerg. Med. 1984 Feb.; 13(2):108-11). At Johns Hopkins, Dr. Columbani et al., reviewed 267 children over a one-year period; 46% of patients arriving directly from the injury scene were delivered by helicopter. Fourteen of seventeen deaths resulted from head injury; a more aggressive approach to the management of brain trauma was advocated (J. Pediatric Surg. 1985 Feb.;20(1):8-13).

Another study evaluating air transport in a rural EMS system looked at 569 patients with multisystemic injuries. The emergency helicopter service was rated, utilizing strict specific guidelines as either essential, helpful, or not a factor in the preservation of life. The helicopter was essential to 16.5% and helpful to 10.9% of patients. In spite of rapid evaluation and maximal intervention, 102 (17.9%) of the patients died. The group for which

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air transport was judged "not a factor" (54.7%) consisted of patients whose injuries would not have proven fatal had their transportation to the tertiary care center been delayed. Retrospective analysis of the data available to the tertiary care center at the time of the decision to transfer the patients by air revealed that it was not possible to differentiate those patients who did not benefit from the service from those for whom the service was judged essential or helpful (Am. Surg. 1984 Apr.; 3-1348:183-8).

Similarly, in a study in Michigan, Rhee et al., found that based on an objective Trauma Intervention Scoring System (TISS) which measures the intensity of medical care provided in a 24-hour period, 65% of patient transports by helicopter were thought to be medically necessary both at the time of the flight and later; 17% were thought to be appropriate using the information available at flight time, but were later found not to be; and 18% were found not to be necessary. These researchers concluded that TISS is a useful, objective measure of helicopter transport program performance and should be tested in other helicopter transport programs (Annals Em. Med. 1986 Jan; 15:1;79-82).

Baxt et al., looked at a group of 1,273 blunt trauma patients who were treated and transported from the site by seven different hospital-based rotorcraft aeromedical emergency care services and saw a 21% reduction in expected mortality ($p<.05$) in five of the seven services. There is some debate about methodologic errors in the study. An editorial in the same journal issue (Annals Em. Med. 1985 Sept.; 14:9;859-61) states that

> The effectiveness of aeromedical evacuation of battlefield casualties is well established; the transfer of this technology to the civilian setting is a logical event. Its effectiveness for civilian trauma care should be based on the following three principles; 1) early field resuscitation; 2) rapid transport; and 3) delivery to the hospital best suited to admit and treat the patient definitely and without delay. As Baxt and colleagues point out, helicopter emergency medical service (HEMS) patients may benefit from a highly integrated team effort at the receiving trauma center that is the direct or indirect result of a program but for which the helicopter (unless distance is a factor) is the least important component. This is a strong argument for the concept of regional trauma care that concentrates multiply injured patients in trauma centers organized to best care for them. The potential role of HEMS in making regional trauma care a reality should be explored by EMS systems.

My conclusions from the literature review are that there are medical conditions (especially trauma) where time of transport is critical regardless of mode of transportation, that specific clinical criteria may be helpful in selecting a helicopter versus ground ambulance transport but do not help in

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predicting patient outcome, and that the experience of other tertiary centers, while helpful in describing the seriousness of injury seen in the usual patient populations transported, does not clearly shed any statistical light on your question at issue, the Graves field site versus the hospital site a minimum of 10 minutes away (patient transfer and driving time). There is very little in the literature concerning the interhospital transport of non-trauma patients.

Current Data

Children's admits approximately 700 patients per month in 200 beds, including 36 intensive care beds. In Children's Fiscal Year 1986 (October 1 - September 30), 283 patients were admitted after air transport; 166 were fixed-wing transports and 117 were rotary-wing transports (115 Airlift Northwest, 1 MAST, and 1 KIRO). Of the 117 patients transported by rotary-wing, 32 landed at the emergency room entrance of the hospital. Nineteen of those 32 died; the remaining 13 had an average length-of-stay of 17.5 days, compared to the average 7.1 days for all admissions.

Review of the case files of the children flown directly to Children's indicates that with one possible exception, all presented life-threatening conditions that warranted transport right to the doors of the hospital. Review of 30 additional randomly selected cases flown by helicopter to Harborview for ground transport to Children's shows that all cases met the State's proposed criteria for use of air transport but were less severe than those flown directly to the hospital. Referring physicians and Children's appear to be sorting patients appropriately.

Recommendations

It is my professional opinion that there are hospital transfers to Children's where 10 minutes are critical to a severely ill infant or youngster, but the actual number of such cases is small. Decisions regarding air transport of these patients must rest on the judgment of the attending physician and consider distance, stable clinical condition during transport, severe injury or illness requiring tertiary center treatment (rather than secondary or community hospital level), and the possibility of decompensation (severe clinical deterioration) during transport. The most important part of the transport, in most cases, will be in getting a specially trained team out to community hospitals around the State. The key to any transportation of sick people is the stabilization of the patient, making sure that vital signs are stable and that the general physical condition is not deteriorating. One of the most important aspects in the case of the critically ill neonate is the

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transport of a specially trained medical team, the neonatologist/pediatrician and neonatal nurse, to the community hospital to stabilize a deteriorating baby. Once stable, a patient can be transported much more safely.

In most cases, Harborview or Graves Field would be adequate sites for most patients transported by helicopter to Children's; however, there will be a small number of cases where the ability to land at the hospital may be life-saving.

It is difficult to derive reliable projections of total numbers of patients who would be transported by helicopter to Children's. Given that a medical breakthrough, catastrophe, addition of competing helicopter service, increasing specialization, or some other situation might change their projection, Children's estimates that by 1990 the number of children transported by helicopter for admission to Children's in any given month may be 15 to 20. Based on actual experience in 1986, 4 to 5 of these patients may have a medical need for helicopter transport to the doors of the hospital.

The literature review indicated that there are no definitive predictive clinical indicators of prognosis; that is, any estimate of the number of transports to the doors of Children's would have to include an additional number of patients whose condition at time of referral was appropriate for air transport but who over time were determined not to have need of helicopter transport as essential. There also needs to be some flexibility for seasonal variation in disease.

Taking into account these factors, I would estimate six (6) critically ill pediatric patients per month as an upward bound for helicopter transports to the doors of Children's in the next decade.

I recommend that the emergency transport of patients by helicopter be a planned part of a complete EMS transportation system, with guidelines for use, rather than a hospital-by-hospital provided service. The proposed WAC guidelines for air ambulance use appear to support this approach. A consortium of hospitals providing helicopter services such as the one in Airlift Northwest is certainly a most sensible approach and will make it easier to establish a systematic approach to provision of these services. We are, however, just beginning to integrate helicopter transport into our EMS system. The proposed WAC guidelines are a first step in this direction. They condition licensure of air ambulance services on meeting standards for equipment, personnel, community need, and use, and place air ambulance services under the medical control of local medical program directors.

Based on my review of Children's case files, I conclude that the Children's helistop meets the City's land use permit requirement that it save lives. I also believe, given Children's experience to date and the prospect of State-mandated controls, that use of the helistop can be restricted to life-threatening emergencies.

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While it is beyond the scope of my expertise to comment on the City's requirement that the heliстop be located so as to minimize impacts upon surrounding residential property, I strongly recommend that the City give careful consideration to the issue of helicopter safety. From a public health standpoint, the risk of an accident must be weighed against the medical benefit of helicopter transport.

I hope that these updated observations and recommendations will assist you in your permit deliberation; please let me know if any comments need further clarification. Again, my thanks to DCLU staff, to a wide variety of health professionals involved in delivery care, to the staff and administration at Children's, to the community residents of Laurelhurst, and to a number of other interested individuals who helped me to reach a better understanding of the emergency medical services delivered to infants and children in our community and the many factors which affect those services.

Sincerely,

Bud Nicola

Bud Nicola, M.D.
Director of Public Health

BN:jb
Enclosures

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Seattle
Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

August 30, 1985

RECEIVED
SEP 4 198-
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT OF PUBLIC HEALTH

Bud Nicola, Director
Health Department
7th Floor, Yesler Building

Dear Mr. Nicola:

I am writing to ask your help.

As you know, this Department has received an application from the Children's Orthopedic Hospital to establish a helipad on hospital grounds. The Land Use Code classifies the hospital as a Major Institution, and Major Institutions are permitted to establish helistops as a Council Conditional Use if the Council finds that:

a. The helistop is needed to save lives;
b. The helistop is located so as to minimize impacts upon surrounding residential property; and,
c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

We must make a recommendation to the City Council and our report must examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas as part of the analysis.

The question of medical need is beyond our area of expertise and this is where I am asking for your Department's assistance. In the past, helicopters have made emergency landings at the Graves athletic field and patients are then transported by ambulance to either Children's Orthopedic or to the University of Washington Medical Center. This request by Children's Orthopedic would mean those patients destined for Children's would instead land on hospital grounds with those destined for the University of Washington continuing to land at Graves field. The University of Washington may subsequently apply for a permit for a helistop on the grounds of the U. W. medical campus.

You have agreed to sponsor a public hearing and to give us your opinion on the question of medical need. The questions I would like your opinion on are:

1. What are existing emergency services in Seattle and how does the service fit into the existing services?
2. What emergency services does COH offer that are unique and unavailable elsewhere?
3. Is there a medical need for emergency helicopter service to serve the hospitals in this immediate area, (Children's and University of Washington primarily)? What, if any, would be the effect on the well-being of a patient transported by helicopter versus helicopter and ground transport as it is presently done? Are direct flights versus air/ground transports medically significant in terms of patient morbity and mortality?

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Seattle Department of Construction and Land Use 400 Municipal Building Seattle Washington 98104

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4. Is the current site at Graves athletic field adequate, or is there a medical need to locate such facilities on the hospital grounds? Or are there alternative sites? Would one such facility either at COH or U. W. be a preferred location?
5. What data are available regarding the number of emergencies that are likely to be generated by the population to be served by the helicopter services? How many landings per week will result?
6. If there is an established medical need, how would you define "occurrences involving life-threatening emergencies," as the use must be restricted to such occurrences? Are there other restrictions we should consider, based on existing medical care facilities capabilities?
7. How would you suggest we monitor the occurrences to ensure that the use is restricted to life-threatening emergencies should the use be permitted? Can we ensure that the service is used for emergency purposes only?

We have asked Children's Orthopedic Hospital for more information to support their application for the helistop (see attached). This information is necessary for your consideration of these questions. As soon as we receive it, we will send you a copy. As you know, we are happy to help with the scheduling and public notice of the hearing.

Thank you for your assistance. If you have questions, please call me at 625-2262 or Katy Chaney at 625-4274.

Sincerely,

Katy Chaney

For BEATRICE FARRAR RYAN
Interim Director

KC:vg

Attachment

cc: Truman Katz, Director, Children's Orthopedic Hospital

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THIS DRAFT INCLUDES CHANGES SUGGESTED AT THE [illegible] OF THE [illegible] COMMITTEE MEETING. Changes from the original draft are typed in this larger print so they can be easily identified.

WAC 248-17-020

DEFINITIONS. For the purpose of these regulations, the following words and phrases shall have the following meaning unless the context clearly indicates otherwise.

(1) "Department" means the state of Washington Department of Social and Health Services.

(2) "Emergency Medical Services Advisory Committee" means the committee appointed by the Governor, pursuant to RCW 18.73.040.

(3) "Air ambulance" means any privately or publicly owned aircraft specifically designed, constructed or modified which is intended to be used for and is equipped with the intent to be used for the transportation of individuals who are sick, injured, or otherwise incapacitated or helpless.

(4) "Air ambulance service" means a service that is currently certified under Federal Aviation Administration (FAA) rules, 14 CFR Part 135, (Air Taxi Operators and Commercial Operators of Small Aircraft) and is certified by the department as an air ambulance service and meets the minimum requirements for personnel and equipment as described elsewhere in this chapter.

(5) "Local EMS Medical Program Director" means a licensed physician authorized by the department to perform duties specified in RCW 18.71 and 18.73.

(6) "Medical control" means physician responsibility for supervision of EMT training programs, the establishment of field protocols, and the recommendation for certification and decertification of EMTs certified under this chapter.

(7) Medical control as defined above does not include first responders, except as provided in WAC __ - __ (the WAC covering First Responder defibrillation).

(8) "Basic life support" means out of hospital emergency care which includes some or all of the techniques and procedures taught in a state approved emergency medical technician basic training course.

(9) "Advanced life support" means an advanced level of out of hospital emergency care that includes basic life support functions plus some or all of the following techniques or procedures:

(a) Cardiac monitoring.

(b) Cardiac defibrillation.

(c) Telemetered electrocardiography.

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(d) Administration of specific medications, drugs, and solutions.

(e) Use of adjunctive medical devices.

(f) Trauma care.

(g) Airway management techniques.

(h) Other techniques and procedures authorized by medical control.

(10) Air Ambulance Support Personnel

(a) Air Ambulance Medical Director A physician licensed by the State of Washington who is knowledgeable of potential medical complications which may arise because of aeromedical evacuations. and who is engaged by the air ambulance service to oversee and assure that the appropriate aircraft, medical personnel and equipment are provided for patients transported by the air ambulance service. The air ambulance medical director and alternates function through delegation of responsibility of the local Medical Program Director in the county where the service is licensed.

(b) Registered Nurse. A person licensed and certified by the state of Washington to perform nursing functions pursuant to RCW 18.88.

(c) Paramedic. An emergency medical technician who has completed an advanced life support training program approved by the department, who is certified by the department as a mobile intensive care paramedic. pursuant to RCW 18.71.

(d) Emergency Medical Technician. An individual who has completed a basic life support training program approved by the department, and who is certified by the department pursuant to RCW 18.73.

(e) Pilot. An individual certified by the Federal Aviation Administration and licensed with the state of Washington Department of Transportation pursuant to RCW 47.68. This individual must meet certain criteria set forth by the department.

(f) Patient. An individual who, as the result of illness or injury, needs immediate medical attention, whose physical or mental condition is such that he is in imminent danger of loss of life or significant health impairment, or who may be otherwise incapacitated or helpless as a result of a physical or mental condition.

(g) Communications System. A radio or landline network connected with a dispatch center which makes possible the alerting and coordination of personnel, equipment and facilities.

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WAC 248-17-135 Air ambulance services - Requirements for Licensure. The department is authorized to issue licenses to services conforming to these regulatory standards:

(1) No air ambulance service shall function as an air ambulance service in this state unless the agency holds a currently valid license to do so.

(2) An application for an original or renewal license shall be made to the department and shall contain as a minimum, but is not limited to, the following:

(a) Articles of incorporation and current business license, where applicable.

(b) The name and address of the owner of the air ambulance service or proposed ambulance service.

(c) The name under which the applicant is doing business or proposes to do business.

(d) The training and experience of the applicant in the transportation and care of patients.

(e) A description and general location of each aircraft to be used as an air ambulance, including the make, model, year of manufacture, registration number, or other distinguishing characteristics.

(f) The geographical area served.

(g) The air ambulance medical director for a geographic area who shall review treatment protocols, assess field performance and critique air ambulance runs with the local medical program director. The air ambulance medical director shall be designated in writing by the local medical program director.

(h) Agreement to abide by the review process designated by the department and/or the local medical program director as defined in WAC 248-15-020.

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(j) A current roster of medical personnel which includes level of certification or licensure.

(k) Agreement to provide reports to the department for each trip made, on forms or a data format specified by the department.

(l) They shall provide evidence of coordination with the local medical program directors in communities where the service intends to operate.

(3) The department shall review each application for licensure based upon type of service to be offered, equipment, trained personnel, and whether the public convenience and necessity requires the proposed service. Before issuing a license to a new service, the department shall inspect the vehicle, the ambulance equipment and the personnel roster.

(4) An ambulance service license will be issued for a period of three years from the date of issue and will remain valid for this period unless revised, modified, revoked or suspended by the department. Inspections shall be conducted to assure compliance. The vehicle license will be for a period of one year and updated annually.

(5) Grounds for denial, suspension or revocation of air ambulance license shall include, but are not limited to proof that the applicant and/or service

(a) Has been guilty of misrepresentation in obtaining the license.

(b) Has engaged or attempted to engage in service that is not authorized by the license.

(c) Has demonstrated incompetence or has otherwise been unable to provide adequate service.

(d) Has violated or aided and abetted in the violation of any provisions contained in RCW chapters 18.73 and 18.71.

(e) Has demonstrated unprofessional conduct in the course of providing services.

(f) Has failed to meet requirements in associated statute and rule.

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WAC 248-17-136 Air ambulance services - Personnel Requirements.

(1) Air ambulance medical director.

(a) Each air ambulance service must have at all times an air ambulance medical director (or his/her alternate) who is a licensed physician knowledgeable of the air medical requirements of patients. It is the responsibility of the air ambulance service applicant to provide in writing to the department the name of the medical director and approved alternate(s).

(b) The air ambulance medical director (and alternate) must have training in altitude physiology and be familiar with the emergency medical services communications system.

(c) The air ambulance medical director (or alternate) will:

(i) Be knowledgeable of the capabilities and limitations of the aircraft used by his service.

(ii) Be knowledgeable of each of the medical attendants' capabilities relative to meeting the patient's medical needs.

(iii) Be knowledgeable of potential medical complications which may arise because of aeromedical evacuation of patients being transported by the air ambulance.

(iv) Match during interfacility transports appropriate aircraft, medical personnel and medical equipment necessary in the care of patients' medical needs or any anticipated inflight complications.

(v) Be knowledgeable in the application, use, maintenance, removal and hazards of any routine or special medical equipment used in the transport of patients by the air ambulance service.

(vi) Assure current certification, training requirements, and education requirements are met by all medical attendants providing services for the air ambulance service.

(vii) Ensure that all medical attendants are adequately trained to perform inflight duties prior to functioning in an inflight capacity.

(viii) Ensure that each medical attendant meets the requirements necessary to provide given levels of medical care.

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(d) The air ambulance medical director is responsible to coordinate with local medical program director(s) in every county where service is provided.

(2) Air ambulance medical attendant.

(a) At least one medical attendant accompanying the patient shall be a person who:

(i) Has current Washington state certification or licensure as a Paramedic, Registered Nurse, or Physician.

(ii) Must have training and be familiar with altitude physiology, aircraft safety and Washington emergency medical systems communications, as determined by the department.

(iii) Must be knowledgeable in the application, operation, care, and removal of all medical equipment used in the care of the patient. The medical attendant(s) must have a knowledge of potential inflight complications and their treatment which may arise from the use of such devices.

(iv) Will be required to know and follow all policies and procedures of the air ambulance service's medical director.

(v) Must have available during transport a current copy of all written protocols authorized for use by the air ambulance medical director. Patient care shall be governed by these authorized written protocols.

(b) The air ambulance medical director may designate additional attendants with specialized skills to meet the specific needs of the patient.

(3) Pilot. In addition to being licensed with the state of Washington department of transportation pursuant to RCW 47.68, the pilot must:

(a) Possess commercial rotorcraft certification and a minimum of 2,000 rotorcraft flight hours as pilot in command.

(b) Be factory trained or equally prepared and have at least five (5) hours in the specific type of aircraft, before flying as pilot in command on patient missions.

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(c) Meet FAA requirements for medical certification, licensing and type of ratings for the flight(s).

(d) Have training and be familiar with altitude physiology and EMS communications

(e) The final decision to fly or not to fly will be made by the pilot.

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WAC 248-17-137 Air Ambulances - Required Equipment. All air ambulances shall carry at least the following medical equipment:

(1) Cardiac monitor/defibrillator with strip-chart recorder and battery back-up power. Monitor should be tested to insure that it does not produce electromagnetic interference with aircraft navigation and communication equipment.

(2) Litter or stretcher approved by FAA for type of aircraft with straps for securing patient to litter and litter to frame.

(3) Medical oxygen source (installed or portable). The minimum amount of oxygen carried should be sifficient to supply one patient for one hour at 10 LPM. Oxygen bottles should be secured to aircraft in an approved manner.

(4) Portable suction device with battery back-up power, tested and certified to function at all altitudes.

WAC 248-17-138 Air Ambulances - Selection and utilization. The selection and utilization of an air ambulance service shall be determined by the medical program director in the county of patient origin or the air ambulance medical director and the referring physician prior to response based upon the following:

(1) Level of medical care the patient's illness or injury requires during transport, or non-availability of local transport.

(2) The urgency of transport (immediate or not immediate). In special circumstances, because of urgency of transport, an action of providing less than minimal air ambulance transport care may occur.

(3) The dispatch protocols adopted by the medical program director of the county of origin.

(4) Any agency (requesting agency and transporting service) that dispatches a service that does not meet the minimum requirements is required to prepare and submit a written justification to the local medical program director and the state Emergency Medical Services Training and Licensing Section within 14 days of the action.

(5) Other aircraft not herein defined by this chapter shall not be used for transportation of patients who may require medical attention enroute, except that such transportation may be used when a disaster creates a situation that cannot be served by licensed ambulances.

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STATE OF WASHINGTON

RECOMMENDED
AIR AMBULANCE
PROTOCOLS

DRAFT

DEPARTMENT OF SOCIAL AND HEALTH SERVICES
EMERGENCY MEDICAL SERVICES

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AIR AMBULANCE PROTOCOLS

INTRODUCTION

Chapter 248-17, Washington Administrative Code (WAC), establishes minimum standards for licensing air ambulance services and aircraft.

The purpose of this document is to set forth air ambulance policies adopted by the State of Washington Department of Social and Health Services to promote and protect the health and safety of the people of this state.

Field use of an air ambulance shall only occur when there is reasonable cause to believe that the patient's death or increased morbidity will result if any means other than air ambulance is utilized.

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CRITERIA FOR USE OF PREHOSPITAL AIR AMBULANCES

I. To provide rapid delivery of a critical patient(s)* to an appropriate definitive care facility when ground transport times would be protracted (more than 15 - 20 minutes). For example:

Long distances
Terrain problems
Traffic congestion
Long field extraction times
Hazardous road conditions or other road obstruction

II. To provide rapid delivery of special critical care medical personnel to the scene otherwise staffed by non-critical care personnel, for example, paramedics/Rns/physicians assistants/EMTs - experts to assist in disaster or hazardous materials incidents.

III. To provide extrication from otherwise ground inaccessible sites and/or assist in search and rescue operations (mountains/islands).

IV. To provide integrated support in multiple patient incidents, e.g., most seriously injured patients - to deliver skilled personnel or needed supplies/equipment.

CRITERIA FOR NON-UTILIZATION OF AIR AMBULANCE

I. Obviously fatal injury (decapitation, rigormortis).

II. Cardiac arrest of any etiology.

III. If the ground ambulance is capable of arriving at the hospital with the Patient before the air ambulance can arrive at the scene of the accident or illness.

* CRITICAL CASES - EXAMPLES

A. Trauma

1. Physiologic Criteria

a. Trauma score 12 or less

b. Glascow Coma Scale 10 or less

2. Mechanism of Injury Criteria

a. Motor vehicle accident with:

Extrication time more than 20 minutes
Structural intrusion into victim's space by more than 1 foot

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a. Motor vehicle accident (continued):

Victim ejected from the vehicle
Associated death in the same vehicle
Pedestrian struck and thrown 15 feet or more
Child under 12 years struck by vehicle

b. Falls of 15 or more feet

c. Evidence of rapid deceleration

3. Anatomic Criteria

a. Penetrating injury anywhere from the head through the groin

b. Amputation above the ankle or the wrist with potential reimplantation

c. Critical burns or burns by inhalation injury, electrical burns, or other accompanying trauma

d. High voltage electrical injuries (more than 1,000 volts)

e. Spinal cord injuries

f. Toxic inhalation injuries

g. Three or more long bone fractures

h. Injuries of two or more body systems

4. Comorbid Factors

a. Age - 12 or less/60 or older

b. Underlying medical conditions, for example

5. Criticality Criteria

a. Deteriorating conditions which may include loss of consciousness, onset of shock and/or respiratory distress within 30 minutes of injury (define vs. remove)

B. Medical - requiring emergent (within 15 minutes) definitive care center intervention, for example

Rupturing aortic aneurysm

Severe hype or hyperthermia

Acute subarachnoid hemorrhage

c. Obstetric or neonatal - requiring emergent (within 15 minutes) definitive care center intervention

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CRITERIA FOR INTERHOSPITAL AIR AMBULANCE UTILIZATION

GENERAL

1. Requirement for critical care enroute, not otherwise available
2. Time critical injury or illness
3. Need to minimize time out of hospital
4. Alternate travel means unavailable or undesirable

SPECIAL CONDITIONS

1. Cardiac
   a. Acute coronary occlusion
   b. Cardiogenic shock
   c. Dysrhythmias, life threatening
   d. Pericardial tamponade
   e. CHF with decompensation
2. Respiratory
   a. Respiratory failure
   b. ARDS
   c. Ventilator dependency
   d. Severe asthma
   e. Epiglottitis
   f. Aspiration
3. Other Medical
   a. Renal failure (acute fluid overload or electrolyte imbalance) requiring dialysis
   b. CNS bleeds requiring airway and/or ventilator management
   c. Shock (hemorrhagic, DKA, septic, anaphylaxis)
   d. Coma requiring airway and/or ventilator management
   e. Overdose requiring airway and/or ventilator management or accompanied by shock, dysrhythmias
4. Trauma
   a. Multisystem trauma (Champion-Sacco Criteria)
   b. Trauma score $\leq$12
   c. Glasgow Coma Score $\leq$8
   d. Severe extremity injury (amputation, crush injury, unstable long bone fracture)
5. Other Surgical
   a. Acute vascular catastrophe
   b. Acute abdomen
6. OB
   a. Premature labor
   b. Pregnancy induced hypertension
   c. Poorly controlled D.M.
   d. Premature rupture of membranes
   e. Prolapsed cord
   f. Vaginal bleeding (including abruptio placenta, placenta previa)
   g. Fetal distress

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7. Neonatal
   a. Respiratory distress syndrome
   b. Prematurity
   c. Sepsis
   d. Congenital anomalies
   e. CHF
8. Pediatrics
   a. Respiratory distress
   b. Decreased level of consciousness
   c. Poisoning
   d. Severe infections (epiglottitis, meningitis, severe pneumonia)
   e. CHF

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Appendix B

Airlift Northwest's Consistency with AAMS and NEMSPA Rotorcraft Standards and Guidelines and FAA Guidelines for Helistop Design

This Appendix examines the consistency of Airlift Northwest with the guidelines and standards established by the Association of Air Medical Services (AAMS, which was formerly ASHBEAMS) and the National Emergency Medical Service Pilots Association (NEMSPA). An examination of the Kitchen Garden Helistop with the design guidelines of the Federal Aviation Administration (FAA) also is included.

Airlift Northwest has begun a program to work toward consistency with applicable AAMS standards.

A. AIRLIFT NORTHWEST CONSISTENCY WITH AAMS STANDARDS AND GUIDELINES FOR ROTORCRAFT

The AAMS standards have been reviewed for Critical Care Providers.

Standard or Guideline	ALNW Consistency
STANDARD I - The aircraft designated for the air medical mission must be evaluated carefully, considering the geographic area to be served, the type of missions it is to perform, and the crew and equipment it must carry.	
A. Aircraft operator must comply with FAR Part 135.	Consistent
B. Aircraft design must give medical attendants access to the patient.	Consistent
C. Aircraft should have a cargo door.	Consistent
D. Aircraft should be climate controlled.	Consistent
E. Aircraft must have interior lighting that allows patient care to be provided without interfering with pilot's vision; cockpit must be isolated to minimize distraction.	Consistent
F. Aircraft must, at minimum, be equipped with:	
1. Airway management equipment (oxygen, mechanical suction, intubation equipment, and ventilatory support equipment)	Consistent
2. A cardiac monitor/defibrillator	Consistent
3. Advanced cardiac life support drugs and therapeutic modalities; or equivalents for specific mission	Consistent
4. Pulse oximeter.	Consistent
G. Aircraft must have appropriate communication equipment to facilitate communication:	
1. Within the helicopter	Consistent
2. With medical control	Consistent

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Standard or Guideline (continued)	ALNW Consistency
3. With flight operations center	Consistent
4. With air traffic control	Consistent
5. With EMS and law enforcement agencies.	Consistent
H. Aircraft must be equipped with appropriate survival equipment.	Consistent
STANDARD II - The air medical crew shall be well organized, properly directed and staffed according to the nature and extent of health care needs anticipated and the scope of services offered.	
A. Service shall be available 24 hours per day, allowing for exceptions due to unsafe weather, commitment to another flight, grounding for maintenance, etc.	Consistent
B. An educational program should inform potential users of the capabilities of the services.	Consistent
C. Vendor shall accept medically necessary calls from authorized personnel and will not discriminate due to race, creed, color, age, religion, national origin, ancestry, or handicap.	Consistent
D. Medical direction shall be provided by a physician trained and experienced in emergency, trauma, and/or sub-specialty critical care medicine.	Consistent
E. Suggested educational experience of the medical director shall include:	
1. Advanced Cardiac Life Support (American Heart Association standards)	Consistent
2. Advanced Trauma Life Support (American College of Surgeons standards)	Consistent
3. Certification in appropriate specialty, through board exam	Consistent
4. In flight patient treatment modalities	Consistent
5. Knowledge of altitude physiology	Consistent
6. Infection control	Consistent
7. Stress management techniques.	Consistent
STANDARD III- Staffing the air medical unit shall be commensurate with the missions's patient care need afforded by the airborne facility. The aircraft, by virtue of medical staffing and retrofitting, becomes a patient care unit.	
A. Medical flight crew must consist of at least one designated flight nurse specially trained in emergency/critical care who is present at the hospital or with the aircraft.	Consistent
B. Additional qualified medical personnel (such as specially trained, experienced Critical Care or ALS providers, paramedics, or respiratory therapists) assigned as flight crew members may be advantageous.	Consistent
C. Protocols for the addition of air medical personnel should be developed.	Consistent

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Standard or Guideline (continued)	ALNW Consistency
STANDARD IV- All training and experience requirements must be commensurate with the mission profile and airborne environment and must be documented and approved by the program medical director and in the program's policy and procedure manual.	
A. A planned, structured training program shall be required for all medical personnel designated as regularly scheduled flight crew members. Training shall include:	
1. Emergency, trauma, and critical care courses covering Advanced Cardiac Life Support and trauma life support.	Consistent
2. A general review of emergency patient care including medical, pediatric, obstetrical, newborn, behavioral and psychiatric emergencies, infection control, and crisis intervention techniques.	Consistent
3. Altitude physiology, EMS communications, aircraft and flight safety, and the use of all patient care equipment on board.	Consistent
4. Knowledge of the use of extrication devices and of rescue and survival techniques appropriate to the terrain and conditions under which the program operates.	Not Consistent: ALNW does not perform extrications, or search and rescue missions
B. Written policies and procedures shall indicate what therapies can be performed under protocol.	Consistent
C. The physical well-being of flight crew members should be ensured through periodic physical examination and hearing examination.	Partially Consistent: ALNW does not require periodic physical examinations
D. All medical flight crew members must be assigned to the flight service as their primary responsibility to ensure immediate response.	Consistent
E. Competency and currency must be ensured on at least an annual basis through relevant in-service education relating to safety, infection control, stress management, and skills maintenance specific to the air medical component.	Consistent
STANDARD V - Policies and procedures addressing patient transport issues involving communicable diseases, infectious processes and health precautions for emergency personnel as well as for patients must be current with the local standard of practice. Information must be written and readily available to all members of the air medical service. Additional medical and agency resources pertinent to the area of infection control must be identified and made available in the policy manual to all members of the air medical team.	

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Standard or Guideline (continued)	ALNW Consistency
A. Air medical personnel transporting patients must practice preventitive measures lessening the likelihood of transmission of pathogens.	Consistent
B. Policies and procedures must include the following: personal health; communicable disease and infection management; cleaning and disinfecting of aircraft, equipment and supplies; protocols for risk identification; communication plan for suspected/ confirmed exposure.	Consistent

STANDARD VI - A significant commitment of resources is required of the sponsoring institutions. Appropriate services shall be rendered within the hospitals, the defined capabilities of the sponsoring hospital and/or other hospitals within the service region.

A. The Emergency Department(s)/Services shall be staffed and equipped to facilitate safe and effective care of patients as recognized by the American College of Surgeons and JCAH standards of emergency services for a Level I or II facility.	Consistent
B. The Emergency Department(s)/Services must offer emergency care 24 hours a day with at least one physician experienced in emergency care on duty in the emergency care area.	Consistent
C. Specialized care and services must be provided to patients being transported through evaluation and categorization in the care of cardiac, medical, burn, neonatal, pediatric, and other emergency patients.	Consistent
D. The helipad must be located in an area that assures safe access and allows for rapid movement of the patient to the treatment facility.	Consistent
E. The landing site must be appropriately marked, lighted, and secured and wind conditions reviewed and inspected. Appropriate safety programs should be offered to those responsible for such operation.	Consistent
F. The helipad must comply with local, state or federal regulations.	Consistent
G. The landing zone must be reviewed at least yearly to ensure safe access and egress and appropriate lighting and security. Programs addressing safety and appropriate behavior around the landing zone must be offered by the air medical service.	Partially Consistent: Although safety programs are offered, annual inspections of landing zones (as opposed to helistops) are not conducted
H. A safety program must be provided to appropriate public safety/law enforcement agencies and hospital personnel to ensure that when any landing	Consistent

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Standard or Guideline (continued)	ALNW Consistency
site is set up, it is secure, marked, free of overhead obstruction and ground debris, and appropriate in size to the aircraft that will be landing.	
STANDARD VII - The quality and appropriateness of patient care provided by the air medical service shall be continuously reviewed, evaluated and assured through the establishment of a quality control mechanism.	
A. A periodic review of the quality and appropriateness of care delivered must be done at least monthly. This review should evaluate:	
1. Reason for transport	Consistent
2. Mechanism of injury or illness	Consistent
3. Interventions performed or maintained	Consistent
4. Outcome of patients transported.	Consistent
5. Timelines of transport.	Consistent
B. The medical director shall be responsible for ensuring this timely review, using medical record and pre-established criteria.	Paritally Consistent: The review does not currently use pre-established criteria.
C. A patient record shall be maintained documenting patient care rendered by the air medical crew and disposition of the patient at the receiving institution. A copy of this record should be provided to the receiving institution.	Consistent
D. Ongoing education and skills maintenance must be ensured. These programs shall meet the individualized needs of the program as identified in audit sessions and by current trends in air medical patient transport.	Partially Consistent: On-going education and skills maintenance is ensured, however, no audit sessions are conducted.
STANDARD VIII - An air medical service must strive for full integration into existing emergency medical systems and inter-hospital transfer networks.	
A. The air medical service:	
1. Must strive for appropriate utilization of service.	Consistent
2. Must interface with existing communication, public safety, and law enforcement agencies (as well as local medical control as appropriate within a scene response area).	Consistent
3. Must ensure continuum of care and expeditious treatment of patients by utilizing standard protocols, whenever possible.	Consistent

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Standard or Guideline (continued)	ALNW Consistency
4. Should facilitate integration of all emergency services and transport modalities by supporting joint continuing education programs.	Consistent
5. Should promote timely feedback as to patient outcome and treatment rendered before, during and after transport, where appropriate.	Consistent
STANDARD IX- An organized and structured plan must be developed to access the air medical service, provide flight following and communicate pertinent data between requesting agency, airborne flight crew and recipient agency.	
A. A dedicated air medical communications specialist must be assigned to receive, coordinate all requests, and record necessary flight information.	Consistent
B. Air medical service shall be available 24 hours per day to authorized callers except for: . under unsafe weather conditions . commitments to another flight . grounding due to maintenance . medical control officers triaged diversion of air medical service . other reasons that would prevent response.	Consistent
C. The coordination point must be maintained 24 hours per day and must have radio capabilities to transmit and receive with the air medical helicopter.	Consistent
D. The air medical service shall accept medically necessary calls from authorized personnel and will not discriminate due to race, creed, sex, color, age, religion, national origin, ancestry or handicap.	Consistent
E. Training must be commensurate with the scope of responsibility in the Communications Center.	Consistent
F. The dispatcher should be able to initiate a flight. The following information should be recorded:	
1. Time call received and time aircraft departed	Consistent
2. Name of party or agency requesting the flight and verification phone number	Consistent
3. Pertinent medical information	Consistent
4. Pertinent landing site information	Consistent
5. Other data pertinent to the program's specific needs.	Consistent
G. Continuous flight following must be maintained and documented, with communication of location and estimated time of arrival occurring no less than every 15 minutes.	Consistent
H. At least one incoming phone line must be dedicated to emergency air medical service.	Consistent

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Standard or Guideline (continued)	ALNW Consistency
I. There should be a system for recording all incoming and outgoing telephone and radio transmissions, with recordings to be kept for a minimum of thirty days.	Not consistent
J. The dispatch center must have the capability of immediate notification of the air medical crew.	Consistent
K. A backup emergency power source should be available.	Consistent
L. The coordination point should maintain a status board detailing crew names, maintenance schedule, pre-planned flights, training flights, etc. Local area maps should be readily available.	Consistent
M. A readily accessible emergency plan must be part of the flight following protocol.	Consistent

STANDARD X - A professional and community education program shall be developed that will promote proper air medical service utilization.

A. The program should include:	
1. Program accessibility through 24 hour availability as appropriate; an educational program informing potential users of the capabilities of the air medical service; and non-discrimination.	Consistent
2. A safety program covering landing site. designation and safe conduct around the aircraft that shall be offered to appropriate agencies and individuals.	Consistent
3. Stabilization of the patient for airborne transport.	Consistent
4. The capabilities of the air medical crew and the patient care modalities afforded by the airborne treatment facility.	Consistent

STANDARD XI - The air medical crew will approach the mission where hazardous material is suspected or known to exist in such a manner so as to ensure the safety of the crew and aircraft as the primary consideration. A structured program for responding to the patient(s) involved in a hazardous material incident must be in place, with policies and procedures clearly outlined and available for the pilot and medical crew prior to lift off.

A. Air medical personnel must be trained to evaluate the potential for hazardous material, safety hazards and appropriate responses; as well as to meet the patient's medical need when determined appropriate to do so.	Not Consistent
B. Policies and procedures for hazardous materials.	Not Consistent

In addition to the preceding general guidelines, AAMS has the following safety guidelines for helicopters:

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Standard or Guideline (continued)		ALNW Consistency
SAFETY GUIDELINE I - Weather: The air medical helicopter operating VFR must establish weather minimums based on the topography of the service area and weather history known to exist in the area.		
A. All FAR must be met and the safety of the air medical crew never compromised.		Consistent
B. Ceiling and visibility minimums should not be less than:		Consistent
Day local	500' and 1 mile	
Day cross country	1000' and 1 mile	
Night local	800' and 2 miles	
Day cross country	1000' and 3 miles	
C. Operational policies dealing with climatic changes mustbe established and adhered to.		Consistent
SAFETY GUIDELINE II - Pilots: The helicoper pilot , flying air medical missions, must call upon many resources, experiences and skills. The mission frequently involves night flying and unprepared landing sites. The pilot shall be summarily prepared, certified and trained.		
A. All FAR duty time requirements shall be met.		Consistent
B. For each aircraft there must be a minimum of three permanently assigned pilots, who are supported by relief pilots.		Consistent
C. The pilot must possess commercial rotorcraft certification and a minimum of 2000 hours as pilot in command.		Consistent
D. The pilot must be trained in the specific aircraft.		Consistent
E. The pilot must be specifically trained, preferably experienced in flying the terrain and conditions unique to the flight program and oriented to the hospital's health care system.		Consistent
F. Annual training must be done.		Consistent
G. A planned, structured orientation must be provided relief pilots.		Consistent
H. Quality assurance and competency must be insured through monthly operational review. Remedial training must be implemented as deficiencies are identified.		Consistent
I. A lead pilot and designated safety officer must be appointed.		Consistent
J. The pilot has the right to decline or abort any portion of the mission for safety reasons.		Consistent
SAFETY GUIDELINE III - Maintenance: The helicopter mechanic is vital to mission readiness.		
A. The mechanic must have two years experience as a certified air frame and power plant mechanic.		Consistent

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Standard or Guideline (continued)	ALNW Consistency
B. The mechanic must be properly prepared and trained in an approved program to maintain the aircraft.	Consistent
C. The mechanic's primary responsibility is to the air medical service.	Consistent
D. Back-up support to the mechanic should be provided.	Consistent
E. A procedure for alerting Air Medical Control during maintenance periods must be in place.	Consistent
F. A hangar or similar facility must be available.	Consistent

SAFETY GUIDELINE IV - Aircraft: The aircraft must have appropriate equipment in order to assure the maximum safety of the air medical crew and patient(s).

A. The aircraft must have a 180 degree, controllable searchlight.	Consistent
B. The aircraft must have appropriate communications equipment.	Consistent
C. The aircraft must be equipped with appropriate survival equipment.	Consistent
D. All medical equipment, supplies and personnel must be secured and restrained.	Consistent
E. All patients must be properly restrained.	Consistent
F. A protective barrier must isolate the pilot and controls from contact by the patient(s) and/or crew.	Consistent

SAFETY GUIDELINE V - Helipad: The helipad must be designed and located so as to facilitate the safe and effective transfer of patients.

A. The location of the helipad must be a place that assures safe access and allows for rapid movement of the patient to the treatment facility.	Consistent
B. The landing location should be appropriately marked, lighted, secured and wind direction identified.	Consistent
C. The sites should be periodically reviewed and inspected.	Consistent
D. The helipad must comply with local, state and federal requirements.	Consistent
E. The landing zone designated for occasional and episodic use must be reviewed periodically.	Not Consistent
F. Programs addressing safety and appropriate behavior around said landing zone must be offered by the air medical service.	Consistent

Note: The consistency of the Kitchen Garden Helistop site has been examined for items A-D, above; because items E and F relate to landing zones, Airlift Northwest's overall policies, rather than the Kitchen Garden Helistop site, were examined for consistency.

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Standard or Guideline (continued)	ALNW Consistency
SAFETY GUIDELINE VI - Communications: A designated person must be assigned to receive and dispatch all requests for air medical services.	
A. Continuous flight following must be maintained and documented.	Consistent
B. The aircraft must communicate with ground units securing unprepared landing sites.	Consistent
C. An emergency plan must be part of the flight following protocol.	Consistent
SAFETY GUIDELINE VII - Medical Crew: All air medical crew members must be trained and capable of performing program missions.	
A. Training specific to general aircraft safety must include: - FAA rules and regulations pertaining to safety - aircraft capabilities, limitations and safety measures - emergency procedures - ground operations - safety related to patient care in aircraft environment - environmental survival - day and night flying protocols	Consistent
B. Scheduling practices should assure a well-rested, alert crew.	Consistent
C. Periodic physical and hearing examinations should be conducted.	Partially consistent; periodic physicals are not conducted.
D. Management policies must promote on-going communication regarding safety between crew members.	Consistent
SAFETY GUIDELINE VIII - Pre-Hospital and Hospital Personnel: The air medical service must offer sufficient training and education to ensure safe conduct around the helicopter by all potential users.	
A. A safety program must be offered to appropriate agencies and individuals.	Consistent
B. Aircraft-specific procedures must be developed and practiced.	Consistent

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B. AIRLIFT NORTHWEST CONSISTENCY WITH NEMSPA SAFETY GUIDELINES

Guideline	ALNW Consistency
GUIDELINE 1: MINIMUM EXPERIENCE AND QUALIFICATIONS FOR PILOTS (in addition to FAA requirements)	
I. Pilot in Command	
A. Flight experience	
1. 3,000 hours helicopter total time	Consistent
2. 1,000 hours turbine experience, helicopter	Consistent
3. 300 hours night, helicopter	Not consistent 100 night hours
B. Ratings	
1. Commercial Helicopter	Consistent
2. Instrument Helicopter	Consistent
OR	
II. Pilot in Command Grandfather Clause	Airlift Northwest does not apply the Pilot in Command Grandfather Clause
A. Flight experience of 2,000 hours total helicopter time, plus one of the following:	
1. One year EMS pilot experience	
2. 300 hours as an EMS pilot	
3. 200 EMS missions	
III. Co-Pilot	Not Applicable: The August 109 Mk II aircraft does not have a pilot/co-pilot seating configuration
A. Flight experience	
1. 1,500 hours helicopter total time	
2. 500 hours turbine experience	
B. Ratings	
1. Commercial Helicopter	
2. Instrument Helicopter	
C. May upgrade to P.I.C. by meeting requirements of Grandfather Clause	
GUIDELINE 2: MINIMUM INITIAL PILOT TRAINING (in addition to FAA requirements)	
I. Less than 100 hours in aircraft type	
A. Factory school or equivalent (ground and flight)	Consistent

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B. 25 hours as P.I.C. in aircraft type prior to EMS missions	Consistent
II. Over 100 hours in aircraft type	
A. Part 135 check ride	Consistent
B. 5 hours local area orientation	Consistent
III. Less than one year EMS experience	
A. 12 duty days at hospital participating in a structured training program in an EMS aviation environment	Not Consistent
IV. Over one year EMS experience	
A. 6 duty days at hospital participating in a structured training program in an EMS aviation environment	Not Consistent
GUIDELINE 3: MINIMUM RECURRENT PILOT TRAINING (in addition to FAA requirements)	
I. All programs	
A. Semi-annual training flight oriented toward realistic EMS operations including day and night operations, IMC procedures, scene work, unimproved area operations, instrument training, egress and survival training, emergency procedures and limitations	Consistent
B. Recommend instrument currency and proficiency for all pilots	Consistent
GUIDELINE 4: AIRCRAFT TYPE AND EQUIPMENT (in addition to FAA requirements)	
I. Aircraft type	
A. Recommend IFR certified helicopters for all programs flying other than day, VFR only	Consistent
II. Equipment	
A. Recommend IFR certified aircraft, and/or stability augmentation, and/or two pilot operations	Consistent

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GUIDELINE 5: MINIMUM STAFFING REQUIREMENTS (in addition to FAA requirements)

I.	Single helicopter contracts	
A.	Four crews	Consistent
B.	In addition, one relief crew available to cover holidays, sick days, vacation, training, etc.	Consistent
II.	Multi-helicopter contracts	
A.	One additional crew above the minimum for each additional helicopter	Consistent

GUIDELINE 6: DUTY TIME LIMITATIONS (in addition to FAA requirements)

I.	12 hour shift maximum (recommend no more than four shifts in a row) or average 42 duty hours in a seven day period	Not Consistent: five 12-hour shifts are followed by five days off.
II.	Limited rotation between days and nights	Consistent

GUIDELINE 7: VFR WEATHER MINIMUMS (in addition to FAA requirements)

I.	Day	
A.	Local: 500 foot cloud ceiling and 1 mile visibility	Consistent
B.	Cross country/not local: 800/2	Consistent
II.	Night	
A.	Local: 500/2	Consistent
B.	Cross country: 1,000/3	Consistent

GUIDELINE 8: MEDICAL ATTENDANTS ON AIRCRAFT (in addition to FAA requirements)

I.	All attendants	
A.	All attendants who routinely fly must receive an aircraft and operations orientation designed to introduce attendants to EMS missions. Orientation should include safety awareness training, operating standards, and communications. This shall take place for both ground and flight operation.	Consistent
II.	Other than regular attendants	
A.	These personnel must be briefed prior to each flight.	Consistent

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GUIDELINE 9: SAFETY PROGRAM

I. Each EMS program will implement an active safety program.	Consistent
II. Each EMS program should be subject to an annual evaluation by an independent party.	Not Consistent: Airlift Northwest's safety program has been reviewed by an independent party, however, not on an annual basis.

C. KITCHEN GARDEN HELISTOP CONSISTENCY WITH FAA DESIGN GUIDELINES

Table B-1 identifies FAA design guidelines as established in Advisory Circular 150/5390-2, Heliport Design, and the consistency of the design of the proposed Kitchen Garden Helistop with those design guidelines.

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Table B-1
SUMMARY OF FAA RECOMMENDED HELISTOP DESIGN GUUIDELINES
AND CONSISTENCY OF KITCHEN GARDEN SITE WITH GUIDELINES

Helistop Specifications[1]	Helicopter Design Guidelines	Compliance[3]	Comment
TAKEOFF AND LANDING AREA Diameter: 85'	2.0 x rotor diameter	Agusta (72.0'): yes Huey (96.6'): no	
HELIPAD Length: 40' Width: 40'	1.5 x undercarriage length	Agusta (17.4'): yes Huey: yes	Minimally sized touchdown pads are not encouraged, but may be used in cases of economic or aesthetic necessity.
UNOBSTRUCTED AREA Length: 12' on each side of minimum (72')	Recommended: 1/3 x rotor diameter Minimum: 10' on each side	Agusta (12.0'): yes Huey (16.1'): no	An obstacle-free area surrounding the takeoff and landing area. Keep the area clear of parked helicopters, buildings, fences, etc. The three-foot fence surrounding the take-off and landing area would be an obstruction.
HELICOPTER PRIMARY SURFACE Diameter: 85'	2.0 x rotor diameter	Agusta (72.0'): yes Huey (96.6'): no	Imaginary plane overlying the takeoff and landing area. Area to be free of all obstacles.
HELICOPTER APPROACH SURFACE Length: 4,000' Inner width: 85'	4,000 feet 2.0 x Rotor Diameter	Yes Agusta (72.0'): yes Huey (96.6'): no	Approach and departure surfaces should not be penetrated by any objects that are determined to be hazards to air navigation. Several trees and light poles, that would be obstructions within the surfaces at Children's must be removed or relocated. At least one unobstructed approach and departure surface is required.
Outer width: 500'	500'	Yes	
Slope: 8:1 (horizontal to vertical)	8:1	Yes	

Table B-1 (continued)

Helistop Specifications[1]	Helicopter Design Guidelines	Compliance[3]	Comment
HELICOPTER TRANSITIONAL SURFACE			
Length: Full length of approach and primary surfaces	Full length of approach and primary surfaces	Yes	Surface should not be penetrated by objects.
Width: 250' from approach and primary surface center line	250' from approach and primary surface center line	Yes	
Slope: 2:1	2:1	Yes	

1 Sizes given are the dimensions of the proposed Kitchen Gardens helistop
2 Guidelines as set forth in FAA's Heliport Design Advisory Circular 150/5390-2; January 4, 1988.
3 Numbers in ( ) are recommended dimensions for each helicopter

APPENDIX C

DRAFT

MEDICAL REVIEW COMMITTEE

(July 23, 1987 Draft Proposal)

Purpose of the Committee

The purpose of the Medical Review Committee is to review compliance with condition (3) of the Council Conditional Use Permit and recommend corrective action where appropriate.

Composition and Appointment

The Committee will consist of the following five members:

(1) The Director of the Seattle-King County Department of Public Health, who will serve as Committee chair.

(2) A representative of CHMC selected by the Chief Executive Officer.

(3) A physician representative of the Washington State Medical Association (WSMA), selected by the President of the Association. The representative must be a qualified neonatologist, pediatric intensivist, or pediatric emergency physician.

(4) A physician representative of the Washington State Society of Pediatrics (WSSP), selected by the President of the Society. The representative must be a board certified pediatrician.

(5) A distinguished citizen, appointed by the Mayor of Seattle and confirmed by a majority of the Seattle City Council.

The representative of CHMC will be appointed for a term set by the Chief Executive Officer of CHMC. The representatives of the WSMA, the WSSP, and the Mayor/City Council will be appointed for three

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years. In the event a Committee member can no longer serve, a replacement will be appointed by the original appointing authority.

Responsibilities

The role of the Committee is advisory. The Medical Director of Airlift Northwest (ALNW) will retain ultimate authority and responsibility for all ALNW helicopter transports to the CHMC campus.

The Committee members will work cooperatively with the Chief Executive Officer of CHMC, the Chairman of the ALNW Executive Committee, and the ALNW Medical Director to assure use of the helistop will be restricted to life-threatening emergencies.

The five-member Committee will have the following responsibilities:

(1) In consultation and cooperation with the ALNW Medical Director, develop written guidelines for determining whether a helicopter transport to the CHMC campus involves a "life-threatening emergency." The ALNW Medical Director will be responsible for establishing the final guidelines.

(2) In consultation with the ALNW Medical Director and based on the final guidelines and information available at the time of transport, conduct a semi-annual (twice a year) review and evaluation of all helicopter transports to the CHMC campus to determine whether each transport involved a life-threatening emergency.

(3) Prepare and submit a semi-annual report to the Mayor of Seattle, the Director of the Seattle Department of Construction and Land Use, the Chief Executive Officer of CHMC, the Chairman of the ALNW Executive Committee, and the ALNW Medical Director discussing the Committee's

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evaluation of all helicopter transports to the CHMC campus.

(4) Prepare and implement written policies and procedures designed to assure the Committee's proceedings and the results of the Committee's work are open to the public to the extent allowed by the laws and administrative rules governing the confidentiality of patient medical records.

(5) Adopt additional rules and procedures needed to govern the conduct of the Committee's responsibilities.

Staff Support and Funding

The City of Seattle will provide the Committee's staff support and funding as follows:

(1) The Emergency Medical Services (EMS) Division of the Seattle-King County Department of Public Health will provide the staff support needed by the Committee to carry out its responsibilities.

(2) The City of Seattle (through the EMS Division) will provide the funds needed for equipment, supplies, and other Committee expenses.

(3) The City of Seattle will reimburse Committee members for their reasonable expenses required to carry out their responsibilities. Committee members will not receive any compensation or other benefits for their service on the Committee.

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Operations

CHMC will request the written consent of the parent or guardian of each patient transported by helicopter to the CHMC campus for Committee members to review the patient's medical records.

Each Committee member will agree in writing to abide by all laws and administrative rules governing the confidentiality of patient medical records.

Semi-annually, the EMS Division staff will conduct a preliminary review and evaluation of all helicopter transports to the CHMC campus.

The Committee will meet semi-annually to consider the EMS Division staff evaluation of all helicopter transports to the CHMC campus for the previous six months.

With the help of EMS Division staff and the ALNW Medical Director, the Committee will prepare and publish semi-annual written reports of the Committee's evaluation of all helicopter transports to the CHMC campus.

Reports and Recommendations

Based on information available at the time of transport, the Committee's semi-annual reports will identify and report all helicopter transports to the CHMC campus that did and did not involve a life-threatening emergency.

The semi-annul reports will recommend actions to be taken by the Chief Executive Officer of CHMC, the Chairman of the ALNW Executive Committee, the ALNW Medical Director, and the Committee to decrease the incidence of medically unnecessary helicopter landings on the CHMC campus, if any.

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The Committee will submit the semi-annual reports to those officials listed above in subparagraph (3) of Responsibilities. The Committee's reports will be made available to interested community groups, appropriate media, and any community resident or interested citizen who requests a copy.

Evaluation/Duration of the Committee

Within three years of the date of the Conditional Use Permit, the Seattle Mayor and City Council will evaluate the Committee's operations and results to determine whether to continue the Committee. The Committee will be discontinued after three years unless the Mayor and City Council decide to continue it.

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Appendix D

KEY CHARACTERISTICS OF CRITICALLY ILL AND INJURED PATIENTS
TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S
(August 1, 1985 - March 26, 1989)

Admission Date	Time*	Referring Hospital/Scene	Age	Presenting Condition	Admitted To	Discharge/Current Status
8/3/85	1600-1800	Puget Sound Naval Hospital, Bremerton, WA	1 day	Necrotizing enterocolitis	IICU	Expired 8/4/85
8/20/85	1100-1550	Forks Community Hospital, Forks, WA	Premature newborn; 30 wk. gestation	Severe hyaline membrane disease	IICU	Transferred to Olympic Memorial Hospital 9/25/85
8/27/85	1800-2022	St. Helen's Hospital Chehalis, WA	4 weeks	Respiratory distress, Beta strep meningitis	IICU	Discharged 12/13/85
10/15/85	0830-0800	Central Wash. Hospital, Wenatchee, WA	Premature newborn; 27 wk. gestation	Congenital anomalies, diaphragmatic herrla	ER	Expired 10/15/85
11/19/85	0800-0400	Covington, WA (scene)	Premature newborn; 29 wk. gestation	Severe respiratory distress	IICU	Transferred to Valley General Hospital 2/22/86
11/27/85	1150-1225	St. Joseph's Hospital Bellingham, WA	Newborn; 37 wk. gestation	Respiratory distress	IICU	Discharged 12/5/86
11/28/85	1125-1255	St. Peter's Hospital Olympia, WA	2 months	Bilateral subdural hematomas; seizure activity, retinal hemorrhages	IICU	Transferred to St. Peter's Hospital Olympia, 12/16/85
12/4/85	0935-0945	Harrison Memorial Hospital, Bremerton, WA	Premature newborn; 32 wk. gestation	Respiratory distress; apneic episodes	IICU	Expired 12/14/85
12/13/85	2115-2245	St. Helen's Hospital Chehalis, WA	Newborn; 37 wk. gestation	Respiratory distress	IICU	Discharged home 1/5/86
12/22/85	1329-1350	Skagit Valley Hospital Mt. Vernon, WA	7 months	Meningitis; septic shock	PICU	Transferred to Skagit Valley Hospital 1/8/86
1/11/86	1510-1740 (Boeing) -1800 (CHMC)	Ketchikan General Hospital, Ketchikan, AK	Newborn; 36 wk. gestation	Group B strep sepsis and respiratory distress	IICU	Expired 1/20/86
1/20/86	0735-0805 (Boeing) -0815 (CHMC)	Yakima Valley Hospital Yakima, WA	18 months	Gross internal bleed, metabolic acidosis, respiratory distress, ongoing CPR	PICU	Expired 1/20/86

Appendix D (Continued)

KEY CHARACTERISTICS OF CRITICALLY ILL AND INJURED PATIENTS
TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S
(August 1, 1985 - March 26, 1989)

Admission Date	Time*	Referring Hospital/Scene	Age	Presenting Condition	Admitted To	Discharge/Current Status
2/12/86	2100-2200	Grays Harbor Community Hospital, Aberdeen, WA	3 years	Apneic, hypothermic, pulseless, acidotic, comatose, ongoing CPR	ER	Expired 2/12/86
2/13/86	1040-1055	Whidbey General Hospital, Coupeville, WA	Newborn	Bradycardic, generalized edema, congestive heart failure	IICU	Expired 2/14/86
3/21/86	2225-2245	Harrison Memorial Hospital, Bremerton, WA	Newborn	Diaphragmatic hernia, respiratory distress	OR/IICU	Expired 3/21/86
4/5/86	1005-1020	Medic 8 Federal Way (scene)	19 months	Hypothermic, bradycardic, apneic, comatose	PICU	Discharged 4/10/86
4/18/66	1510- (Boeing Field) -0815 (CHMC)	Sunnyside Hospital Sunnyside, WA	Newborn	Multiple congenital anomalies including diaphragmatic hernia and anal atresia	IICU	Expired 4/18/86
5/21/86	0850-0910	Bainbridge Island Middle School Winslow, WA	14 years	Cardiac arrest	PICU	Expired 5/26/86
5/31/86	0015-0040	Whidbey Island, WA	Newborn	Respiratory distress; meconium aspiration	IICU	Discharged Whidbey Island 6/3/86
6/1/86	1218-1235	Medic 6 Black Diamond (scene)	20 months	Respiratory distress	PICU	Discharged home 6/11/86
6/17/86	0915-0940	Puget Sound Naval Hospital, Bremerton, WA	Newborn; 35 wk. gestation	Respiratory distress; persistent pulmonary hypertension	IICU	Discharged 7/1/86
6/29/86	0850-0925	Medic 6 - Auburn	2 months	Unresponsive; ongoing CPR	IICU	Expired 7/1/86
7/9/86	1645-1715	Medic 6 - Auburn	15 months	Seizures; history of febril seizures	PICU	Discharged 7/10/86
7/13/86	1625-1710	Medic 6 - Auburn	2 years	Seizures; cyanotic, listless. History of VP shunt and cerebral palsy	PICU	Discharged 7/17/86

KEY CHARACTERISTICS OF CRITICALLY ILL AND INJURED PATIENTS
TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S
(August 1, 1985 - March 28, 1989)

Admission Date	Time*	Referring Hospital/Scene	Age	Presenting Condition	Admitted To	Discharge/Current Status
7/14/86	1845-1950	Mason General Hospital, Shelton, WA	3 years	Ongoing CPR; Asystolic status post near drowning	PICU	Expired 7/14/86
7/18/86	0955-1120	Whidbey Naval Hospital, Oak Harbor, WA	Newborn; 32 wk. gestation	Birth asphyxia; seizures	IICU	Expired 7/21/86
7/23/86	2120-2150	Whidbey Naval Hospital, Oak Harbor, WA	Newborn; 26 wk. gestation	Severe respiratory distress; hypotensive	IICU	Expired 7/24/86
7/26/86	1435-1440	Yakima Valley Memorial, Yakima, WA	Newborn	Diaphragmatic hernia; hypotensive, severe respiratory distress Rotary from Boeing Field	IICU	Expired 7/27/87
8/18/86	1405-1455	Cascade Valley Hospital, Arlington, WA	Newborn; 27 wk. gestation	Severe lung disease with emphysema	IICU	Expired 8/9/86
8/19/86	1705-1755	Puget Sound Naval Hospital, Bremerton, WA	9 months	Closed head injury; seizure; decreased level of consciousness, status post near drowning	PICU	Discharged 8/22/86
8/23/86	2100-2205	Medic 6 - Kent	3 months	Seizures; low heart rate; apnea	IICU	Discharged 8/26/86
8/29/86	2206-0010	Skagit Valley Hospital, Mt. Vernon, WA	Newborn	Diaphragmatic hernia, severe respiratory distress	IICU	Discharged 9/10/86
8/29/86	0105-0220	Harrison Memorial Hospital, Bremerton, WA	Newborn; 32 wk. gestation	Trisomy 21 and severe respiratory distress, hypotensive	IICU	Expired 9/11/86
9/16/86	0950-1150	Puget Sound Naval Hospital, Bremerton, WA	2 wks.	Sepsis, ongoing CPR	IICU	Expired 9/18/86
10/2/86	1600-1720	Whidbey General Hospital, Coupeville, WA	Newborn	Asphyxia; seizures, severe respiratory distress	IICU	Discharged 3/7/88
10/3/86	0755-0900	Snoqualmie Valley Hospital	9 years	Pneumococcal sepsis, low blood pressure	PICU	Discharged 11/17/88
10/17/86	1630-1755	Whidbey General Hospital, Coupeville, WA	Newborn	Meconium aspiration/asphyxia respiratory distress	IICU	Expired 10/24/86

Appendix D (Continued)

KEY CHARACTERISTICS OF CRITICALLY ILL AND INJURED PATIENTS
TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S
(August 1, 1986 - March 26, 1989)

Admission Date	Time*	Referring Hospital/Scene	Age	Presenting Condition	Admitted To	Discharge/Current Status
10/27/86	0035-0225	Lakewood General Hospital, Tacoma, WA	18 months	Septic shock; meningitis	PICU	Transferred to Mary Bridge Hospital 10/27/86
10/23/86	1550-1625	Medic 6 - Auburn	9 years	Cerebral palsy; seizures, low blood pressure	PICU	Discharged 10/24/86
11/1/86	1915-1950	Medic 6 - Auburn	2 years	Motor vehicle accident; submerged in muddy water CPR	PICU	Discharged 11/5/86
11/28/86	0900-0930	Patient's home, Vashon Island, WA	3 years	Congenital adrenal hyperplasia seizures, respiratory arrest	PICU	Discharged 12/3/86
11/29/86	1240-1440	Willapa Harbor Hospital, South Bend, WA	6 years	Cerebral palsy; seizures	PICU	Discharged 12/3/86
11/29/86	1530-1730	St. Joseph's Hospital Bellingham, WA	Newborn	Birth asphyxia; meconium aspiration, low blood pressure, respiratory distress	IICU	Expired 12/3/86
12/10/86	1540-1740	Medic 5 - Renton	21 years	Cardiac surgery 2 weeks previous; respiratory distress	PICU	Discharged 12/19/86
12/13/86	0505-0540	Medic 6 - Auburn	17 years	Lupus vasculitis, renal failure, pulmonary edema, respiratory distress	PICU	Discharged 1/1/87
12/16/86	1555-1800	St. Mary's Hospital Walla Walla, WA	Newborn, 34-35 wk. gestation	Respiratory distress; ruptured comphacele requiring surgery, low blood pressure. Rotary from Boeing Field.	IICU	Expired 1/8/87
12/26/86	0540-0815	Grays Harbor Hospital, Aberdeen, WA	Newborn	Born with tight nuchal cord; meconium aspiration, respiratory distress, cyanosis	IICU	Expired 1/11/87
12/31/86	1500-1521	Medic 23 (Redmond)	1 year	Seizures	ER-Floor	Discharged. 1/1/87
1/C.87	1525-1550	Medic 8 - Federal Way	8 years	Seizures; comatose, epileptic history	Floor	Discharged 1/8/87
2/2/87	0745-0815	Island Hospital Anacortes, WA	Newborn; 24 wk. gestation	Very low blood pressure; extremely hypoxic and acidotic, very low heart rate	IICU	Expired 2/3/87

KEY CHARACTERISTICS OF CRITICALLY ILL AND INJURED PATIENTS TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S (August 1, 1985 - March 26, 1988)

Admission Date	Time*	Referring Hospital/Scene	Age	Presenting Condition	Admitted To	Discharge/Current Status
2/9/87	1413-1425	Medic 6 - Auburn	14 days	Had experienced sudden apneic period; severely cyanotic and tacky cardic	IICU	Discharged 2/20/87
2/16/87	1311-1400	Whidbey General Hospital, Coupeville, WA	10 years	Asphyxia; comatose; ongoing CPR	PICU	Expired 2/16/87
2/26/87	1145-1203	Whidbey Naval Hospital, Oak Harbor, WA	3 1/2 months	Evidence of severe anoxic injury; massive acidosis, cardiac irritability, and bleeding because of abnormalities in coagulation	ER	Expired 2/26/87
3/[illegible]/87	2325-2365	St. Peter's Hospital Olympia, WA	7 years	Acidosis, pulmonary edema, cyanosis, low blood pressure	PICU	Discharged 3/11/87
3/15/87	0305-0325	Jefferson General Hospital, Port Townsend, WA	8 months	Fulminating meningitis; deteriorating neurological status	PICU	Discharged 3/23/87
3/30/87	1228-1606	Forks Community Hospital,	Newborn	Severe respiratory acidosis, bilateral pneumothoraxes, dysmorphic features	IICU	Expired 3/30/87
4/6/87	1020-1030	Harrison Memorial Hospital, Bremerton, WA	17 years	Low blood pressure, very rapid respiratory rate, septic shock	PICU	Discharged 4/14/87
4/11/87	0945-0955	Harrison Memorial Hospital, Bremerton, WA	Newborn	Severe asphyxia at birth (prolapsed cord) extremely acidotic, marked tremors of the arms, nonreactive pupils	IICU	Expired 4/22/87
4/17/87	1845-1857	Medic 8 Federal Way	3 1/2 years	Epigestis; seizures, comatose	ER	Discharged 4/20/87
4/29/87	08[illegible]-0822	Medic 23 Kirkland	2 years	Respiratory distress	PICU	Discharged 5/9/87
5/01/87	1930-1940	Medic 23 Kirkland	22 months	Unresponsive; probable history of ingesting a tricyclic drug	PICU	Discharged 5/3/87

Appendix D (Continued)

KEY CHARACTERISTICS OF CRITICALLY ILL AND INJURED PATIENTS
TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S
(August 1, 1985 - March 26, 1989)

Admission Date	Time*	Referring Hospital/Scene	Age	Presenting Condition	Admitted To	Discharge/Current Status
5/22/87	1000-1010	Medic 6 - Auburn	3 years	Unresponsive; unconscious (found on bottom of pool)	PICU	Expired 6/1/87
5/26/87	0724-0735	Medic 6 - Kent	2 years	Tachypneic, tachycardic; diabetic keto acidosis	PICU	Discharged 5/29/87
5/27/87	0610-0700	St. Joseph's Hospital Bellingham, WA	Newborn, 38 wk. gestation	Severe respiratory distress; sepsis	IICU	Transferred to St. Joseph's 6/15/87
6/14/87	2208-2220	Medic 8 - Federal Way	10 months	Febrile seizures	Floor	Discharged 6/16/87
6/20/87	2147-2202	Medic 6 - Auburn	8 months	Child with history of hydrocephelus and VP shunt in place; respiratory arrest, followed by vomiting and aspiration	PICU	Discharged 6/23/87
6/24/87	1740-1752	Medic 6 Kent	3 months	Apnec period; tachypnic, status post CPR	IICU	Discharged 6/28/87
6/25/87	1830-1850	Providence Hospital Everett, WA	6 months	Cardiac and respiratory arrest	PICU	Expired 6/26/8.
7/9/87	1310-1325	Good Samaritan Hospital, Puyallup, WA	4 years	Seizures; recent cardio-pulmonary arrest	PICU	Expired 7/12/87
7/13/87	1045-1215	Mason General Hospital, Shelton, WA	3 years	Reyes Syndrome/meningitis; respiratory distress	PICU	Transferred to other hospital 10/19/87
7/25/87	1818-1850	Grays Harbor Community Hospital	4 years	Seizures; status epilepticus	PICU	Discharged 8/5/87
7/27/87	1658-1720	Whidbey General Hospital, Coupeville, WA	Newborn; 38 wk. gestation	Cyanotic congenital heart disease	IICU	Expired 7/28/87
8/3/87	0030-0055	Auburn General Hospital, Auburn, WA	2 years	Anesthesia bradycardia seizures	PICU	Discharged 9/8/87
8/6/87	1455-1510	St. Peter's Hospital Olympia, WA	1 year	Chloroquin phosphate ingestion; cardiac arrest	PICU	Discharged 9/28/87

KEY CHARACTERISTICS OF CRITICALLY ILL AND INJURED PATIENTS
TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S
(August 1, 1986 - March 26, 1989)

Admission Date	Time*	Referring Hospital/Scene	Age	Presenting Condition	Admitted To	Discharge/Current Status
8/17/87	1125-1145	Whidbey General Hospital, Coupeville, WA	Newborn	Meconium aspiration	IICU	Discharged 8/25/87
8/17/87	1550-1600	Yakima Valley to Boeing Field to CHMC	Newborn; 33 wk. gestation	Diaphragmatic hernia	IICU	Expired 8/18/87
8/21/87	1250-1327	Medic 5 - Renton	11 months	Febrile seizures	ER	Discharged 8/23/87
8/27/87	1625-1710	Kittitas Valley Community/Ellensburg to Boeing to CHMC	Newborn; 34 wk. gestation	Cyanotic, obvious limb deformaties; moderate respiratory distress	IICU	Expired 8/29/87
8/29/87	0150-0210	Harrison Memorial Hospital, Bremerton, WA	7 months	Respiratory arrest	ER	Expired 8/29/87
9/2/87	1240-1250	Medic 4 - Burien	1 month	SIDS; ongoing CPR, intubated	ER	Expired 9/2/87
9/2/87	1500-1510	Medic 71 - Maltby	2 1/2 years	Asystolic; ongoing CPR	ER	Expired 9/2/87
9/26/87	1112-1142	St. Helen's Hospital Chehalis, WA	3 months	Diagnosed transposition of the great vessels and arteries and ventricular septal defect with prior pulmonary artery banding surgery; found cyanotic	IICU	Expired 9/26/87
9/27/87	1100-1130	Olympic Memorial Hospital, Port Angeles, WA	Newborn; 37 wk. gestation	In respiratory distress; diffusely cyanotic	IICU	Expired 9/27/87
10/4/87	0910-0925	Medic 6 - Enumclaw	13 years	Seizures	PICU	Discharged 10/6/87
10/5/87	1430-1521	Wenatchee	3 months	Cardiac arrest	IICU	Expired 10/6/87
10/20/87	2145-2232	Valley Medical Hospital, Renton, WA	4 years	Respiratory arrest; sepsis	PICU	Expired 10/21/87
11/3/87	2024-2116	Enumclaw General Hospital, Enumclaw, WA	6 years	Epiglottitis	ER	Discharged 11/8/87
11/27/87	1140-1155	Medic 6 - Kent	13 years	Cardiogenic shock	ER	Expired 11/27/87

KEY CHARACTERISTICS OF CRITICALLY ILL AND INJURED PATIENTS
TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S
(August 1, 1985 - March 26, 1989)

Admission Date	Time*	Referring Hospital/Scene	Age	Presenting Condition	Admitted To	Discharge/Current Status
12/6/87	2145-2200	Snoqualmie Valley Hospital	14 months	Meningitis; septic shock	PICU (B3)	Discharged 12/10/87
12/11/87	0950-1035	Yakima Valley Memorial Hospital	5 years	Foreign body aspiratin	PICU	Discharged 12/24/87
12/28/87	1830-1840	Medic 10 Vashon Island	15 months	Epilepticus with decordicate posturing	ER	Discharged 12/29/87
1/1/88	1115-1130	Auburn General Hospital, Auburn, WA	7 months	Seizures; H-flu meningitis, sepsis	PICU	Dischgd. 1/16/88
1/3/88	0919-0928	Medic 5 - Kent	13 years	Asystolic	ER/PICU	Expired 1/8/88
2/9/88	1910-2045	Everett General Hospital, Everett, WA	4 months	Respiratory distress; seizures	PICU	Discharged 2/16/88
2/13/88	0730-0955	Grays Harbor Community Hospital, Aberdeen, WA	Newborn	Diaphragmatic hernia	IICU	Expired 2/13/88
2/16/88	1800-1810	Medic 6 - Auburn	3 years	Anaphylaxis and seizures	ER	Discharged 2/17/88
2/25/88	0515-0730	Cascade Valley Arlington, WA	Newborn	Respiratory distress	IICU	Discharged 3/3/88
3/3/88	2215-2230	St. Francis' Hospital Federal Way, WA	5 years	Ingestion of unidentified plants; brady diphythmia	PICU	Discharged 3/6/88
3/7/88	1405-2012	Jefferson General Hospital, Bellingham, WA	19 months	Respiratory distress; ongoing CPR	ER	Expired 3/8/88
4/11/88	1940-2012	St. Joseph's Hospital Bellingham, WA	2 weeks	Post resuscitation with severe metabolic acidosis and cardiovascular shock	IICU	Expired 4/11/88
4/21/88	2013-2032	Valley Medical Center Renton, WA	7 years	Serious respiratory distress (chronic esthmatic)	ER	Discharged 4/26/88

Appendix D (Continued)

KEY CHARACTERISTICS OF CRITICALLY ILL AND INJURED PATIENTS
TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S
(August 1, 1985 - March 26, 1989)

Admission Date	Time*	Referring Hospital/Scene	Age	Presenting Condition	Admitted To	Discharge/Current Status
5/3/88	1845-1900	Providence Hospital Everett, WA	13 months	Septic shock	PICU	Discharged 5/18/88
5/19/88	1425-1500	Providence Hospital Centralia, WA	Newborn	Congenital heart disease	IICU	Expired 5/19/88
5/28/88	2133-2156	Medic 5 - Kent	23 months	Atypical seizures	PICU	Discharged. 6/1/88
5/29/88	1950-2025	Morton General Shelton, WA	Newborn	Birth asphyxia; respiratory distress	IICU	Discharged 7/19/88
5/30/88	1540-1555	Everett General Hos- Everett, WA	22 months	Near drowning; status post CPR	PICU	Expired 6/3/88
6/16/88	2040-2050	Medic 23 - Carnation	3 years	Recent history of dysrhythmias; arrest, neurologically unresponsive	PICU	In hospital as of 7/21/88
6/19/88	2000-2400	Fairbank Memorial Hospital	2 days	Severe bradycardic episodes; ongoing CPR	IICU	Expired 6/20/88
6/21/88	2129-2140	Harrison Memorial Hospital, Bremerton, WA	9 months	Apneic tachycardic	PICU	Expired 6/22/88
6/30/88	1910-1925	St. Francis' Hospital Federal Way, WA	16 months	Seizures	PICU (B3)	Discharged 7/2/88
7/23/88	2400-0025	United General Hospital, Sedro Wooley, WA	Newborn	Respiratory distress/meconium aspiration, pneumothorax	IICU	Discharged 7/27/88
8/4/88	1243-1248	Evergreen Hospital Kirkland, WA	13 months	Kerosene ingestion; aspiration, respiratory failure	ER	Discharged 8/10/88
8/18/88	1130-1140	Snoqualmie Valley Hospital Carnation, WA	11 years	Diabetic ketoacidosis; respiratory failure	PICU	Expired 8/21/88
8/23/88	1320-1330	Medic 5 - Renton	3 months	Respiratory arrest	ER/IICU	Expired 8/26/88

Appendix D (Continued)

KEY CHARACTERISTICS OF CRITICALLY ILL AND INJURED PATIENTS
TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S
(August 1, 1985 - March 26, 1989)

Admission Date	Time*	Referring Hospital/Scene	Age	Presenting Condition	Admitted To	Discharge/Current Status
9/1/88	1510-1555	St. Peter's Hospital Olympia, WA	14 months	Ingestion of Benedryl; seizures	PICU	Discharged 9/6/88
9/7/88	2345-2351	Yakima Memorial Hospital, Yakima, WA Boeing Field to CHMC	1 week**	Septic shock	IICU	Expired 9/8/88
10/7/88	2000-2010	Medic 23 - Bellevue	13 months	Seizures; respiratory arrest	ER	Transferred to another hospital 10/8/88
10/10/88	1958-2006	Medic 13 Vashon Island, WA	7 months	Foreign body aspiration; respiratory failure	ER	Discharged 10/10/88
10/30/88	1532-1552	Harrison Memorial Hospital, Bremerton, WA	6 weeks	Cardiac/respiratory arrest	IICU	Expired 11/4/88
11/1/88	1805-1810	Medic 8 - Des Moines	3 months	Cardiac/respiratory arrest	IICU	Expired 11/2/88
11/4/88	1820-1827	Valley Medical Center Renton, WA	22 months	H-flu meningitis/shock; respiratory failure	PICU	Discharged 11/18/88
11/10/88	1721-1732	Medic 23 - Woodinville	4 years	Epiglottitis; respiratory distress	ER	Discharged 11/13/88
11/18/88	1355-1455	CHMC Seattle WA to Emmanuel Hospital Portland, OR	1 day	Respiratory failure; ECMO candidate	ECMO Team in NICU (Portland)	Readmitted to CHMC 11/23/88 Discharged 11/25/88
11/23/88	1411-1420	Valley Medical Center Renton, WA	11 months	Status asthmaticus; respiratory distress/failure	PICU	Transferred 12/31/88
11/28/88	0920-0935	Riverton Hospital Seattle, WA	13 months	Septic shock; respiratory distress	PICU	Expired 11/29/88
12/10/88	0045-0055	Medic 10 Kingston	8 months	Seizures; respiratory distress, sedation and intubation required	ER	Discharged 12/14/88

Appendix D (Continued)

KEY CHARACTERISTICS OF CRITICALLY ILL AND INJURED PATIENTS
TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S
(August 1, 1985 - March 28, 1989)

Admission Date	Time*	Referring Hospital/Scene	Age	Presenting Condition	Admitted To	Discharge/Current Status
12/27/88	2215-2225	Providence Hospital Everett, WA	3 1/2 years	Status asthmaticus; respiratory distress	PICU	Discharged 1/6/89
1/5/89	1655-1735	Grays Harbor Community Hospital Aberdeen, WA	3 years	Near drowning; comatose	PICU	Discharged 3/7/89
1/7/89	2310-2330	Valley Medical Center Renton, WA	3 days	Necrotizing fasciitis	NICU	Discharged 2/4/89
1/21/89	2310-2330	Medic 6 - Kent	2 months	Rule out SIDS	ER	Expired in ER
1/25/89	0205-0220	Highline Community Hospital, Seattle, WA	10 years	Acute respiratory distress with respiratory arrest	PICU	Discharged 1/26/89
1/25/89	0938-0945	Medic 23 - Duvall	2 years	Foreign body obstruction; severe respiratory distress	ER/PICU	Discharged 1/30/89
2/4/89	2120-2130	Harrison Memorial Hospital, Bremerton, WA	4 months	Respiratory distress/bradycardia	NICU	Discharged 2/10/89
2/17/89	1845-1900	Providence Hospital Everett, WA	22 months	Status asthmaticus	PICU	Discharged 2/25/89
2/18/89	1929-1936	Medic 8 - Burien	11 months	Near drowning	PICU	Still hospitalized
2/23/89	1808-1820	Valley Medical Center Renton, WA	13 years	Status asthmaticus	ER	Discharged 2/28/89
2/24/89	1415-1432	Debob Bay	2 years	Near drowning; cardio/respiratory arrest	ER	Expired in ER
3/5/89	1458-1506	Medic 5 - Kent	Newborn; 7 month gestation	Respiratory distress; born at gas station/required CPR	NICU	Discharged 3/21/89
3/6/89	0945-1408	CHMC, Seattle WA to Emmanuel Hospital Portland, OR	Newborn	Diaphragmatic hernia; respiratory failure ECMO candidate	ECMO Team in NICU (Portland)	Readmitted 3/21/89; still hospitalized

KEY CHARACTERISTICS OF CRITICALLY ILL AND INJURED PATIENTS TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S
(August 1, 1985 - March 26, 1989)

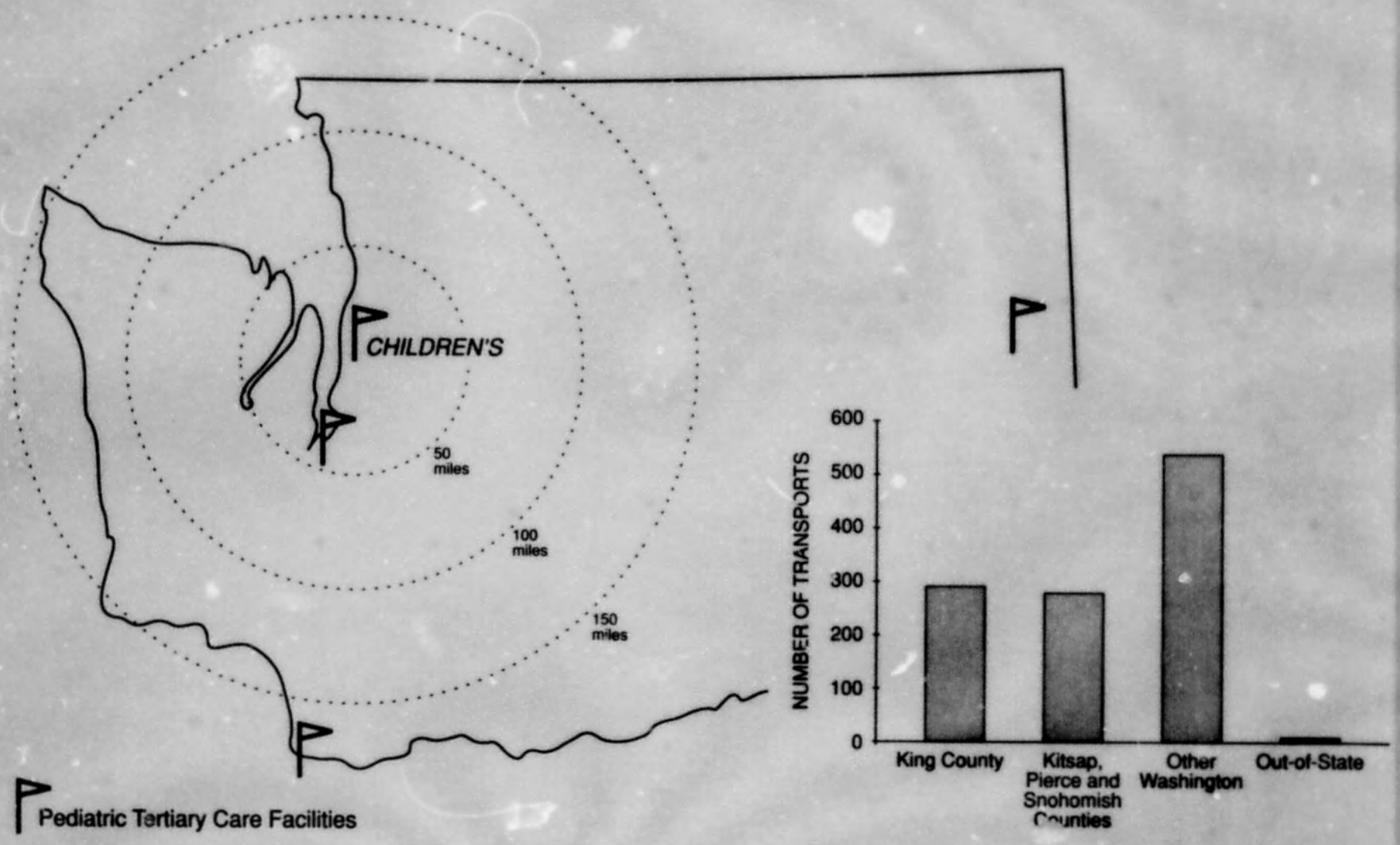
Admission Date	Time*	Referring Hospital/Scene	Age	Presenting Condition	Admitted To	Discharge/Current Status
3/19/89	0100-0330	CHMC, Seattle WA to Emmanuel Hospital Portland, OR	11 days	Idiopathic respiratory distress syndrome, persistent pulmonary fetal circulation transferred to Portland for ECMO	ECMO Team in NICU (Portland)	Not readmitted
3/26/89	1832-1845	Valley General Hospital, Monroe, WA	15 years	Status asthmaticus; respiratory arrest	PICU	Discharged 4/5/89

*Time left referring to hospital's Emergency Room or scene, to time of arrival at Children's

IICU - Infant Intensive Care Unit
PICU - Pediatric Intensive Care Unit
ER - Emergency Room
ECMO - Extra Corporeal Membraneous Oxygenation

Source: Children's, 1989

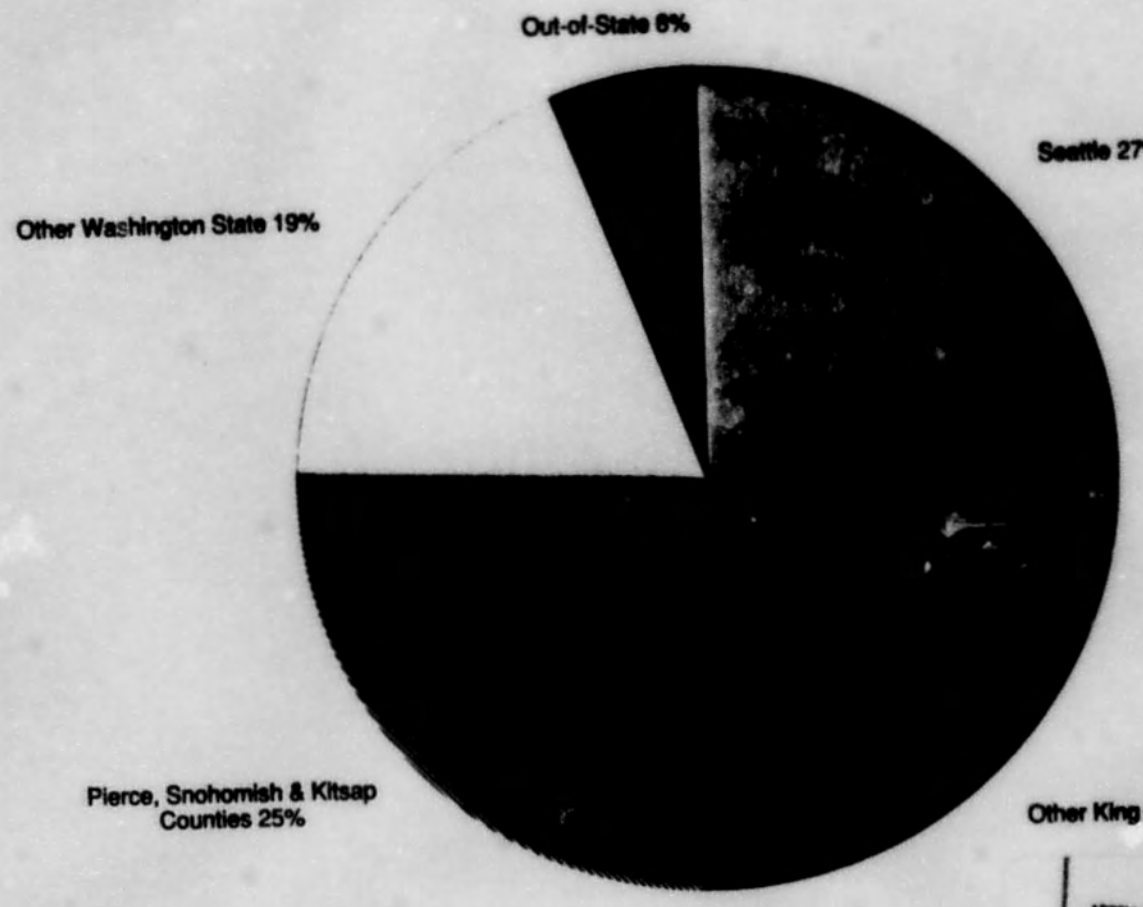
REGIONAL PEDIATRIC TERTIARY CARE FACILITIES AND ORIGIN OF PATIENTS TRANSPORTED BY ALNW HELICOPTER



APPELLANT
DEPARTMENT
APPLICANT ✓
FILE # 840587 9106441 297288 298790

5

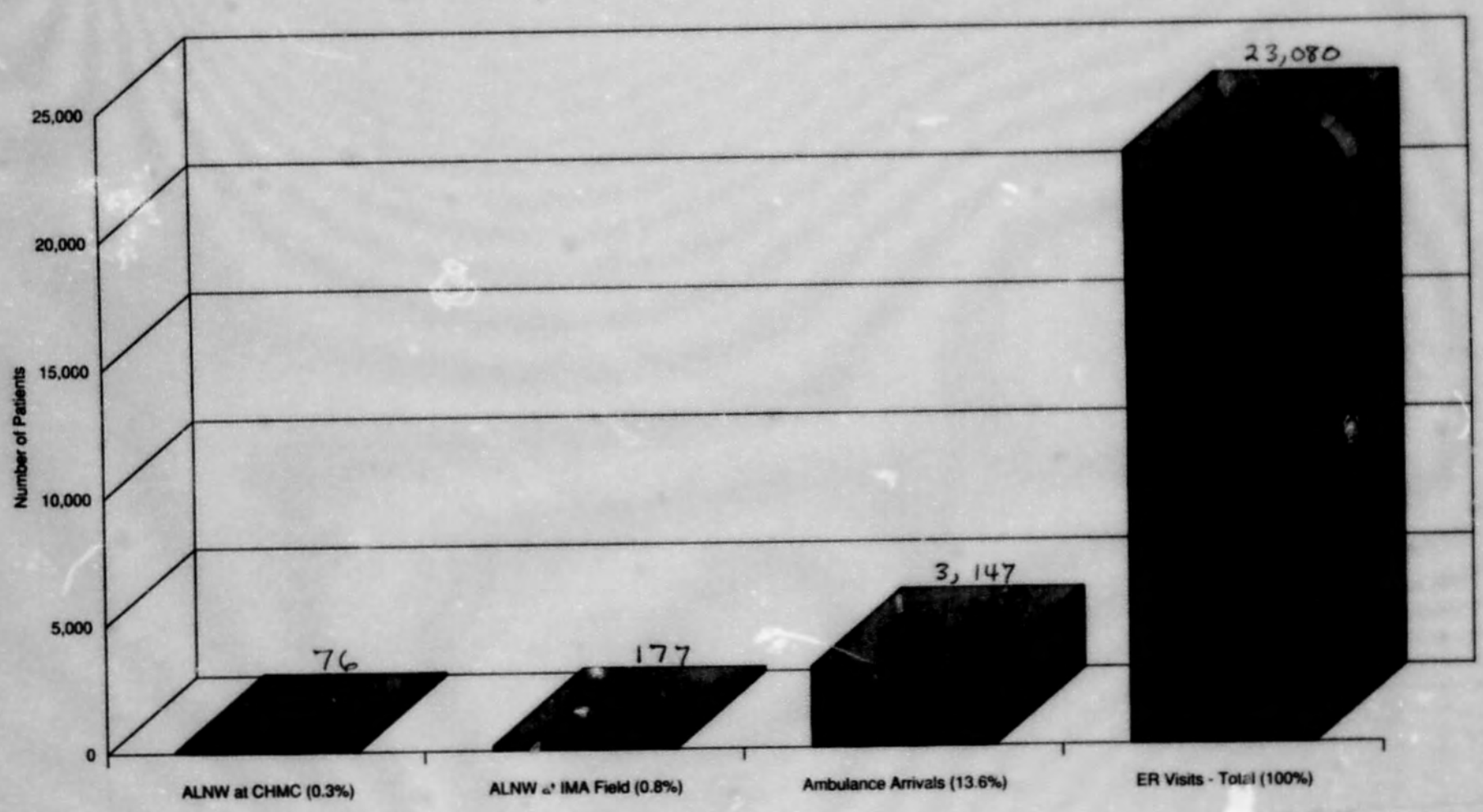
GEOGRAPHIC ORIGIN OF ALL CHILDREN'S INPATIENTS (FY 1990)



APPELLANT
DEPARTMENT
APPLICANT
FILE # 540580 9166441 297288 298740

6

PATIENT TRANSPORTS TO CHILDREN'S ER BY TRANSPORT MODE (1991)



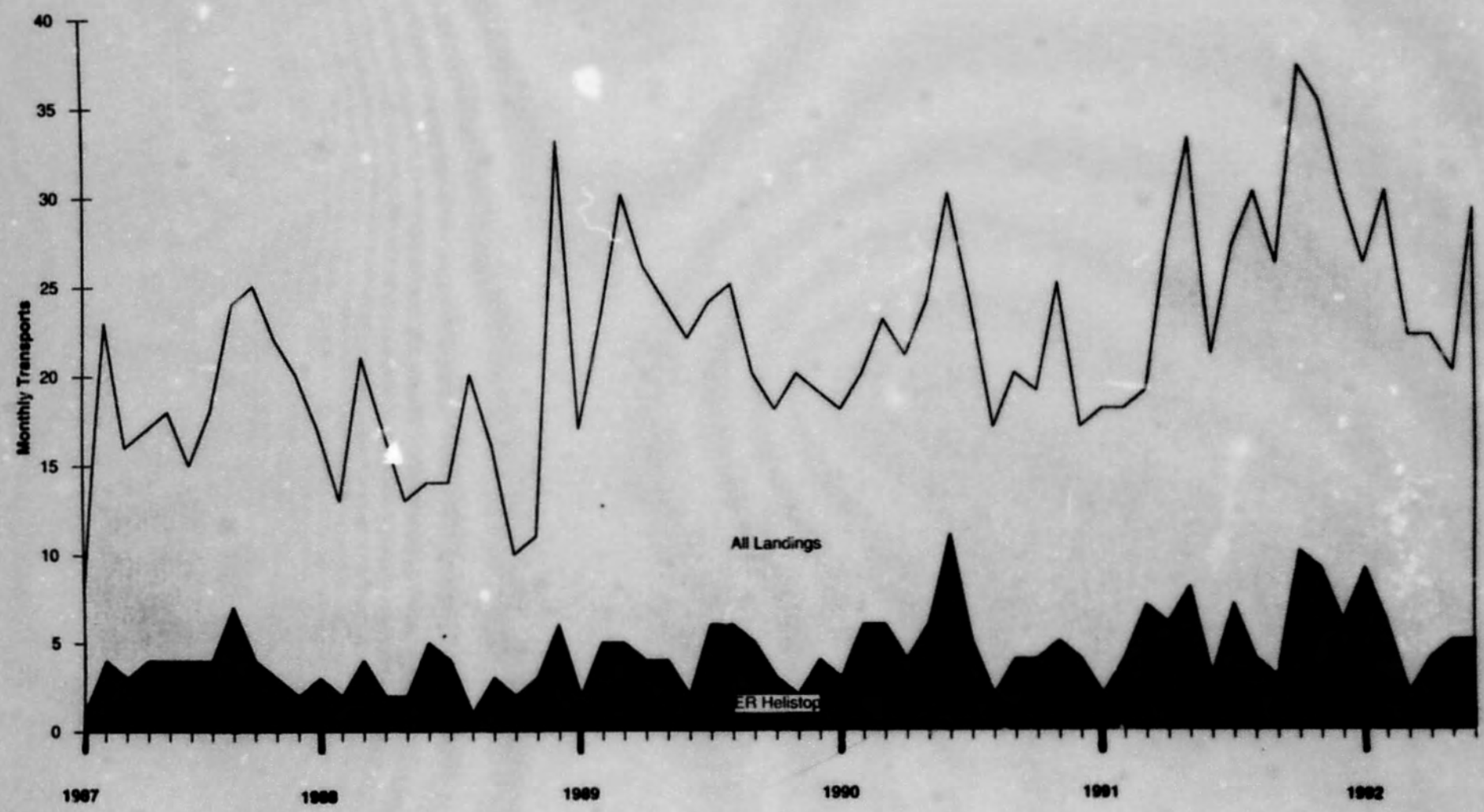
7

APP
DEPARTMENT
APPLICANT ✓
FILE # 8405870 9106441
297288 298740

APPELLANT
DEPARTMENT
APPLICANT ✓
FILE # 840570 9106441
297288 295740

8

MONTHLY AIRLIFT NORTHWEST TRANSPORTS (JANUARY 1987 - MAY 1992)



AIRLIFT NORTHWEST

STANDING ORDERS FOR CHILDREN'S LANDINGS

If during the transport of a critically ill child any of the following clinical conditions occur, a Children's Landing is authorized by the Medical Director of Airlift Northwest

I. UNSTABLE AIRWAY

- A. Diagnosis or clinical presentation of epiglottitis
- B. Inability to protect the airway
- C. Inability to provide an artificial airway

II. INABILITY TO VENTILATE/OXYGENATE

- A. Inadequate PaO2 confirmed by oxygen saturation monitoring
- B. Significant hypoxia in the face of 100% oxygen administration
- C. Inability to generate adequate gas exchange, as in status asthmatics or acute pulmonary edema.

III. INABILITY TO MAINTAIN ADEQUATE CARDIAC OUTPUT

- A. Low or absent blood pressure
- B. Lethal cardiac rhythm
- C. Inability to provide IV access in hypotensive patients

IV. INABILITY TO MAINTAIN ADEQUATE CEREBRAL BLOOD FLOW

- A. Uncontrolled seizures
- B. Signs and symptoms of massive cerebral edema as in Drowning, Carbon Monoxide Poisoning, Strangulation

V. THE PERSISTENCE OF UNSTABLE VITAL SIGNS DESPITE HEROIC ATTEMPTS TO CONTROL THEM

Approved 9/16/89
Michael K Jarvis

APPELLANT
DEPARTMENT
APPLICANT V
FILE # 2405870 9106441
297208 298740

9

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

AIRLIFT NORTHWEST

AIRLIFT NORTHWEST ROTARY WING LANDINGS AT CHMC
MEDICAL JUSTIFICATION

DATE: _____

PATIENT NAME: _____

FLIGHT TEAM: _____

_____

An emergency landing on the CHMC campus was medically required for the following reasons (please check appropriate number and circle the appropriate letter subtitle):

_____ I. UNSTABLE AIRWAY

A. Diagnosis or clinical presentation of epiglottitis
B. Inability to protect the airway
C. Inability to provide an artificial airway

_____ II. INABILITY TO VENTILATE/OXYGENATE

A. Inadequate PaO2 confirmed by oxygen saturation monitoring
B. Significant hypoxia in the face of 100% oxygen administration
C. Inability to generate adequate gas exchange, as in status asthmatics or acute pulmonary edema

_____ III. INABILITY TO MAINTAIN ADEQUATE CARDIAC OUTPUT

A. Low or absent blood pressure
B. Lethal cardiac rhythm
C. Inability to provide IV access in hypotensive patients

_____ IV. INABILITY TO MAINTAIN ADEQUATE CEREBRAL BLOOD FLOW

A. Uncontrolled seizures
B. Signs and symptoms of massive cerebral edema as in Drowning, Carbon Monoxide Poisoning, Strangulation

_____ V. THE PERSISTENCE OF UNSTABLE VITAL SIGNS DESPITE HEROIC ATTEMPTS TO CONTROL THEM

REVIEWED: _____ _____
Medical Director **Chief Flight Nurse**

COMMENTS: _____

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

AIRLIFT NORTHWEST

Airlift Northwest Helicopter Landings at CHMC
MARCH 1989
(23 CHMC patients via ALNW helicopter; 4 landed at CHMC; 19 at UW Graves Field)

FLIGHT DATE	LANDING/ TAKE-OFF	PATIENT NAME/ PATIENT AGE	TRANSPORTED FROM	ADMITTING DIAGNOSIS	RECEIVING UNIT
03/05/89	3:10 pm 3:35 pm	Newborn	Medic 5 Kent	Prematurity, Respiratory Distress	
03/07/89	10:35 am 10:52 am	Newborn	From CHMC To Emanuel Hospital Portland, OR	Diaphragmatic Hernia, Respiratory Failure	
03/19/89	12:40 am 1:05 am	12 days	From CHMC To Emanuel Hospital Portland, OR	Respiratory Failure	
03/26/89	6:45 pm 7:35 pm	15 years	Valley General Hosp Monroe	Respiratory Arrest	

APPLICANT ✓
FILE # 8405878 7126941
297268 298740

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AIRLIFT NORTHWEST

Airlift Northwest Helicopter Landings at CHMC
APRIL 1989
(20 CHMC patients via ALNW helicopter; 4 landed at CHMC; 16 at UW Graves Field)

FLIGHT DATE	LANDING/ TAKE-OFF	PATIENT NAME/ PATIENT AGE	TRANSPORTED FROM	ADMITTING DIAGNOSIS	RECEIVING UNIT
04/21/89	12:40 pm 1:20 pm	2 months	Harrison Mem Hosp Bremerton	Near SIDS	
04/23/89	1:10 pm 1:50 pm	18 months	Auburn General Hosp Auburn	Seizures, Possible Sepsis	
04/29/89	7:55 pm 8:35 pm	12 months	Medic 71 Snohomish	Status Epilepticus	
04/30/89	4:10 pm 4:55 pm	Newborn	From CHMC To Emanuel Hospital Portland, OR	Meconium Aspiration, Persistent Fetal Circulation	

AIRLIFT NORTHWEST

Airlift Northwest Helicopter Landings at CHMC
MAY 1989
(20 CHMC patients via ALNW helicopter; 2 landed at CHMC; 18 at UW Graves Field)

FLIGHT DATE	LANDING/ TAKE-OFF	PATIENT NAME/ PATIENT AGE	TRANSPORTED FROM	ADMITTING DIAGNOSIS	RECEIVING UNIT
05/19/89	9:39 am 10:02 am	Newborn	St. Joseph Hospital Bellingham	Asphyxia	
05/24/89	6:49 pm 7:10 pm	7 years	Medic 5 Kent	Possible Epiglottitis	

AIRLIFT NORTHWEST

Airlift Northwest Helicopter Landings at CHMC
JUNE 1989
(17 CHMC patients via ALNW helicopter; 6 landed at CHMC; 12 at UW Graves Field)

FLIGHT DATE	LANDING/ TAKE-OFF	PATIENT NAME/ PATIENT AGE	TRANSPORTED FROM	ADMITTING DIAGNOSIS	RECEIVING UNIT
06/02/89	5:31 pm 6:58 pm	4 days	Was to have been from CHMC to Portland, but patient expired		
06/04/89	7:10 pm 7:55 pm	Newborn	St. Joseph Hospital Bellingham	Possible Congenital Heart Disease	
06/17/89	4:45 am 5:15 am	Newborn	Harrison Mem Hosp Bremerton	Diaphragmatic Hernia	
06/20/89	2:56 pm 3:35 pm	3 years	Medic 4 Seattle	Respiratory Distress	
06/28/89	1:05 pm 1:50 pm	Newborn	Central WA Hospital Wenatchee	Asphyxia, Respiratory Distress	
06/29/89	11:08 am 11:59 am	Newborn	From CHMC To Emanuel Hospital Portland, OR	Respiratory Distress	

January 1990

To Our Neighbors,

As I'm sure you are all aware, the most critically ill patients admitted to Children's Hospital and Medical Center, particularly those from outside the city, are transported via the emergency medical helicopter operated by Airlift Northwest to the Emergency Room entrance at Children's

In an effort to keep you informed about the number and types of cases landing at the hospital, we plan to send you periodic reports about medical airlift activity at the hospital. This report will indicate the date, time and origination of the airlift; the age, sex and admitting diagnosis of each child; where the child went within Children's; and his or her outcome. We have been careful to protect patient confidentiality in our attempt to share with you as much information as possible about these life-threatening cases.

If you have any questions about this report or about emergency medical helicopter landings at Children's, please direct them to Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write to her at Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98105.

Sincerely,

Truman Katz
President and Chief Executive Officer

Emergency Medical Helicopter Landings at Children's Hospital and Medical Center: Summary of Airlift Northwest Flight Activity is published quarterly by the Communications Department at Children's Hospital and Medical Center, Seattle, WA. If you have comments or questions, Please call Suzanne Petersen, Director of Government Affairs, at (206) 526-2530.

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Emergency Medical Helicopter Landings at Children's Hospital and Medical Center

Summary of Airlift Northwest Flight Activity, June Through December 1989

Children's
Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center June through December 1989

Date	Time	Transported From	Sex	Age	Admitting Diagnosis	Receiving Unit	Outcome*
June							
4	4:35 pm	St. Joseph Hospital, Bellingham	M	2 days	Congenital heart disease	Infant Intensive Care Unit	Still in hospital
17	4:43 am	Harrison Memorial Hospital, Bremerton	M	Newborn	Congenital diaphragmatic hernia	Emergency Department	Expired
20	2:55 pm	King County Medic 4, Sea-Tac	F	3 years	Respiratory arrest (history of asthma)	Emergency Department	Discharged
28	1:04 pm	Central Washington Hospital, Wenatchee	M	Newborn	Infant respiratory distress syndrome	Infant Intensive Care Unit	Expired
July							
5	10:06 pm	Stevens Memorial Hospital, Edmonds	M	15 years	Cardiac arrest	Pediatric Intensive Care Unit	Discharged
22	6:00 pm	King County Medic 6, Auburn	M	8 years	Near drowning	Emergency Department	Discharged
28	3:09 pm	Harrison Memorial Hospital, Bremerton	F	1 year	Near drowning	Emergency Department	Expired
30	3:50 pm	Olympic Memorial Hospital, Port Angeles	F	15 years	Sepsis (life-threatening infection)	Pediatric Intensive Care Unit	Expired
30	6:05 pm	King County Medic 4, Burien	M	3 years	Foreign body aspiration (beauty bark)	Emergency Department	Discharged
August							
1	10:45 pm	Providence Hospital, Everett	F	18 months	Epiglottitis	Emergency Room	Discharged
6	7:42 pm	Overlake Hospital Medical Center, Bellevue	F	4 years	Epiglottitis	Pediatric Intensive Care Unit	Discharged
12	3:25 pm	St. Joseph Hospital, Bellingham	M	13 years	Asthmaticus	Pediatric Intensive Care Unit	Discharged
22	8:40 pm	Highline Hospital, Burien	M	10 months	Foreign body aspiration	Emergency Room	Discharged
September							
15	7:43 pm	King County Medic 8, Kent	F	3 years	Drug ingestion	Emergency Department	Discharged
21	9:30 pm	Skagit Valley Hospital, Mt. Vernon	M	Newborn	Potters Syndrome (asphyxia)	Infant Intensive Care Unit	Expired
October							
8	6:45 pm	King County Medic 8, Federal Way	F	8 months	Foreign body aspiration	Emergency Department	Discharged
13	9:25 pm	Valley Medical Center, Renton	M	9 years	Respiratory arrest (history of asthma)	Pediatric Intensive Care Unit	Discharged
November							
3	11:30 am	Valley Medical Center, Renton	F	5 months	Possible Sudden Infant Death Syndrome	Emergency Room	Expired
18	5:50 pm	Snoqualmie Valley Hospital, Snoqualmie	M	5 months	Meningitis	Infant Intensive Care Unit	Expired
26	7:50 pm	St. Joseph Hospital, Bellingham	F	2 months	Sepsis, chronic heart disease	Infant Intensive Care Unit	Still in hospital
29	8:15 am	Harrison Memorial Hospital, Bremerton	F	14 years	Overdose	Emergency Room	Still in hospital
December							
4	9:50 am	King County Medic 4, Renton	F	3 years	Status epilepticus (seizures)	Emergency Room	Discharged
17	4:40 pm	Group Health, Olympia	M	18 months	Foreign body aspiration (peanut)	Emergency Room	Discharged
23	4:20 pm	St. Joseph Hospital, Bellingham	F	3 months	Cardiac arrest	Infant Intensive Care Unit	Still in hospital

*Outcome as of January 2000

Children's
Hospital & Medical Center

May 1990

To Our Neighbors,

In an ongoing effort to keep you informed about patients transported by emergency medical helicopter to Children's Hospital and Medical Center, we are sending you periodic reports. These reports indicate the date, time and origination of the airlift; the age range and admitting diagnosis of each child; where the child went within Children's; and his or her outcome. We have been careful to protect patient confidentiality in our attempt to share with you as much information as possible about these life-threatening cases.

Most requests for emergency helicopter transport of patients to Children's come from physicians in the Puget Sound area or Olympic Peninsula. These reports describe the cases of children most critically ill who require immediate transport to the emergency room entrance at Children's. Other critically ill or injured children, determined able to withstand delay and movement, are helicoptered to other landing sites in Seattle and then transported by ambulance to Children's Hospital.

If you have questions about this report or about emergency medical helicopter landings at Children's, please direct them to Suzanne Peterson, Director of Government Affairs, at (206) 526-2530, or write to her at Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98105.

Sincerely,

Truman Katz

Truman Katz
President and Chief Executive Officer

* Definition of Diagnosis/Treatment

Kidney and lung hypoplasia: *A condition in which the kidneys and lungs are underdeveloped, which can result in a lack of or diminished function of the organs.*

Omphalocele: *A defect in the abdominal muscle structure causing some portion or all of the abdominal organs to herniate out of the cavity.*

Persistent fetal circulation: *A condition in which the blood circulation in newborns fails to switch over from in utero oxygenation or oxygenation by the mother, to oxygenation by the newborn's own lungs. As a result, the newborn's blood bypasses its lungs and fails to absorb enough oxygen. The infant's metabolism continues without sufficient oxygen, which produces acid in the bloodstream. This acid is toxic to body systems.*

Respiratory syncytial virus: *Also known by its acronym, RSV is a serious respiratory virus that affects the lining of the airways in the lungs, producing a large amount of mucous and swelling. Because young children cannot cough up the mucous, it remains in their airways and increases labored breathing. RSV is especially serious in premature infants, whose health is already compromised.*

ECMO: *Extracorporeal membrane oxygenation is a form of heart-lung bypass used as a treatment of last resort for newborn infants who are critically ill with reversible heart or lung disease. ECMO can take over most of an infant's heart and lung functions, giving the baby's injured organs time to rest and heal.*

In March, Children's Hospital began providing ECMO treatment for newborns in the Infant Intensive Care Unit.

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center: A summary of flight activity is published quarterly by the Communications Department at Children's Hospital and Medical Center, Seattle, WA. If you have comments or questions, please call Suzanne Peterson, Director of Government Affairs, at (206) 526-2530.

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of flight activity, January through March 1990

Children's
Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center January through March 1990

Date	Time	Transported From	Age	Admitting Diagnosis	Receiving Unit	Outcome (as of 3/90)
January						
1	7:30 am	Kitsap Medic Unit, Port Orchard	Infant	Seizures	Emergency Room	Hospitalized 3 days
4	10:30 pm	Skagit Valley Hospital, Mt. Vernon	Newborn	Respiratory distress syndrome with kidney hypoplasia and lung hypoplasia*	Infant Intensive Care Unit	Died
15	11:31 pm	Children's Hospital, Seattle to Emanuel Hospital, Portland	Infant	Respiratory syncytial virus*	ECMO Unit* Emanuel Hospital, Portland	Died
19	10:52 am	Children's Hospital, Seattle to Emanuel Hospital, Portland	Infant	Respiratory syncytial virus*	ECMO Unit* Emanuel Hospital, Portland	Died
19	5:25 pm	Medic Unit, Bainbridge Island	Toddler	Ingested 3/4 cup liquid dishwasher soap	Emergency Room	Hospitalized 1 day
30	7:00 pm	Providence Hospital, Centralia	Preschool	Pulmonary edema due to multiple congential heart defects	Pediatric Intensive Care Unit	Died
February						
7	5:42 am	Oak Harbor Naval Hospital	Newborn	Oomphalocele*	Infant Intensive Care Unit	Died
8	8:00 pm	Children's Hospital, Seattle to Emanuel Hospital, Portland	Newborn	Persistent fetal circulation*	ECMO Unit* Emanuel Hospital, Portland	Hospitalized 15 days in Portland
9	12:46 pm	United General Hospital, Sedro Woolley	Adolescent	Respiratory distress, rule out sepsis	Pediatric Intensive Care Unit	Hospitalized 13 days
23	3:05 pm	Medic 7, Edmonds	School-age	Near drowning	Emergency Room	Died
26	10:05 pm	Central Washington Hospital, Wenatchee	Newborn	Infant respiratory distress syndrome	Infant Intensive Care Unit	Hospitalized 1 day
27	8:00 pm	Children's Hospital, Seattle to Emanuel Hospital, Portland	Newborn	Infant respiratory distress syndrome	ECMO Unit* Emanuel Hospital, Portland	Hospitalized 40 days in Portland
March						
2	9:00 pm	Children's Hospital, Seattle, to Emanuel Hospital, Portland	Newborn	Sepsis (life-threatening infection)	ECMO Unit* Emanuel Hospital, Portland	Died
4	6:00 pm	Olympic Memorial Hospital, Port Angeles	School-age	Asthma	Pediatric Intensive Care Unit	Hospitalized 9 days
6	12:46 pm	Auburn General Hospital	Newborn	Prematurity	Infant Intensive Care Unit	Died
20	12:00 pm	Mason County Fire District 5	Preschool	Near drowning	Emergency Room	Died

* Definition of diagnosis/treatment on back panel.

Children's
Hospital & Medical Center

August 1990

To Our Neighbors,

We are sending you quarterly reports about patients transported by emergency medical helicopter to Children's Hospital and Medical Center in order to keep you informed about the number and types of the cases of children who require immediate transport directly to the emergency room entrance. We have been careful to protect patient confidentiality in our attempt to share with you as much information as possible about these life-threatening cases.

Emergency helicopter transport of patients to Children's Hospital occurs when time is a critical element of saving a child's life. This service is used by emergency medical teams responding to crises in the field and by community hospital physicians who need to send patients to Children's for emergency tertiary (highly specialized) care services. For example, during the summer months, near drownings are too often examples of some of the conditions that require immediate, advanced medical intervention at Children's. The hospital's medical and surgical teams are notified of the helicopter transport and are ready to provide immediate treatment upon the child's arrival.

If you have questions about this report or about emergency medical helicopter landings at Children's, please direct them to Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write to her at Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98105.

Sincerely,

Truman Katz
President and Chief Executive Officer

*** Definition of Diagnosis/Treatment**

Bacterial meningitis: *Life-threatening infection of the membranes which surround the brain and spinal cord.*

ECMO: *Extracorporeal membrane oxygenation is a form of heart-lung bypass used as a treatment of last resort for newborn infants who are critically ill with reversible heart or lung disease. ECMO can take over most of an infant's heart and lung functions, giving the baby's injured organs time to rest and heal.*

In March, Children's Hospital began providing ECMO treatment for newborns in the Infant Intensive Care Unit.

Epiglottitis: *Swelling in the back of the throat due to bacterial infection that can rapidly block the airway. Treated by a pediatric anesthesiologist or otolaryngologist (ENT) who inserts a tube to bypass the swelling to allow the patient to breathe.*

Grand mal status epilepticus: *Rapid succession of major epileptic seizures attended by loss of consciousness.*

Pyelonephritis: *Infection of the kidneys which, if not treated promptly, can lead to growth arrest of the kidneys, deterioration of kidney function, and obstruction. In the most severe cases, acute pyelonephritis can spread, causing the child to develop a generalized, life-threatening infection of the blood.*

Sudden Infant Death Syndrome: *Also known by its acronym, SIDS is a collection of disorders whose common feature is the sudden death of an infant who appeared to be in good health and developing normally. SIDS deaths remain unexplained after a complete case study and postmortem examination is completed. The child is usually discovered during a sleeping period with no heart rate and no respirations. Emergency medical personnel will attempt to resuscitate a child who has a detectable heart rate or whose skin color is near normal.*

A report to the community about emergency medical helicopter landings at Children's Hospit and Medical Center

A summary of flight activity, April through June 1990

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center: A summary of flight activity is published quarterly by the Communications Department at Children's Hospital and Medical Center, Seattle, WA. If you have comments or questions, please call Suzanne Petersen, Director of Government Affairs, at (206) 526-2530.

Children's
Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center April through June 1990

Date	Time	Transported From	Age	Admitting Diagnosis	Receiving Unit	Outcome (as of 7/90)
April						
1	9:00 p.m.	Valley Medical Center, Renton	Infant	Bacterial meningitis with neuro-degenerative disorder *	Emergency Room	Hospitalized 38 days
8	11:00 a.m.	King County Medic 6, Covington	Preschool	Grand mal status epilepticus *	Emergency Room	Hospitalized 24 days
14	9:00 p.m.	Grays Harbor Hospital, Aberdeen	Toddler	Near drowning	Pediatric Intensive Care Unit	Hospitalized 5 days
17	3:10 a.m.	King County Medic 6, Kent	Newborn	Prematurity	Infant Intensive Care Unit	Hospitalized 45 days
22	7:15 p.m.	St. Joseph Hospital, Bellingham	Infant	Bacterial meningitis with severe neurological impairment *	Pediatric Intensive Care Unit	Hospitalized 17 days
May						
2	2:05 p.m.	Children's Hospital, Seattle to Emanuel Hospital, Portland	Newborn	Infant respiratory distress syndrome	ECMO Unit * Emanuel Hospital, Portland	Hospitalized 12 days in Portland
4	9:25 a.m.	King County Medic 19, Redmond	Infant	Sudden Infant Death Syndrome *	Emergency Room	Died
7	4:18 p.m.	King County Medic 4, Renton	Infant	Seizures, staph infection	Emergency Room	Hospitalized 2 days
7	9:05 p.m.	Vashon Island	Infant	Seizures	Pediatric Intensive Care Unit	Hospitalized 2 days
9	5:25 a.m.	Stevens Memorial Hospital, Edmonds	Infant	Bacterial meningitis *	Pediatric Intensive Care Unit	Died
11	4:30 p.m.	King County Medic 5, Kent	Toddler	Seizures	Emergency Room	Hospitalized 2 days
14	4:55 p.m.	Valley Medical Center, Renton	Infant	Bacterial meningitis *	Pediatric Intensive Care Unit	Died
16	5:00 p.m.	King County Medic 5, Renton	School-age	Pyelonephritis with seizure *	Emergency Room	Hospitalized 3 days
23	11:05 p.m.	King County Medic 6, Kent	Infant	Seizures	Emergency Room	Hospitalized 1 day
26	10:20 p.m.	Island Hospital, Anacortes	Newborn	Prematurity with infant respiratory distress syndrome	Infant Intensive Care Unit	Still in hospital
29	10:16 p.m.	Harrison Memorial Hospital, Bremerton	Teenager	Severe asthma attack	Pediatric Intensive Care Unit	Hospitalized 20 days
June						
13	12:39 p.m.	King County Medic 6, Auburn	Infant	Upper respiratory infection	Emergency Room	Hospitalized 6 days
14	7:02 p.m.	Providence Hospital, Everett	School-age	Near drowning	Pediatric Intensive Care Unit	Hospitalized 3 days
20	6:30 p.m.	King County Medic 13, Vashon Island	School-age	Rule out epiglottitis *	Emergency Room	Treated and released
25	5:25 a.m.	St. Joseph Hospital, Bellingham	Infant	Respiratory arrest	Infant Intensive Care Unit	Died
30	2:06 a.m.	Valley Medical Center, Renton	Infant	Seizures	Pediatric Intensive Care Unit	Hospitalized 2 days

** Definition of diagnosis/treatment on back panel.*

Children's
Hospital & Medical Center

November 1990

To Our Neighbors,

In an ongoing effort to keep you informed about emergency medical helicopter activity at Children's Hospital, we are sending you quarterly reports about the number and types of cases of the children who require helicopter transport to Children's Emergency Room entrance. We have been careful to protect patient confidentiality in our attempt to share with you as much information as possible about these life-threatening cases.

Emergency helicopter transport of patients to Children's Hospital occurs when time is a critical element in saving a child's life. This service is used by emergency medical teams responding to crises in the field and by community hospital physicians who need to send patients to Children's for immediate advanced medical intervention. The AirLift Northwest medical helicopters are equipped and staffed to provide specialized pediatric emergency care to the child during the flight to Children's.

If you have questions about this report or about emergency medical helicopter landings at Children's, please direct them to Suzanne Peterson, Director of Government Affairs, at (206) 526-2530, or write to her at Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98105.

Sincerely,

Truman Katz

Truman Katz
President and Chief Executive Officer

*** Definition of Diagnosis/Treatment**

Birth asphyxia: *A condition resulting in inadequate oxygen delivery to the tissues.*

Cardiac dysrhythmia: *An abnormal heart rhythm that affects the heart function.*

Diaphragmatic hernia: *A condition at birth in which the abdominal contents are displaced into the chest cavity causing respiratory distress and usually requiring immediate surgery.*

Streptococcal septicemia: *The organism called Group B Streptococcus causes a severe infection of the lungs, bloodstream and other organs such as the brain. This infection can lead to respiratory failure, cardiac failure and/or meningitis resulting in neurological complications and/or death.*

Pyelonephritis: *Infection of the kidneys which, if not treated promptly, can lead to growth arrest of the kidneys, deterioration of kidney function and obstruction. In the most severe cases, acute pyelonephritis can spread, causing the child to develop a generalized, life-threatening infection of the blood.*

Printed on Recycled Paper

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A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of flight activity, July through September 1990

Children's
Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter
Landing at Children's Hospital and Medical Center
July through September 1990

Date	Time	Transported From	Age	Admitting Diagnosis	Receiving Unit	Outcome (as of 11/90)
July						
6	3:10 pm	Jefferson General Hospital, Port Townsend	Newborn	Birth asphyxia *	Infant Intensive Care Unit	Hospitalized 4 days
28	7:30 pm	Providence Hospital, Everett	Toddler	Seizure	Emergency Room	Hospitalized 1 day
August						
3	8:15 pm	King County Medic 6, Renton	Toddler	Accidental drug ingestion	Emergency Room	Hospitalized 34 days
3	9:37 pm	King County Medic 2, Bellevue	Preschool-age	Drowning	Emergency Room	Died
13	4:38 pm	King County Medic 13, Vashon Island	School-age	Near drowning	Emergency Room	Hospitalized 10 days
21	9:48 am	Providence Hospital, Centralia	Newborn	Diaphragmatic hernia *	Infant Intensive Care Unit	Hospitalized 31 days
September						
20	10:43 pm	King County Medic 6, Auburn	Preschool-age	Pyelonephritis *	Emergency Room	Hospitalized 4 days
21	4:10 pm	Boeing Field-King County International Airport via fixed wing flight from Great Falls, MT	Newborn	Streptococcal septicemia *	Infant Intensive Care Unit	Died
22	9:25 pm	Cascade Valley Hospital, Arlington	School-age	Cardiac dysrhythmia *	Emergency Room	Hospitalized 2 days
29	2:33 am	St. Joseph Hospital, Tacoma	Newborn	Diaphragmatic hernia *	Infant Intensive Care Unit	Still in hospital

* Definition of diagnosis/treatment on back panel

Children's
Hospital & Medical Center

March 1991

To Our Neighbors,

In an ongoing effort to keep you informed about emergency medical helicopter activity at Children's Hospital, we are sending you quarterly reports about the number and types of cases of the children who require helicopter transport to Children's Emergency Room entrance. We have been careful to protect patient confidentiality in our attempt to share with you as much information as possible about these life-threatening cases.

Emergency medical teams responding to crises in the field and community hospital physicians who need to send patients to Children's for immediate advanced medical intervention make the decision to request emergency helicopter transport. Critically ill or injured children determined able to withstand delay and movement are helicoptered to other landing sites in Seattle and then transported by ground ambulance to Children's.

In response to a request from a community member, beginning with this report, we are including helicopter departure as well as landing times for each transport. Helicopter ground time at Children's depends upon the amount of time necessary to transfer essential medical equipment and information about the child between the helicopter medical team and the emergency room staff.

If you have questions about this report or about emergency medical helicopter landings at Children's, please direct them to Suzanne Peterson, Director of Government Affairs, at (206) 526-2530, or write to her at Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98105.

Sincerely,

Treuman Katz

Treuman Katz
President and Chief Executive Officer

*** Definition of Diagnosis/Treatment**

Acute Epiglottitis: *Swelling in the back of the throat due to bacterial infection that can rapidly block the airway. Treated by a pediatric anesthesiologist or otolaryngologist (ENT) who inserts a tube to bypass the swelling to allow the patient to breathe.*

Bacterial Meningitis: *A potentially fatal bacterial infection of the covering of the brain and spinal cord which requires intensive therapy. May cause deafness, brain damage or other serious permanent neurological damage.*

Cardiac Dysrhythmia: *An abnormal heart rhythm that affects the heart function.*

Diabetic Ketoacidosis: *A condition in which the lack of insulin causes a breakdown of fats, and the accumulation of by-products in the blood may lead to pH changes and respiratory distress.*

Grand Mal Status Epilepticus: *Rapid succession of major epileptic seizures attended by loss of consciousness.*

Viral Encephalitis: *A viral infection of the brain often associated with seizures, alterations of consciousness, fever, neurological dysfunction and mental changes. May be life-threatening, requiring intensive care and treatment.*

Vocal Cord Paralysis: *A condition in which the vocal cords do not open and thus prevents breathing.*

Printed on Recycled Paper

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A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of flight activity, October through December 1990

Includes corrected listing for April 1990

Children's
Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center October through December 1990

Date	Landing	Departure	Transported From	Age	Diagnosis	Receiving Unit	Outcome (as of 2/91)
October							
7	5:48pm	6:25pm	King County Medic 6, Kent	Infant	Vocal Cord Paralysis *	Emergency Room	Hospitalized 1 day
1.	3:55pm	5:00pm	Valley Medical Center, Renton	Preschool-age	*Haemophilus influenzae* Type B Meningitis *	Pediatric Intensive Care Unit	Died
22	5:35pm	6:20pm	Valley Medical Center, Renton	Toddler	Acute Epiglottitis *	Pediatric Intensive Care Unit	Hospitalized 7 days
25	1:15am	2:05am	Olympic Memorial Hospital, Port Angeles	Toddler	Cardiac/Respiratory Arrest	Emergency Room	Died
27	3:45am	4:05am	Jackson Park Naval Hospital, Bremerton	Preschool-age	Diabetic Ketoacidosis *	Emergency Room	Hospitalized 3 days
November							
6	10:25pm	10:40pm	Oak Harbor Naval Hospital, Oak Harbor	Newborn	Respiratory Distress, Prematurity	Infant Intensive Care Unit	Died
18	12:35am	1:35am	King County Medic 71, Woodinville	Toddler	Viral Encephalitis *	Emergency Room	Hospitalized 38 days
21	7:55pm	8:45pm	Valley Medical Center, Renton	Toddler	Acute Epiglottitis *	Pediatric Intensive Care Unit	Hospitalized 5 days
26	5:29pm	6:15pm	Enumclaw Community Hospital, Enumclaw	Adolescent	Cardiac Dysrhythmia *	Emergency Room	Hospitalized 3 days
December							
7	4:40pm	5:00pm	King County Medic 3, Redmond	Preschool-age	Asthma	Emergency Room	Discharged from ER
21	7:25pm	8:10pm	Oak Harbor Naval Hospital, Oak Harbor	School-age	Acute Epiglottitis *	Pediatric Intensive Care Unit	Hospitalized 8 days
Corrected Listing for April 1990							
1	*9:00pm*		*Valley Medical Center, Renton*	*Infant*	*Bacterial Meningitis with Neuro-degenerative Disorder **	*Emergency Room*	*Hospitalized 38 days*
8	*11:00am*		*King County Medic 6, Covington*	*Preschool*	*Grand Mal Status Epilepticus **	*Emergency Room*	*Hospitalized 24 days*
14	*9:00pm*		*Grays Harbor Hospital, Aberdeen*	*Toddler*	*Near Drowning*	*Pediatric Intensive Care Unit*	*Hospitalized 5 days*
17	*3:10am*		*King County Medic 6, Kent*	*Newborn*	*Prematurity*	*Infant Intensive Care Unit*	*Hospitalized 45 days*
22	*7:15pm*		*St. Joseph Hospital, Bellingham*	*Infant*	*Bacterial Meningitis with Severe Neurological Impairment **	*Pediatric Intensive Care Unit*	*Hospitalized 17 days*
*38****	*6:18pm*		*Morton General Hospital, Morton*	*Toddler*	*Bacterial Meningitis **	*Emergency Room*	*Hospitalized 17 days*

* Definition of diagnosis/treatment on back panel.
** Due to snow conditions.
*** This landing was mistakenly omitted from the April through June 1990 report.

Children's
Hospital & Medical Center

June 1991

To Our Neighbors,

In an ongoing effort to keep you informed about emergency medical helicopter activity at Children's Hospital, we are sending you quarterly reports about the number and types of cases of the children who require helicopter transport to Children's Emergency Room entrance. We have been careful to protect patient confidentiality in our attempt to share with you as much information as possible about these life-threatening cases.

Most requests for emergency helicopter transport of patients to Children's come from physicians in the Puget Sound area or Olympic Peninsula. These reports describe the cases of children most critically ill who require immediate transport to the emergency room entrance at Children's. Other critically ill or injured children, determined able to withstand delay and movement, are helicoptered to other landing sites in Seattle and then transported by ambulance to Children's Hospital.

If you have questions about this report or about emergency medical helicopter landings at Children's, please direct them to Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write to her at Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98105.

Sincerely,

Treuman Katz

Treuman Katz
President and Chief Executive Officer

• Definition of Diagnosis/Treatment

Adult Respiratory Distress Syndrome: A condition comparable to Infant Respiratory Distress Syndrome in which there is a clinical dysfunction of lung physiology.

Cerebral Edema: Swelling of the brain. If severe, causes coma; if very severe, can interrupt blood flow to the brain and result in death.

Croup: Inflammation of the airway which may cause difficulty breathing. If severe, can result in blockage of the airway and require insertion of a tube to allow the patient to breathe.

Epiglottitis: Swelling in the back of the throat due to bacterial infection that can rapidly block the airway. Treated by a pediatric anesthesiologist or otolaryngologist (ENT) who inserts a tube to bypass the swelling to allow the patient to breathe.

Herpetic Encephalitis: An infection of the brain with herpes virus which can cause brain damage or other serious permanent neurologic damage; may be fatal.

Intestinal Vascular Insufficiency: Insufficient blood supply to the intestine (gut) which can result in intestinal obstruction and may result in irreversible damage to the intestine; may be a surgical emergency.

Meningococcemia: A potentially fatal bacterial infection of the covering of the brain and spinal cord which requires intensive therapy. May cause deafness, brain damage or other serious permanent neurological damage.

Myocarditis: Inflammation of the heart muscle often caused by a virus. It can be associated with heart failure and may cause long term damage to the heart.

Sepsis: A bacterial infection of the blood stream which may progress rapidly to involve multiple other organs including the brain, lungs and liver. It is often associated with shock and may be fatal.

Sudden Infant Death Syndrome: Also known by its acronym, SIDS is a collection of disorders whose common feature is the sudden death of an infant who appeared to be in good health and developing normally. SIDS deaths remain unexplained after a complete case study and postmortem examination is completed. The child is usually discovered during a sleeping period with no heart rate and no respirations. Emergency medical personnel will attempt to resuscitate a child who has a detectable heart rate or whose skin color is near normal.

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A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of flight activity, January through March 1991

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Children's
Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center January through March 1991

Date	Landing	Departure	Transported From	Age	Diagnosis	Receiving Unit	Outcome (as of 5/91)
January							
7	3:00pm	3:45pm	Snohomish County Medic 7, Edmonds	Infant	Sudden Infant Death Syndrome *	Infant Intensive Care Unit	Died
8	10:25am	10:55am	Valley Medical Center, Renton	School-age	Herpetic Encephalitis *	Pediatric Intensive Care Unit	Hospitalized 9 Days
9	2:40pm	3:35pm	Olympic Memorial Hospital, Port Angeles	Adolescent	Acute Intestinal Vascular Insufficiency *	Pediatric Intensive Care Unit	Died
12 **	5:00pm	6:00pm	United General Hospital, Sedro Woolley	Toddler	Accidental Hanging/Asphyxiation	Pediatric Intensive Care Unit	Hospitalized 4 Days
31	11:25pm	12:20am	King County Medic 13, Vashon Island	Infant	Seizures, Respiratory Failure	Emergency Room	Hospitalized 55 Days
February							
12	1:30am	2:30am	Valley Medical Center, Renton	Toddler	Cerebral Edema *	Pediatric Intensive Care Unit	Died
13	1:35pm	2:20pm	Providence Hospital, Everett	Infant	Asthma	Pediatric Intensive Care Unit	Hospitalized 2 Days
13	3:25pm	4:20pm	King County Medic 6, Renton	Toddler	Drowning	Emergency Room	Died
14	5:35pm	6:40pm	Stevens Memorial Hospital, Edmonds	Infant	Cerebral Edema *	Pediatric Intensive Care Unit	Died
17	8:20am	9:30am	Community Memorial Hospital, Enumclaw	Infant	Meningococcemia *	Infant Intensive Care Unit	Died
19	3:35pm	4:15pm	King County Medic 4, White Center	Toddler	Ingestion: Antidepressant	Emergency Room	Hospitalized 2 Days
25	8:30pm	9:10pm	Whidbey General Hospital, Coupeville	Toddler	Acute Epiglottitis *	Pediatric Intensive Care Unit	Hospitalized 7 Days
March							
7	9:40pm	10:25pm	King County Medic 5, Auburn	Toddler	Drowning	Emergency Room	Died
9	8:50pm	9:35pm	King County Medic 6, Kent	Preschool	Myocarditis *	Pediatric Intensive Care Unit	Died
13	2:37pm	3:45pm	Valley Medical Center, Renton	Toddler	Asthma	Pediatric Intensive Care Unit	Hospitalized 3 Days
15	2:56pm	3:40pm	Valley Medical Center, Renton	Toddler	Croup *	Pediatric Intensive Care Unit	Hospitalized 3 Days
17	6:45pm	7:15pm	King County Medic 8, Federal Way	School-age	Croup *	Emergency Room	Hospitalized 1 Day
19	6:40pm	8:20pm	Tacoma General Hospital, Tacoma	Newborn	Sepsis *	Infant Intensive Care Unit	Died
24 ***	4:45pm	5:40pm	Madigan Army Medical Center, Tacoma	Preschool	Adult Respiratory Distress Syndrome *	Pediatric Intensive Care Unit	Hospitalized 11 Days

** Definition of diagnosis/treatment on back panel.*
*** MedFlight helicopter landing.*
**** Military ambulance helicopter landing.*

August 1991

To Our Neighbors,

In an ongoing effort to keep you informed about emergency medical helicopter activity at Children's Hospital, we are sending you quarterly reports about the number and types of cases of the children who required helicopter transport to Children's Emergency Room entrance. We have been careful to protect patient confidentiality in our attempt to share with you as much information as possible about these life-threatening cases.

Most requests for emergency helicopter transport of patients to Children's come from physicians in the Puget Sound area or Olympic Peninsula. These reports describe the cases of children most critically ill who require immediate transport to the emergency room entrance at Children's. Other critically ill or injured children, determined able to withstand delay and movement, are helicoptered to other landing sites in Seattle and then transported by ambulance to Children's Hospital.

If you have questions about this report or about emergency medical helicopter landings at Children's, please direct them to Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write to her at Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98105.

Sincerely,

Treuman Katz

Treuman Katz
President and Chief Executive Officer

• Definition of Diagnosis / Treatment

Acidosis in patient with microcephalus: *Severe metabolic imbalance in a patient with an abnormally small head which may be the consequence of a birth defect or severe brain damage in early life.*

Acute liver necrosis: *A sudden, massive injury to the liver, usually from a toxin or an infection which causes severe liver damage resulting in liver failure.*

Acute respiratory syncytial virus: *Also known by its acronym, RSV is a serious respiratory virus that affects the lining of the airways in the lungs, producing a large amount of mucous and swelling. Because young children cannot cough up the mucous, it remains in their airways and increases labored breathing. RSV is especially serious in premature infants, whose health is already compromised.*

Anoxic brain damage: *Extreme deficiency of oxygen to the brain.*

Aspiration pneumonia: *Pneumonia due to inhalation of foreign material into the lungs.*

Croup: *Inflammation of the airway which may cause difficulty in breathing. If severe, can result in blockage of the airway and require insertion of a tube to allow the patient to breathe.*

Meningococcemia: *Infection of the blood stream by meningococcus bacteria. Often progresses very rapidly and can be fatal.*

Streptococcal sepsis: *The organism called Group B Streptococcus causes an overwhelming infection of the lungs, bloodstream and other organs such as the brain. This infection can lead to respiratory failure, cardiac failure and/or meningitis resulting in neurological complications and/or death.*

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A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of flight activity, April through June 1991

Children's Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center April through June 1991

Date	Landing	Departure	Transported from	Age	Diagnosis	Receiving Unit	Outcome (as of 8/91)
APRIL							
2	8:50pm	9:50pm	Valley Medical Center, Renton	Adolescent	Acute liver necrosis *	Pediatric ICU	Hospitalized 11 days
6	5:10pm	5:55pm	Medic 6, Kent	Pre-school age	Seizures	Emergency Room	Hospitalized 4 days
8	11:35pm	12:25am	Highline Community Hospital, Burien	School-age	Intracerebral hemorrhage	Pediatric ICU	Hospitalized 4 days
8	8:39am	9:10am	Medic 18, Poulsbo	School-age	Pacemaker failure	Emergency Room	Hospitalized 3 days
16	4:10am	5:05am	St. Joseph Hospital, Bellingham	Infant	Acute respiratory syncytial virus *	Infant ICU	Hospitalized 6 days
27	9:04pm	9:45pm	Sunnyside Community Hospital, Sunnyside	Infant	Meningococcemia *	Infant ICU	Died
28	4:25pm	5:15pm	Bremerton Naval Hospital, Bremerton	Infant	Acidosis in patient with microcephalus *	Pediatric ICU	Hospitalized 3 days
30	12:08pm	1:20pm	United General Hospital, Sedro Woolley	Newborn	Prematurity/respiratory distress syndrome	Infant ICU	Hospitalized 6 days
MAY							
2	7:47pm	8:45pm	Overlake Medical Center, Bellevue	Infant	Anoxic brain damage with epilepsy *	Infant ICU	Hospitalized 18 days
3	1:52am	2:55am	Olympic Memorial Hospital, Port Angeles	School-age	Aspiration pneumonia in patient with anoxic brain damage *	Pediatric ICU	Hospitalized 13 days
6	2:40pm	3:40pm	Medic 4, White Center	Toddler	Head injury due to child abuse	Pediatric ICU	Hospitalized 32 days
JUNE							
6	6:50pm	7:25pm	Medic 5, Renton	Infant	Streptococcal sepsis *	Emergency Room	Hospitalized 17 days
13	2:11pm	3:40pm	Olympic Memorial Hospital, Port Angeles	Newborn	Congenital heart defect	Infant ICU	Hospitalized 18 days
27	12:50pm	1:20pm	Medic 210, Bainbridge Island	Toddler	Croup *	Emergency Room	Hospitalized 1 day
28	7:20pm	7:50pm	Medic 210 Bainbridge Island	Toddler	Carrot lodged in bronchus	Emergency Room	Hospitalized 1 day
29	3:20am	4:15am	Medic 7, Lynnwood	Newborn	Neonatal asphyxia	Infant ICU	Hospitalized 18 days
30	10:50pm	11:40pm	Harrison Memorial, Bremerton	Infant	Congenital heart defect	Emergency Room	Hospitalized 3 days
30	12:47am	1:10am	Whidbey General Hospital, Coupeville	Infant	Aortic valve contraction	Emergency Room	Died

** Definition of diagnosis / treatment on back panel.*

Children's
Hospital & Medical Center

November 1991

To Our Neighbors,

In an ongoing effort to keep you informed about emergency medical helicopter activity at Children's Hospital, we are sending you quarterly reports about the number and types of cases of the children who required helicopter transport to Children's Emergency Room entrance. We have been careful to protect patient confidentiality in our attempt to share with you as much information as possible about these life-threatening cases.

Most requests for emergency helicopter transport of patients to Children's come from physicians in the Puget Sound area or Olympic Peninsula. These reports describe the cases of children most critically ill who require immediate transport to the emergency room entrance at Children's. Other critically ill or injured children, determined able to withstand delay and movement, are helicoptered to other landing sites in Seattle and then transported by ambulance to Children's Hospital.

If you have questions about this report or about emergency medical helicopter landings at Children's, please direct them to Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write to her at Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98105.

Sincerely,

Treuman Katz

Treuman Katz
President and Chief Executive Officer

• Definition of Diagnosis / Treatment

Encephalopathy: *Deterioration in brain function usually accompanied by a change in level of consciousness*

Meconium aspiration syndrome: *Pneumonia-like illness of newborn due to inhalation at birth of fluids containing material from infant's bowel*

Hypoplastic left heart: *Severe underdevelopment of left side of heart which can have life threatening consequences*

Reactive airway disease: *Acute narrowing of the airways which may cause severe difficulty in breathing and require mechanical ventilation*

Pertussis: *Whooping cough—a very contagious infection of the respiratory tract that may be accompanied by seizures and encephalopathy*

Status asthmaticus: *Severe asthma attack during which the patient is not responsive to treatment*

Status epilepticus: *Continuous epileptic seizures during which the patient is unconscious*

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A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of flight activity, July through September 1991

Children's
Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center July through September 1991

Date	Landing	Departure	Transported from	Age	Diagnosis	Receiving Unit	Outcome
JULY							
1	1:55am	3:15am	Bremerton Naval Hospital, Bremerton	Infant	Encephalopathy *	Emergency Room	Died
4	8:10pm	8:15pm	Boeing Field, transfer from fixed-wing flight originating at Kennewick General Hospital	Newborn	Respiratory Distress Syndrome	Infant ICU	Died
6	8:10am	8:15am	Jefferson General Hospital, Port Townsend	Newborn	Meconium Aspiration Syndrome *	Infant ICU	Hospitalized 18 days
14	4:10pm	4:41pm	Medic 6, Covington	Toddler	Seizure	Emergency Room	Treated and released same day
AUGUST							
5	11:45pm	1:15am	Auburn General Hospital, Auburn	Newborn	Hypoplastic left heart *	Infant ICU	Died
9	3:05am	4:25am	Community Memorial Hospital, Enumclaw	Toddler	Reactive Airway Disease *	Emergency Room	Hospitalized 20 days
21	5:20pm	5:45pm	Boeing Field; transfer from fixed-wing flight originating in Ketchikan, Alaska	School-age	Asthma	Pediatric ICU	Hospitalized 13 days
SEPTEMBER							
8	11:35am	12:40pm	Forks Community Hospital, Forks	Infant	Cardiac arrest	Pediatric ICU	Died
11	9:05am	9:20am	Forks Community Hospital, Forks	Infant	Pertussis *	Pediatric ICU	Hospitalized 22 days
14	2:35pm	3:10pm	Valley Medical Center, Renton	Infant	Pertussis *	Pediatric ICU	Hospitalized 8 days
14	8:49pm	10:37pm	From CHMC to Emanuel Hospital, Portland, Oregon	Infant	Respiratory Distress	———	Transported from Children's to Emanuel Hospital, Portland, for ECMO treatment
17	9:15pm	10:05pm	Skagit Valley Hospital, Mt. Vernon	Toddler	Drowning	Pediatric ICU	Died
18	5:35pm	6:15pm	Medic 8, Des Moines	Toddler	Near drowning	Emergency Room	Hospitalized 1 day
19	4:30am	5:05am	Stevens Memorial Hospital, Edmonds	Toddler	Grand mal status epilepticus *	Pediatric ICU	Hospitalized 2 days
19	8:00pm	8:35pm	Medic 4, Renton	Pre-school	Grand mal seizures	Emergency Room	Hospitalized 2 days
28	6:35pm	7:05pm	Providence Hospital, Centralia	Toddler	Emphysema with status asthmaticus *	Pediatric ICU	Hospitalized 4 days
29	12:00am	12:33am	Harrison Memorial Hospital, Bremerton	Toddler	Penny lodged in esophagus	Emergency Room	Hospitalized 1 day

** Definition of diagnosis / treatment on back panel.*

Children's
Hospital & Medical Center

March 1992

To Our Neighbors,

In an ongoing effort to keep you informed about emergency medical helicopter activity at Children's Hospital, we are sending you quarterly reports about the number and types of cases of the children who required helicopter transport to Children's Emergency Room entrance. This report also reflects the number of cases landing at the UW Intramural Field.

In order to minimize the impacts on the community, only the most critically ill or injured patients are to land at the Children's Emergency Room entrance. Other patients determined able to withstand delay and movement are landed at the Intramural Field and are transported by ambulance to Children's. Airlift Northwest physicians and nurses make the decision about where to land based on the condition of the patient. The majority of patients continue to arrive at the Emergency Room by ambulance.

This report is mailed to all households in the 98105 zip code through a mailing service. We apologize for any errors in names or addresses.

If you have questions about this report or about emergency medical helicopter landings at Children's, please contact Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write her at Children's Hospital and Medical Center, PO Box 5371, Seattle, WA 98105-0371.

Sincerely,

Treuman Katz

Treuman Katz
President and Chief Executive Officer

Landings Location Summary

Month	Children's Hospital	UW Intramural Field
October	9	17
November	6	18
December	9	8

• Definition of Diagnosis / Treatment

Acute tracheitis: *Inflammation and swelling of the trachea (airway) that, if severe, will impair breathing.*

Hypoxia: *Lack of oxygen, in this case, because the hot dog was aspirated and was blocking the airway.*

Meconium aspiration syndrome: *Pneumonia-like illness of newborn due to inhalation at birth of fluids containing material from infant's bowel.*

Status asthmaticus: *Severe asthma attach during which the patient is not responsive to treatment.*

Streptococcal sepsis and streptococcal meningitis: *A bacterial bloodstream infection and a bacterial infection of the membranes covering the brain and spinal cord.*

Viral encephalitis: *A viral infection of the brain often associated with seizures, alterations of consciousness, fever, neurological dysfunction and mental changes. May be life-threatening, requiring intensive care and treatment.*

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A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center / A summary of flight activity is published quarterly by the Communications Department at Children's Hospital and Medical Center, Seattle, WA. If you have comments or questions, please call Suzanne Petersen, Director of Government Affairs, at (206) 526-2530.

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of flight activity, October through December 1991

Children's
Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center

October through December 1991

Date	Landing	Departure	Transported from	Age	Diagnosis	Receiving Unit	Outcome
OCTOBER							
5	9:50pm	11:00pm	Harrison Memorial Hospital, Bremerton	Toddler	Croup, pneumonia	Pediatric ICU	Hospitalized 5 days
7	2:45am	3:27am	Harrison Memorial Hospital, Bremerton	Adolescent	Status asthmaticus *	Pediatric ICU	Hospitalized 3 days
8	8:23pm	8:25pm	Skagit Valley Hospital, Mount Vernon	Infant	Septic shock	Emergency Room	Hospitalized 31 days
13	10:10pm	10:32pm	Valley General Hospital, Monroe	Teenager	Status asthmaticus *	Pediatric ICU	Hospitalized 5 days
15	2:05pm	2:50pm	Clinic, North Bend	Pre-school	Croup	Emergency room	Hospitalized 1 day
22	10:16am	11:35am	Whidbey General Hospital, Coupeville	Newborn	Meconium aspiration syndrome *	Infant ICU	Hospitalized 20 days
29	4:08am	5:10am	Providence Hospital, Centralia	Infant	Pneumonia (patient with microcephaly and seizures)	Pediatric ICU	Hospitalized 8 days
29	5:35am	6:15am	Olympic Memorial Hospital, Port Angeles	Newborn	Respiratory distress syndrome	Infant ICU	Died
31	7:25pm	8:10pm	Providence Hospital, Centralia	Toddler	Drowning	Emergency Room	Died
NOVEMBER							
1	5:35pm	6:05pm	Valley General Hospital, Monroe	Toddler	Croup	Emergency Room	Hospitalized 1 day
12	11:20am	12:05pm	St. Francis Community Hospital, Federal Way	Adolescent	Asthma	Pediatric ICU	Hospitalized 4 days
14	2:05pm	3:00pm	Skagit Valley Hospital, Mount Vernon	Infant	Streptococcal sepsis and streptococcal meningitis *	Infant ICU	Died
18	10:10am	10:50am	Valley Medical Center, Renton	Pre-school	Seizures	Emergency Room	Hospitalized 2 days
21	10:13am	10:46am	Medic 8, Federal Way	Toddler	Near drowning	Emergency Room	Hospitalized 1 day
28	8:14am	8:50am	Medic 6, Pacific	Infant	Near drowning	Emergency Room	Hospitalized 25 days
DECEMBER							
1	1:26pm	2:00pm	Olympic Memorial Hospital, Port Angeles	Toddler	Viral encephalitis *	Pediatric ICU	Hospitalized 10 days
5	11:55am	12:30pm	Medic 6, Covington	Toddler	Tranquilizer ingestion	Emergency Room	Hospitalized 1 day
11	7:00pm	7:37pm	Medic 19, Redmond	Toddler	Hotdog aspiration with hypoxia *	Emergency Room	Hospitalized 15 days
19	3:40pm	4:45pm	Rescue One, Vashon Island	Toddler	Respiratory failure in patient with metabolism disorder	Pediatric ICU	Hospitalized 1 day
19	8:00pm	9:35pm	Children's Hospital, Seattle, to Emanuel Hospital, Portland	Infant	Meconium aspiration and pulmonary hypertension	ECMO Unit, Emanuel Hospital, Portland	Hospitalized in Portland 15 days; readmitted to Children's and hospitalized 18 days
24	1:15am	2:10am	St. Francis Hospital, Federal Way	Toddler	Grand mal seizure	Pediatric ICU	Hospitalized 2 days
24	6:15pm	6:35pm	Medic 71, Mill Creek	Toddler	Anti depressant ingestion in patient with heart defect	Emergency Room	Hospitalized 1 day
25	5:30am	6:10am	Medic 5, Renton	Newborn	Premature birth at 24 weeks gestation	Infant ICU	Still in hospital
28	6:18pm	6:50pm	St. Francis Hospital, Federal Way	School age	Acute tracheitis *	Emergency Room	Hospitalized 4 days

Definition of diagnosis / treatment on back panel.

Children's
Hospital & Medical Center

June 1992

To Our Neighbors,

In an ongoing effort to keep you informed about emergency medical helicopter activity at Children's Hospital, we are sending you quarterly reports about the number and types of cases of the children who required helicopter transport to Children's Emergency Room entrance.

In order to minimize the impacts on the community, only the most critically ill or injured patients are to land at the Children's Emergency Room entrance. Other patients determined able to withstand delay and movement are landed at the Intramural Field and are transported by ambulance to Children's. The decision about where to land is based on the condition of the patient. The majority of patients continue to arrive at the Emergency Room by ambulance.

Most requests for emergency helicopter transport of patients to Children's come from physicians in the Puget Sound area or Olympic Peninsula. Children's Hospital and Medical Center is a regional specialty hospital. Often, there are several pediatric specialists called to the case within minutes of arrival. Community hospitals do not have the resources to provide this highly specialized pediatric treatment and diagnosis.

This report is mailed to all households in the 98105 zip code and some in the 98112 zip code through a mailing service. We apologize for any address errors.

If you have questions about this report or about emergency medical helicopter landings at Children's, please contact Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write her at Children's Hospital and Medical Center, PO Box 5371, Seattle, WA 98105-0371.

Sincerely,

Treuman Katz

Treuman Katz
President and Chief Executive Officer

*** Definition of Diagnosis / Treatment**

Bronchiolitis: *Inflammation of the small air passages in the lung which makes breathing difficult. If severe, mechanical ventilation may be required to maintain patient's breathing.*

Grand mal seizure: *A convulsion with sudden loss of consciousness and repeated involuntary jerking movement of all limbs. These seizures can be life threatening if very prolonged.*

Meconium aspiration: *Pneumonia like illness of newborn due to inhalation at birth of fluids containing material from infant's bowel.*

Pneumococcal meningitis: *Bacterial infection of the covering of the brain and spinal cord by the bacteria streptococcus pneumoniae. It can be life threatening.*

Pneumonitis: *Inflammation of the lung due to infection or inhalation of an irritating substance. It can progress to pneumonia.*

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A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center / A summary of flight activity is published quarterly by the Communications Department at Children's Hospital and Medical Center, Seattle, WA. If you have comments or questions, please call Suzanne Petersen, Director of Government Affairs, at (206) 526-2530.

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

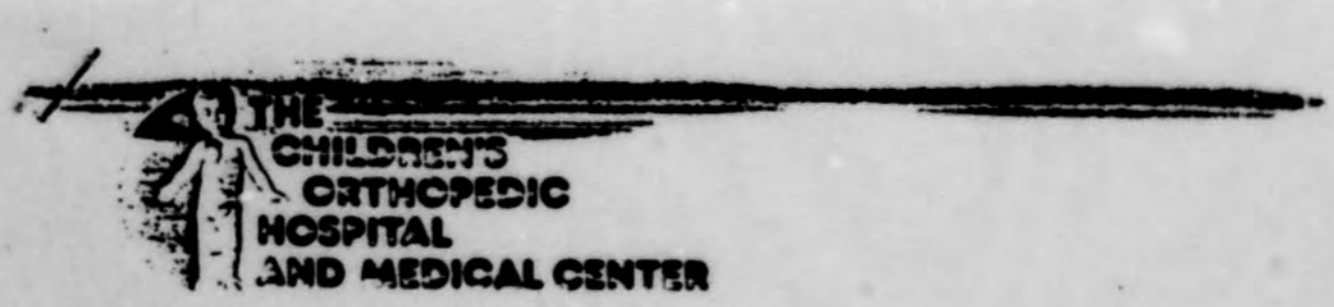
A summary of flight activity, January through March 1992

Children's
Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center October through December 1991

Date	Landing	Departure	Transported from	Age	Diagnosis	Receiving Unit	Outcome
JANUARY							
2	10:50pm	10:55pm	Boeing Field, from RW flight from Wenatchee, Washington	Newborn	Meconium aspiration *	Infant ICU	Hospitalized 20 days
6	12:15am	1:05am	Bremerton Naval Hospital, Bremerton	Pre school	Grand mal seizure *	Pediatric ICU	Hospitalized 2 days
6	9:40pm	10:35pm	St. Peter Hospital, Olympia	Toddler	Benign brain tumor	Pediatric ICU	Hospitalized 18 days
8	5:45pm	6:25pm	Medic 19, Redmond	Infant	Petroleum ingestion	Emergency Room	Hospitalized 5 days
14	3:07pm	3:52pm	Medic 5, Renton	Infant	Non-accidental brain injury	Pediatric ICU	Died
30	8:00pm	8:37pm	Bremerton Naval Hospital, Bremerton	Infant	Seizures, Bronchiolitis *	Emergency Room	Hospitalized 3 days
FEBRUARY							
9	7:45am	8:25am	Harrison Memorial Hospital, Bremerton	Infant	Shock	Pediatric ICU	Hospitalized 18 days
29	12:40am	1:10pm	Medics, Bremerton	School-age	Seizures	Emergency Room	Discharged same day
MARCH							
5	6:55pm	7:40pm	Medics, Bellevue	Toddler	Pneumonitis *	Emergency Room	Hospitalized 11 days
23	1:15pm	2:20pm	Olympic Memorial Hospital, Port Angeles	Newborn	Congenital heart defect	Infant ICU	Died
26	2:10pm	3:12pm	General Hospital, Everett	Toddler	Pneumococcal meningitis *	Pediatric ICU	Hospitalized 17 days
31	6:54am	7:35am	Medics, Auburn	Newborn	Prematurity	Infant ICU	Still hospitalized

** Definition of diagnosis / treatment on back panel.*



September 9, 1985

I am John Neff, M.D., Medical Director for Children's Orthopedic Hospital and Medical Center, and Associate Dean of the U.W. School of Medicine.

Thank you very much for inviting me to participate in this hearing regarding the need for helicopter services in the state. This is a complicated issue and I would like to address my comments toward the need for a balanced emergency medical transportation system as it relates to services for children in the State of Washington and the Pacific Northwest. In order for my comments to have any meaning, I would like to put them in context of what has developed in the northwest as a very unique regional system for the care of critically ill children. In this area we are fortunate to have developed a very coordinated regional system for emergency care. Part of this system has already been described in the testimony that relates to the Emergency Medical System; additionally, excellent emergency services for children exist in Tacoma and Spokane. My comments will be directed only to the system as it relates to COHMC.

COHMC, as the only completely full service specialty care center for children in the northwest, is an essential part of the Emergency Medical System. COHMC coordinates emergency care of children principally with two other institutions, Harborview Medical Center and the University Hospital.

Harborview Medical Center receives and cares for most children with trauma and burns.

The University Hospital which has a high risk maternity service and a newborn intensive care unit, shares the emergency care of newborn prematures with COHMC as bed space is available.

COHMC receives children who require emergency care for acute medical and surgical illnesses and receives most of the newborn prematures who are not born at University Hospital and who require intensive nursery care.

The intensive care nurseries at the University Hospital and COHMC are run and coordindated from a patient care standpoint by a unified group of newborn specialists who also coordinate the newborn transport system.

Because COHMC is the only nospital in the region that has full services in pediatric surgery, radiology, anesthesia and the specialties of medicine, the majority of non-traumatic and non-burned emergency situations must come to our hospital.

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In order for COHMC to be a part of this Emergency Medical System and to provide the appropriate services for the support of emergency illnesses in children, we require a balanced transportation system - a transportation system which includes three modes of transportation:

1. Ambulance
2. Fixed wing plane
3. Helicopter

In those instances where a child can be stabilized and when transportation time is not a critical factor in the outcome of the child's illness, ambulance is the preferred mode of transportation.

In those instances where children have to be transported long geographic distances, and again where their condition can be stabilized, fixed wing plane is the preferred mode of transportation. We use fixed wing for most of the transportation for children who come from our wider geographic referral area. This area includes eastern Washington, Montana, Idaho and Alaska.

The third mode of transportation, helicopter, is required when the physician is faced with an emergency situation, where it is difficult to stabilize the child, where time is a critical factor in the outcome of the illness, where it is important to limit the number of times that a child is moved from one vehicle to another, and where there are severe geographic limitations to ground transport. The helicopter transports occur within the Puget Sound area where many communities are separated by large bodies of water. Most of these transports involve acute medical and surgical problems of the young children and small infants, most of whom are attached by tubes to various mechanical support systems. Without the availability of a helicopter, no emergency system for children is complete or adequate.

To emphasize this point I will describe three recent examples of children landed by helicopter at COHMC because of an emergency request by the physician attending the child in flight. There really was no other alternative for each of these children.

The first example was a one day old child from Bremerton who developed an acute intestinal obstruction that required immediate surgery. The child was placed in the helicopter and while in the air, or just before the child was transported, the intestines perforated and the child went into shock. The helicopter made an unplanned emergency landing at COHMC, and unfortunately and despite two operations the child died. This is the type of condition where the only chance of survival was to provide as rapidly as possible the services of pediatric surgeons and pediatric anesthesiologists in a setting where all of the support services are available for the very small infant. These services are available in the northwest region only at COHMC and we provided this child with his only chance of survival.

The second example is a four week old previously healthy and normal child from Chehalis, who within 24 hours developed an inflammation of the brain, meningitis. The night before the child was noted by his mother to be fussy and have a temperature. In the morning what first seemed like an ear infection develoned

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during the day into a frighteningly progressive meningitis. When the transport team arrived on site at six in the evening, the child was in shock and had signs of beginning brain damage as characterized by severe brain swelling. Within a half hour following an emergency landing at COHMC the child was in the Intensive Care Unit, stabilized, surviving and with evidence that the pressure in the brain was decreasing. The only chance for this child was rapid transportation and limited number of transports from one vehicle to another. If this child had not been landed just outside the door of the Emergency Room at COHMC, the child would have had to be landed in the soccer field at the University. Such a landing would have required a transfer to and out of an ambulance and increased the transportation time by 25 minutes, essentially doubling the time from the hospital of origin to COHMC and thereby decrease chances for positive outcome. Such a landing away from the hospital with the transfers involved also would have increased the chances that the child would have become disconnected from his support systems. We had no other alternative but to allow this emergency landing to occur.

The third child was born in Forks, extremely premature weighing only a little more than two pounds, with immature lungs. The physicians arrived with the helicopter and while the child was being placed in the helicopter, the child acutely collapsed his lungs and required mechanical breathing. The physician was able to reexpand the lungs by withdrawing air from the child's chest with a needle and syringe, but during the flight the child became progressively critically ill and showed signs of lack of oxygen. Permission was grantd to land this child outside the Emergency Room at COHMC. Immediately following the landing the child was in the Intensive Care Unit, on a respirator, and is, fortunately, doing very well. Time, geography and the number of transfers was certainly an important factor in this child's survival. These three examples, are very typical of the type of emergencies we face.

In each one of these situations, time and the need to place a child in the Intensive Care Unit as soon as possible, with limited number of transfers, is essential not only for the long-term survival, but also for the need to limit any progressive brain damage that the child might suffer. In each one of these situations we, as physicians, are able to tell the parents that we were able to do everything within our power to provide life for their child and to limit whatever damage their child might incur from the disease process. We feel as advocates for children, and for us to fulfill our responsibilities for this region for the care of children, we can do no less.

COHMC is the only full service children's hospital for the area and we must be advocates for the children we serve. It is critical for us to be able to land the helicopter on our campus so that we can utilize all aspects of what are essential parts of an emergency transportation system.

There is another economic factor that often is not considered in health care planning for emergency and intensive care services for children. We would acknowledge that these services are expensive. When one considers, however, the Northwest area as a whole, there are only a relatively small number of children who require emergency and intensive care services and only a small percentage of them need helicopter services. The use of helicopter services improve the life of a child and minimize the chance that illness or injury will create life-long body and/or brain damage. Such damaged children become an incredible cost, both individually and collectively, to our society as a whole. If the cost of emergency and intensive care services provided these children is averaged out over a life span and measured against potential death, loss of life-long productivity, or worse yet, dependency on a family or an institution, then these emergency cost measures become almost insignificant.

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I would like to continue my statements with remarks that explain the importance of the regional system for emergency care for children in this area. As I mentione.., there are only a small number of emergency bed needs for children in this area. Fortunately, even though accidents, trauma and prematurity are the major causes of deaths in children, the actual number of specialty bed needs to care for such afflicted children is relatively small when compared to the population as a whole. Therefore, in order for emergency care for children to be as cost-effective as possible, there should be only a few hospitals designated where emergency trans portations should take place. This transportation should optimally be coordinated by the Emergency Medical System. We are fortunate to be living in an area where this regionalization has occurred. This regional emergency system is known nationally as one of the outstanding examples of cooperation among health care facilities, and state agencies. This regional emergency system also provides provides vehicles which are shared among several hospitals, rather than individual hospitals owning their own vehicles and competing among each other, as occurs elsewhere in this country. Therefore, we at COHMC feel very fortunate to be in an area and to be part of the process which has allowed such regionalization to occur. Our plea is that there be general recognition that this cooperation exists and that our hospital be allowed to provide those services which are absolutely essential to assure the best possible outcome of a tragic emergency condition that could possibly affect any one of our children from this region.

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

September 13, 1985

Joanne Brekke
House of Representatives
State of Washington
Olympia, Washington 98504

Dear Ms. Brekke:

I would like to thank you for giving me the opportunity at the House Committee on Social and Health Services to present the views of The Children's Orthopedic Hospital and Medical Center concerning the helicopter. It was an exhausting evening and the committee certainly can be congratulated for their patience and for bringing out all aspects of this complicated and emotional issue.

There are a few things that I would like to comment on while the meeting is still fresh in my mind.

First, when I was asked about the number of transports that we might expect by helicopter to COHMC, I indicated that our recent experience has been about five a month. It is awfully hard to predict this number, since there is great variability in the number of transports and in the type of emergency. Our projections, however, may be closer to fifteen transports a month.

Second, I know there were several comments about the Mast helicopter. Perhaps it was not pointed out adequately that even though it has been very valuable to have the Mast helicopter services, these helicopters do not have physician staffing for child care and are not designed and cannot adequately take care of the very small child who requires monitoring. The vibrations within the helicopter are intense making critical monitoring impossible. It also is quite easy for the child to become disconnected from the support mechanisms and the environment is not at all conducive for stabilizing the child. It may be fine for adult military transport but is just not adequate for children. These helicopters have been designed for combat use, not critical care pediatrics. In addition, it would be impossible to land the Mast helicopters at COHMC and once again we would have to go through the process of moving the child from the soccer field to COHMC. This is not three minutes, but is closer to 20 or 25 minutes because of the amount of time required in transferring the child from one vehicle to another with all of the various support systems that are attached to the child.

Third, I certainly support a review process of the flights. I hope that our internal review system will be credible, but I would have no trouble in expanding our review process to a broader audience, since our institution is very public and there are many aspects of our services that already are exposed to outside scrutiny, and we believe that what we are doing i[illegible]

P O BOX C5371 • 4800 SAND POINT WAY N E • SEATTLE

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Fourth, we are extremely concerned about the safety issues for the neighborhood. It is certainly not our intention to save lives and in the process endanger others. The FAA has assured us, however, that the helicopter route along Sand Point Way, and coming down directly on the hospital grounds does not put in jeopardy the local residential areas and certainly is quite a distance from the playing fields and schools that were mentioned in the testimony. The possibility of a crash also is extremely small. Additionally, airlift Northwest chose this particular helicopter because of the extremely low probability of mechanical problems which might lead to a crash.

Fifth, I believe Dr. Michael Copass has information which demonstrates that in some situations the cost of helicopter transport is less than the cost of ground transport. You can obtain that information directly from him.

From a personal standpoint I wish to respond again to your question about the hard choices that we all face. I have been in the discipline of pediatrics for twenty five years and have seen enormous progress in the care of children during that time. Although the cost of health care has increased dramatically over those twenty five years, I would hope that your committee would look at children separately, as compared to adults. During this twenty five years the number of hospital beds for children has decreased remarkably and hospital services for children likewise have been limited to only a few institutions. The number of institutions for dependent (mentally and physically retarded) children has decreased remarkably, demonstrating the tremendous advances that have been made in pediatrics in developing out-of-hospital and out-of-institution services for the multiply handicapped. The number of what one would call intensive care services for children is very small and well regionalized. The enormous savings that have occurred from the reduction of hospital beds throughout the area has more than offset the increased costs of our few intensive care units. Most of these gains have been made because pediatrics as a discipline has directed a great deal of its attention to preventive measures and the greatest cost savings that we enjoy in pediatrics come from limiting hospital and institutional stays and admissions. It is very difficult for me to respond to your question about making difficult choices when I feel that in this country we have been extraordinarily responsive in providing superb care for children and at the same time have limited that cost. I am disturbed with the trend that I see. As our health care dollars shrink, there is an enhanced shifting of the health care dollar from children to adults, particularly to adults at the end-stages of their lives, rather than at the beginning. Finally, I have never been asked to determine which child should or should not live unless I am faced with a terminal condition where treatment is futile or only prolongs the agony of dying. I hope the state never askes me to make that type of decision.

To me, the use of the helicopter in the state, although a highly emotionally charged issue, is only a very small but essential part in our continued ability to provide a better life for our children, and in the ideal world these emergency transportation services should be paid for on a grant from the state rather than leaving the hospital with the fee for service mechanisms which unfairly penalizes the few unfortunate individuals who are inflicted with a catastrophic illness. I worked in Maryland for years and at that time the state supported the emergency transport system and controlled it.

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You asked me if I would support you personally in your letters to the Governor to maintain funds for prenatal programs. I will do so absolutely. Everything that we can do to prevent problems, in the expectant mother and in the child, will reduce our need for intensive care services and provide considerable savings for the populace as a whole. If we do not continue to put efforts toward preventing illnesses, then the need for intensive care services will certainly increase.

Children are not voters and so therefore those of us who care for them must stand up and be heard. You and your committee can count on my assistance in any efforts you take to improve the health care for children, be it in Spokane, Tacoma, Seattle or any part of the State of Washington. I extend to your committee an invitation to visit COHMC to meet with our staff so that we can share with you our deep concerns about the limited number of resources that are available to take care of women and children in our society. I also will be glad to meet with your committee at any time. I sincerely hope that these larger issues are not lost in these emotional issues of whether or not a helicopter should or should not be allowed to land at COHMC.

Thank you very much.

Sincerely,

John M. Neff, M.D.
Medical Director

JMN:dn
cc: John B. Welsh, Jr.

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

October 29, 1985

Dr. Bud Nicola
Health Officer, City of Seattle
7th Floor, Yesler Building
Seattle, Washington 98104

Dear Dr. Nicola:

I want to thank you for the excellent job you did in holding the hearing last week concerning the medical justification for the helipad at The Children's Orthopedic Hospital and Medical Center. You gave all sides a chance to aire their opinions and feelings, and you were absolutely impartial in the process. Personally, I don't enjoy this adversarial role with the community. I am sure that they also feel equally uncomfortable in being viewed as opposing good health care for children and will be glad when this process is over.

After I went home and reflected on the hearing, I felt there were some things I would liked to have said, not so much to you but in answer to some of the community concerns and to the lawyer that represented Laurelhurst. While these thoughts are still fresh in my mind, I would like to share them with you.

The first concerns our abilty to provide objective data concerning the need for the helipad. During the hearing it was stated that the City in the past has been able to study helicopters for police use. I hope that the community understands that a study of helicopters for health related use would be difficult to do. I imagine that the police use of helicopters was studied by choosing two similar neighborhoods and providing for one patrol cars, and for the other helicopters. At the end of a given time period the City probably looked at crime incidence figures. The only way I would know to perform a similar study involving helicopters for medical use would be to take two similar communities such as Port Angeles and Bremerton and provide direct transport to COHMC by helicopter for one and another combination of transportaion for the other, or to do a study using alternate forms of transportation for comparable cases. In a very short time the community that did not have the direct helicopter service would ask very soon why their patients could not be transported directly by helicopter to COHMC and minimize as much as possible the risks to that child. Not only would it be difficult to control such a study but there would be real ethical and legal problems involving the first death or complication of a child for whom we denied direct helicopter transportation to COHMC. A case by case control study would be even more difficult. That is why it is nearly impossible to perform any type of prospective study.

Scientific retrospective studies also are equally difficult. In a situation where we do not have a helicopter, you cannot compare the different modes of transportation in a retrospective fashion and can only conjecture on a case by case basis whether or not a helicopter would or would not have made a difference.

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During this past year, for your review, we have identified three children who died and were transported either by ambulance or a combination of fixed wing and ambulance.

I can go back in subsequent years and probably find three approximately similar cases each year. Although I feel that each of these children would have benefited by direct helicopter transport to COHMC, I can't prove this but only can use my clinical judgment and conjecture that we should have given each child an optimal chance for survival. This type of review is further complicated because medical-legal questions will come up whenever we have alternative forms of transportation, and the death of a child is associated with a less direct mode of transportation.

During this past year we also have transported four children directly to COHMC because of the emergency condition of that child. Two of these children died. One will have some degree of undetermined persistent brain damage, and one child is perfectly healthy. The mortality of 50 percent for the helicopter is not a measurement of success or failure of that form of transportation, but reflects only the fact that we are selecting out the most critically ill children for helicopter transportation.

Finally, a retrospective case review, even if we had alternate modes of transportation, is extraordinarily difficulty because of the incredible variety of illnesses which we confront and the variability of each individual child. That is why I emphasized in my testimony the fact that of our 18 helicopter transports since May, the children transported represented 12 different diagnoses. The two repeating diagnoses, meningitis and head trauma were sufficiently different in age and the type of pathology involved that these cases can't be compared within those diagnostic groups. Thus, we are left with the problem of not having enough cases in any one category to allow us to provide a scientific evaluation. Again, I am left with having to make a clinical judgment in each individual case, and according to the individual cases I would say that the children were young enough and had illnesses of sufficient acuity that transportation by helicopter was justified.

I don't believe that we are unique in having difficulty in coming up with hard scientific data that would justify our proposal for a helipad, and we must use clinical judgments on a case by case basis. It is hard to refute that a critically ill child or infant requires rapid transportation and quick transport to the nearest and best intensive care unit in order to have the optimal outcome for that individual child. That is what our patients and our referring physicians demand of us, and we expect it of ourselves. Unless we have the ability to land safely a helicopter at COHMC, we will never be able to prove to you its benefit. We could only present to you on a year by year basis the number of children who died while in transport, or died shortly after arrival at COHMC, and conjecture that the outcome would have been better if there had been a helipad at COHMC. There is no question in my mind that the risk of helicopter transport for emergency situations is far less than the risk of ground transport through the congested and slippery streets of King County. I am glad we did not have an emergency from the east side last week when I-90 was completely blocked because of a multi-car accident. That sort of event is far more frequent than the rare, but very newsworthy, helicopter accident.

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The concern from the neighborhood that was most difficult to respond to last week was the elderly lady whose husband has a heart condition and who lives in the apartments immediately adjoining COHMC. I wish I could remove or alleviate the fear and anxiety factor that goes along with the use of helicopters. I personally don't believe that the noise from the few helicopter landings is a significant factor when one already considers the noise that exists in the neighborhood from traffic and overhead planes. Most of our flights would be in the daytime and very few at night. Although I can't prove it, it seems to me that the noise from an ambulance at code red along Sand Point Way is just as disruptive as a helicopter. The only difference is that we as a society have become accustomed to the ambulance and accept that as a part of our background noise. From a health standpoint, although again I can't prove it, I would imagine the danger of a local resident being hit by a speeding ambulance is as great or greater than the danger of a crash of a helicopter or a heart attack because of alarm from a helicopter noise. Unfortunately, our society has become more accustomed to car accidents and almost accepts those as given risks, yet there seems to be a greater fear of the more dramatic but extraordinarily infrequent helicopter crash. The one argument that I cannot abide by is that because of these factors the helicopter should go to Harborview rather than to COHMC. I believe that there are many apartments in which the elderly live around the Harborview campus, and the Harborview campus seems to be more congested than the COHMC campus. The only differences between the two communities are the socio-economic factors, and I don't think that those should bear a role in the decision as to where a helicopter should or should not land.

Let me end by indicating to you once again my commitment to review with you the use of helicopters at COHMC on an ongoing basis and to assure you and the community that we have no intention of utilizing this service unnecessarily. I do make a plea, however, to let us build a safe and protected area at COHMC where we can land children by helicopter and have direct access to the Emergency Room and Intensive Care Units. Liz Anderson in her testimony indicated that she is not against landing critically ill children at COHMC and I sincerely believe she speaks for the majority of the community.

I hope we can come to a resolution on this issue relatively soon. There are too many critical issues involving the health care of children that we must work together to solve. I look forward to a long and rich association with you and I thank you again for your patience and understanding.

Sincerely yours,

John M. Neff, M.D.
Medical Director

JMN:dn
cc: Nancy Greenawalt

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Children's
Hospital & Medical Center

[illegible]

September 28, 1987

Fred Bruner
Shapiro and Associates
The Smith Tower, Suite 1812
506 Second Avenue
Seattle, Washington 98104

Dear Mr. Bruner:

I hope that I can give you adequate answers to Liz Anderson's questions on this short notice.

First, Ms. Anderson suggests that, "one is really 'splitting hairs' in discussing whether or not there is more patient manipulation due to an additional transfer at the [University of Washington's] east campus" as opposed to flying directly to Children's. Ms. Anderson's statement is probably correct when it is applied to older children who are in relatively stable condition. The only children, however, whom we are landing at Children's Hospital are those children whose condition is such that death or bodily damage is imminent because of very unstable cardiovascular, respiratory and/or neurological systems. Most of these children are very small. In these situations, even the most minor change in the respiratory or cardiovascular status can mean the difference between life and death or brain injury. We feel, therefore, it is inappropriate to take even the slightest risk with such unstable children.

Second, Ms. Anderson asks for data to support the claim that "time-saving can decrease suffering, decrease hospital stay time and in most severe cases, can mean the difference between life and death." I am sure that there is no such controlled data. One instead, has to use medical sense and clinical experience. There is no question that a small child whose blood pressure is dropping, who has a fulminant infection or obstruction in the respiratory tract, should be given every chance at optimal survival as soon as possible, and should be in an appropriate intensive care unit as quickly as possible. We can relate the cases that have landed at Children's Hospital from August 3, 1985 to December 31, 1986. There were 47 transports directly to Children's Hospital and Medical Center. These all were admitted directly to the Intensive Care Units. These children were so critically ill that 22 of them died as part of their presenting condition, and 25 survived. I have listed the illnesses and the outcome according to life and death by diagnostic categories. All of these children were critically ill and required immediate transport to an intensive care unit. Almost in every category some children died and some did not. The numbers are very small but in each situation every possible effort was made for survival. All were critically ill and had life-threatening conditions that required their immediate landing at Children's



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Children's Hospital. The physicians involved did everything they could to work toward a good outcome for that child, and in each situations it was the physicians' feelings that the child should be in the intensive care unit quickly. To have done otherwise would have the potential result of a worse outcome. Certainly any landing other than at Children's only would have the potential to worsen the outcome and increase cost, and could not have possibly helped the child.

Finally, Ms. Anderson asks that data be provided to support the statement that "delays in treatment of other patients, while perhaps not a life or death situation, could result in suffering", and she includes in that statment patients with impaired breathing, diaphragmatic hernia, aspiration of a foreign body, cardiac irregularities, near-drowning and vascular collapse from general infection. There is not good data in the literature of the kind that Ms. Anderson is requesting. It would be unethical to perform a controlled experiment in children to provide that kind of scientific data. One would have to provide for one group of children a rapid transport to an intensive care unit, and to the other group of children with exactly similar critical conditions, a delayed transport. No parent or health care professional would accept for their child the potential of an impaired outcome that could come about as a result of a delayed transport time with no expectation of any potential good for the child coming out of such a delay. Such a proposed study would never be accepted by institutional boards, and no physician of any repute would propose or take part in such a study. Therefore, we must depend on review of individual cases, and decide on these individual cases whether or not the physician was justified in providing rapid transport.

In reviewing the cases that have landed at Children's Hospital during the past two years, I feel that the requests for emergency landing were justified based on the condition of the individual patient.

Thank you very much.

Sincerely,

John M. Neff, M.D.
Medical Director

JMN:dn

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SUMMARY OF CHILDREN TRANSPORTED DIRECTLY TO
CHILDREN'S HOSPITAL AND MEDICAL CENTER BY HELICOPTER

August 3, 1985 through December 31, 1986

	Survived	Died	Total
Prematurity with Respiratory Distress and Cardiovascular complications	5	5	10
Continuous Seizures	6		6
Drowning	3	2	5
Term Newborn with Respiratory and Cardiovascular Complications	1	3	4
Meningitis and Septic Shock	3		3
Diaphragmatic Hernia	1	2	3
Septic Shock	1	2	3
Newborn with Multiple Congenital Anomalies		3	3
Acute Brain Hemorrhage	1	1	2
Congenital Heart Disease (older children) (one child acute cardiac arrest and one with acute congestive failure)	1	1	2
Poison Causing Acute Lung Damage	1		1
Shock from Endocrine Abnormality, Adrenal Hypoplasia	1		1
Systemic Lupus with Acute Edema of Lungs	1		1
Gastrointestinal Bleed		1	1
Newborn with Ruptured Bowel		1	1
Newborn with Bowel Outside Body		1	1
TOTAL	25	22	47

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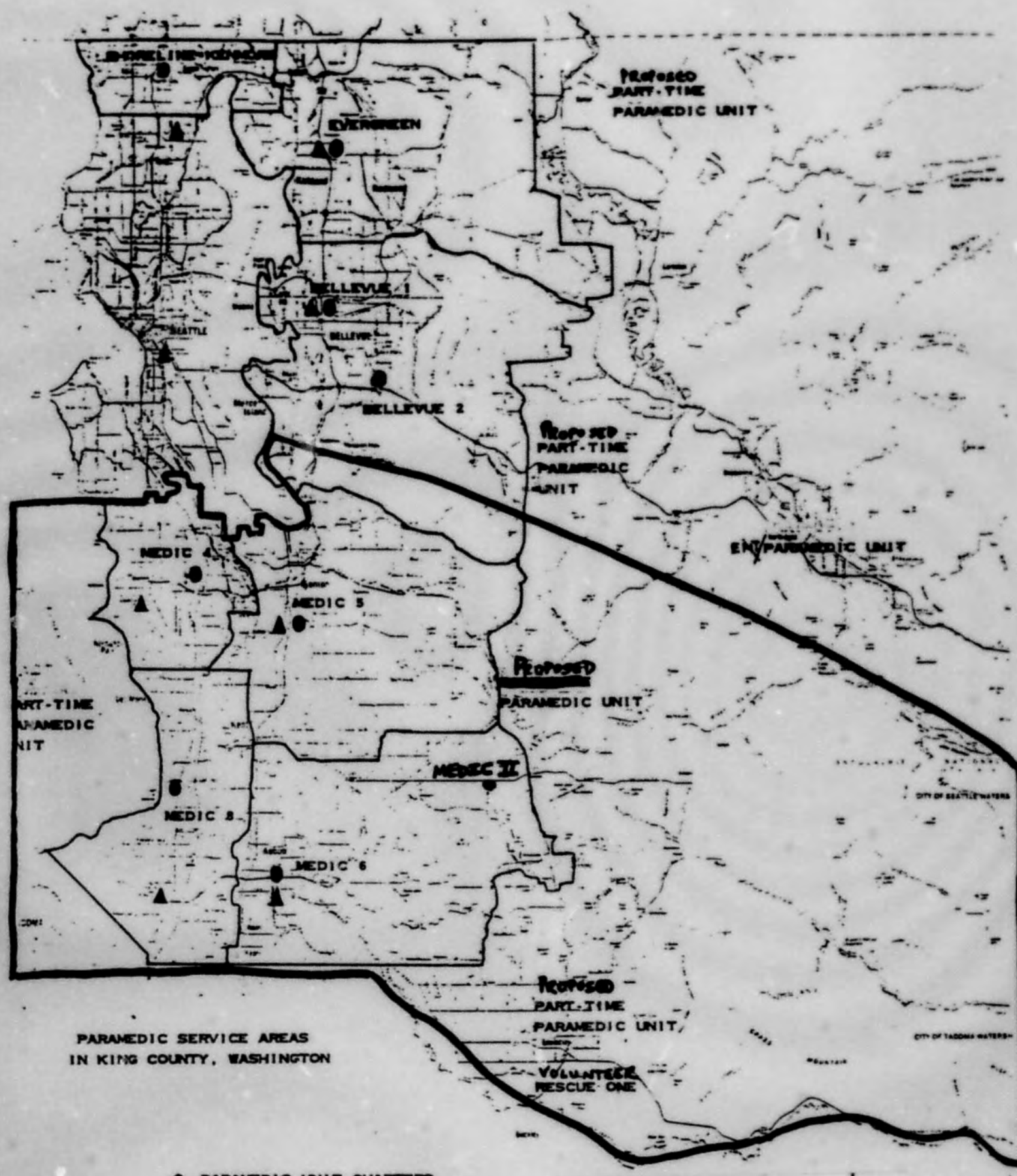

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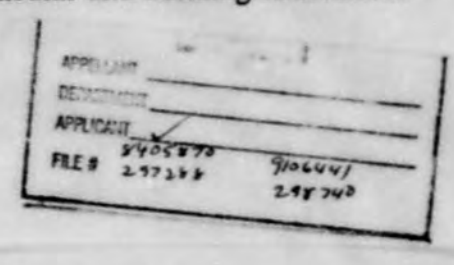
The Seattle Paramedic Training Program

The University of Washington/Harborview Medical Center Paramedic Training Program was established in 1969 to train paramedics for the Seattle Fire Department Medic-1 Program. Original classes were composed of Seattle Firefighter/EMTs only. After a few years, the program began training paramedics for other regional emergency care provider groups. With the certification of the most recent class in 1988, 251 paramedics have received training through the UW/HMC program. On completion of the course, paramedic students are certified as Mobile Intensive Coronary Care Unit Paramedics by the University of Washington School of Medicine, which is equivalent to Washington State certification.

The Program Director, Coordinator and office staff are located at Harborview Medical Center, which is the sponsoring institution. Harborview Medical Center, a 330- bed acute care hospital, is a University of Washington affiliated teaching hospital. Harborview houses an impressive variety of medical facilities and services; including the region's only twenty-four-hour Level 1 Trauma Center, the twenty-two-bed Northwest Regional Burn Center, an eighteen bed medical/surgical intensive care unit and a nine-bed Coronary Care Unit. Two of the Seattle Fire Department's Mobile Intensive/Coronary Care Units are based at Harborview Medical Center.

The majority of paramedic training takes place at Harborview. This includes lectures, medical labs, medical/surgical rounds, emergency room and CCU training. Some aspects require that students be rotated through other University of Washington School of Medicine affiliated teaching hospitals in Seattle. They are assigned to the University of Washington Medical Center Labor and Delivery Suite for obstetrical experience and to Children's Hospital and Medical Center for performing pediatric I.V.'s, intubations and evaluating emergent pediatric patients.

The Paramedic Training Program remains closely tied to the Seattle Fire Department Medic-1 Program, whose headquarters are at Harborview. Paramedic students accrue field experience by accompanying certified paramedics on Seattle Fire Department medic units. Seattle medic units respond to over 9,400 Advanced Life Support responses annually. Seattle Fire Department facilities are also used for specified training sessions such as drills, practical experience in triage, hazardous materials, vehicular and building extrication.



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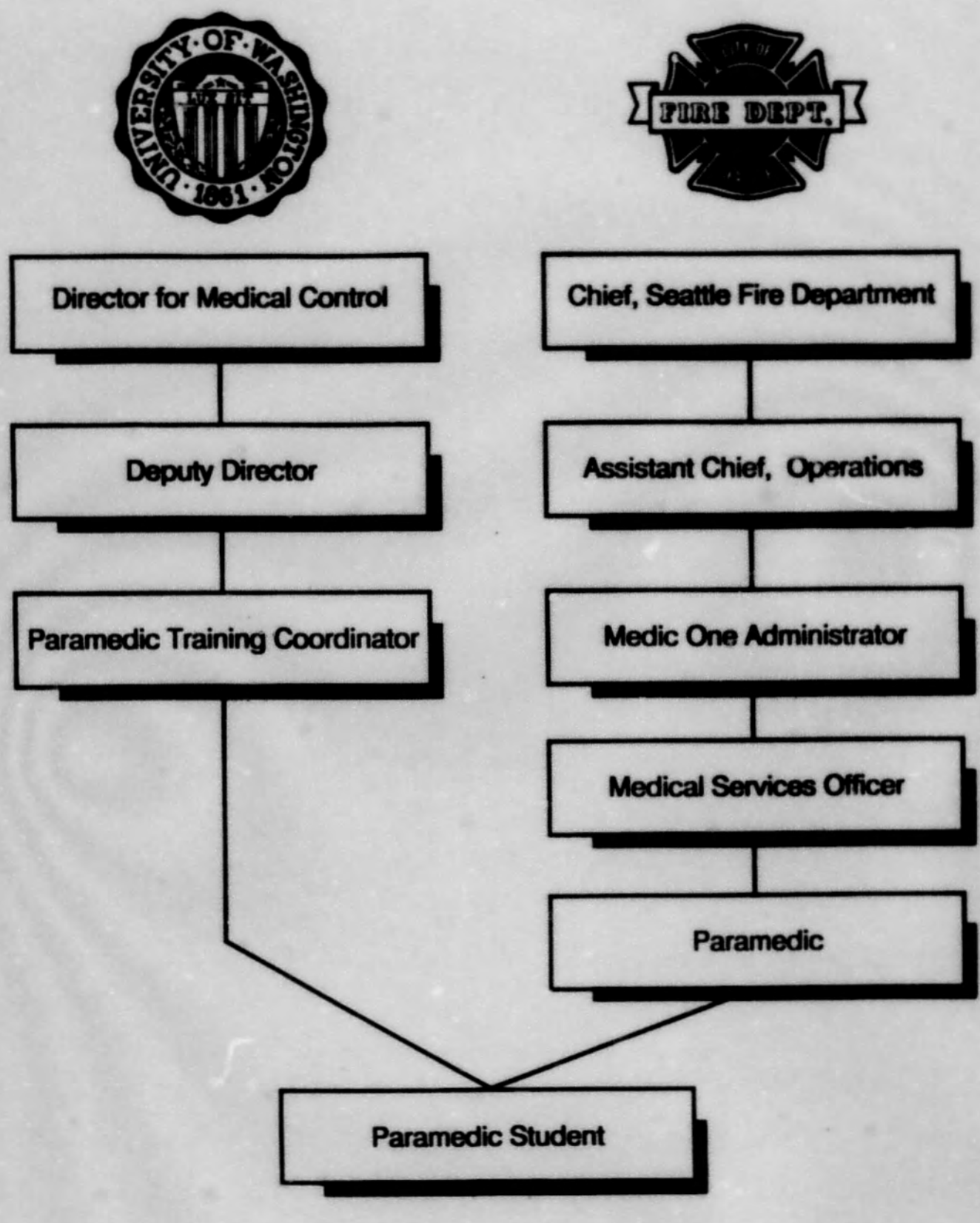
Chain of Command



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Training (Year - at a Glance)

October			November			December		
1	15	31	1	15	30	1	15	31
Introductory Lectures, Field and Street Experience			Block I Lectures, Field and Street Experience			Block II Lectures, Field and Street Experience		

January			February			March		
1	15	31	1	15	28	1	15	31
Block II Lectures, Field and Street Experience			Block III Lectures, Field and Street Experience			Field and Street Experience, Evaluations		

April			May			June		
1	15	31	1	15	30	1	15	31
Field and Street Experience, Evaluations			Field and Street Experience, Evaluations			Field and Street Experience, Evaluations		

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University of Washington
Paramedic Training Program

Total Hours *2,500*



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The Curriculum

LECTURES

Students attend 252 hours of formal lectures. The lecture series is divided into four sections of study:

- **Introduction**
- **Block 1**
  - cardiology
  - respiratory system
  - pharmacology
- **Block 2**
  - general acute medicine
  - trauma
  - burns
  - orthopedic
  - neurology
- **Block 3**
  - obstetrics
  - pediatrics
  - triage and extrication
  - death and dying
  - legal considerations
- **Continuing Education Lectures**

A comprehensive written examination follows each of the three Blocks.

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Introductory Lectures

Session	Hours	DESCRIPTION	INSTRUCTOR
1	8	Orientation to Medic 1 and the Paramedic Training Program	Program Director
2	2	Medic 1 Vehicle/Equipment Orientation	Senior Paramedic
	2	Orientation to the HMC ER, CCU	Program Coordinator
3	1	Introduction to Patient and Stretcher Handling	Senior Paramedic
4	4	The Directed Physical Exam	Program Director
5	2	Lecture Note Taking	Professor of Education
6	4	Medical Write-ups	Program Director
7	3	Introduction to IV Fluid Therapy: Peripheral Lines	Physician and Senior Paramedic
8	2	Introduction to IV Fluid Therapy: Central Lines	Physician and Senior Paramedic
9	2	Oxygen Therapy	Clinical Supervisor, Respiratory Therapy
10	4	Techniques of Airway Management: Endotracheal Intubation	HMC Chief of Anesthesia
	1	Sterile Techniques	Senior Paramedic
11	3	Evaluation of the Emergently Ill Patient	Program Director
12	3	Stress Management	Psychologist
Introductory Lectures Total Hours: 41			

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Block 1

Session	Hours	DESCRIPTION	INSTRUCTOR
13	2 2	Cardiology: Anatomy Cardiology: Physiology-Pathophysiology	Staff Cardiologist, HMC
14 15	4 3	Respiratory System: Anatomy/Physiology Respiratory System: Pathophysiology	Pulmonary Service Physician, HMC
16	3	Introduction to Acid/Base	Pulmonary Service Physician, HMC
17	4	Chest Pain	Cardiology Staff, HMC
18 19 20 21	4 3 3 3	Cardiac Arrhythmias Cardiac Arrhythmias Cardiac Arrhythmias Cardiac Arrhythmias	Cardiology Staff, HMC
22	1	The Pacemaker Patient	Cardiology Staff, HMC
23 24 25 26 27	3 3 3 3 3	Basic Pharmacology Basic Pharmacology Basic Pharmacology Cardiac Pharmacology Cardiac Pharmacology	Program Director Program Director Program Director Cardiology Staff, HMC Cardiology Staff, HMC
28	4	Plan A - Standing Orders	Program Director
29	2	Intro. to Life Pak 200	Senior Paramedic
30	3	Introduction to Field Administration of $_{R}$TPA	Program Director

Block I Lectures
Total Hours: 56

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Block Two

Session	Hours	DESCRIPTION	INSTRUCTOR
31 32 33 34 35	2 2 2 2 2	Trauma: Introduction Trauma: Shock and Fluid Therapy Trauma: Chest Trauma: Abdomen and Soft Tissue Trauma: OB/Peds.	Trauma Service Surgeon, HMC
36	3	"60 Second" Trauma Exam	Senior Paramedic
37	2	Radio Communication	Program Director Senior Paramedic
38	3	The Abdominal Exam	Trauma Service Surgeon, HMC
39	1	Traumatic Amputations	Trauma Service Surgeon, HMC
40	3	Hyperbaric Trauma	Senior Paramedic
41	1	Facial Trauma: Airway Management	Chief, ENT Physician, HMC
42	1	Facial Trauma: Soft Tissue Injury	Chief, Plastic Surgery Service, HMC
43	2	Facial Trauma: Ocular Emergencies	Chief, Ophtalmology Service, HMC
44	2	Facial Trauma: Maxillofacial Trauma	Chief, O.M.F.S. Service, HMC
45	3	Infectious Diseases & Sepsis	Senior Infectious Disease Specialist
(Cont)			

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Block Two (Cont)

Session	Hours	DESCRIPTION	INSTRUCTOR
46	3	Medical Emergencies: Diabetes	Deputy Director Emergency Medical Services, HMC
47	3	Medical Emergencies: Endocrine disorders	
48	2	Medical Emergencies: GI disorders	
49	2	Medical Emergencies: Alcoholism, Red Cell Disorders	
50	2	Medical Emergencies: Environmental	
51	2	Medical Emergencies: Respiratory disorders	Senior Pulmonary Physician
52	2	Medical Emergencies: The Hypertensive Patient	Internal Medicine Specialist
53	2	The Dialysis Patient	Chief, Nephrology Service, HMC
54	4	Burns: Field Management of Burn Patient	Burn Unit Director, HMC
55	2	Injuries to the Musculoskeletal System: Upper limbs	Chief Orthopaedic Surgery Service, HMC
56	2	Injuries to the Musculoskeletal System: Lower limbs	
57	2	Injuries to the Musculoskeletal System: Trunk	
58	3	Neurology: Intro./Anatomy	Senior Neurologist
59	3	Neurology: Coma	
60	3	Neurology: Head and Neck Trauma	
61	3	Neurology: Seizures, Dementia	
62	3	Neurology: Overdose	

Block II Lectures
Total Hours: 76

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Block Three

Session	Hours	DESCRIPTION	INSTRUCTOR
63	4	OB/GYN Emergencies	Obstetrician/Gynecologist
64	8	Pediatric Pre-Hospital Care Advanced Life Support Providers' Course	Children's Hospital & Medical Center Pediatric Facility
65	8		
66	3	Psychiatric Emergencies	ER Social Worker, HMC
67	4	Coping with Death and Dying	Social Worker, HMC
68	4	The Medical Examiner	King County Medical Examiner
69	3	Legal Aspects of the Paramedic Profession	Assistant State Attorney General, UW
70	3	Rescue Procedures	Senior Paramedic Team
71	4	Triage and Extrication	Senior Paramedic Team
72	2	Extrication Devices	Seattle Fire Department Special Team
73	4	Defensive Driving	Seattle Fire Department Driving Instructor
74	2	Hazardous Materials	Seattle Fire Department Hazardous Materials Team Captain

Block III Lectures
Total Hours: 49
Total Lecture Hours: 222

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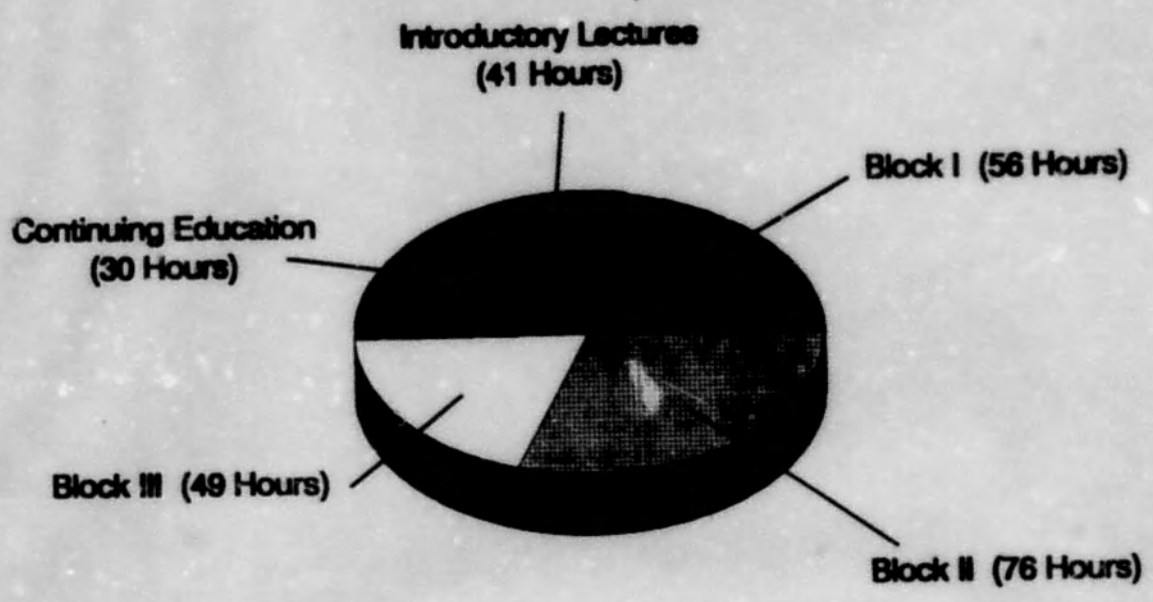
Monthly Continuing Education Lectures

Session	Hours	DESCRIPTION	INSTRUCTOR
10 Total	30	The University of Washington Paramedic Training Program sponsors monthly continuing medical education courses covering a wide range of topics for certified paramedics in the Pacific Northwest. These courses are held at Harborview Medical Center. Each session lasts approximately three hours. All paramedic students are required to attend these sessions.	University of Washington Faculty and guest lecturers

Summary of Lecture Hours



Total Hours = 252

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Children's Hospital Helistop
Glossary

Accident
The National Transportation Safety Board characterizes an "accident" as an occurrence associated with the operation of a rotorcraft between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage.

Advanced Life Support (ALS)
The provision of definitive medical treatment to a patient while en route to a hospital. This treatment can include but is not limited to establishing intravenous lines, administering drugs, inserting an endotracheal tube, or using a cardiac defibrillator. This care is normally provided by registered nurses or physicians.

Association of Air Medical Services (AAMS)
Formerly the American Society of Hospital Based Emergency Air Medical Services (ASHBEAMS), AAMS is a voluntary organization dedicated to the improvement of the aeromedical industry.

Critically ill or injured Patients
Those patients who might die or become seriously damaged unless appropriate medical treatment is received immediately.

Decibels (dB)
A sound level measurement unit.

Decibels, A-weighted (dBA)
A sound level measurement unit that takes into account the sensitivity of the human ear at various sound frequencies.

Emergency Medical Service (EMS) System
The extension of medical services to critically ill or injured patients and, if necessary, the transport of these patients to appropriate medical facilities.

Emergency Medical Technician (EMT)
An individual with a minimum of 81 hours of training in the treatment of medical emergencies.

Flight segment
The portion or leg of a mission that involves a take-off, travel to a destination, and landing at that destination. Flight segments for the proposal include travel from the Harborview or Boeing Field base to the patient, travel with the patient to Children's and return of the aircraft to base (or to the next mission). Flight segments may include picking up a specialty medical transport crew at Harborview or at the IMA Field.

Helipad
A surface used for parking helicopters.

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Helistop

An area used or intended to be used for the landing and takeoff of helicopters engaged in dropping-off or picking-up passengers or cargo.

Heliport

An identifiable area on land, water, or structure, including any building or facilities thereon, used or intended to be used for the landing and takeoff of helicopters. The term heliport applies to all sites, including helistops, used or intended to be used for the landing and takeoff of helicopters.

IICU

Infant Intensive Care Unit. Children's 19-bed IICU treats newborns with critical illnesses including respiratory distress, asphyxiations, congenital anomalies, newborns requiring major surgeries, and infants with severe infections. See also NICU, below.

Incident

Those occurrences other than an accident, associated with the operation of a helicopter, which affects or could affect the safety of operations.

Instrument Rated

A certification given to a pilot who demonstrates that he/she can operate an aircraft only under instrument orientation, without the ground being visible.

Instrument Flight Rules (IER)

Under Federal Aviation Regulation (FAR) Part 135, the rules that govern the procedures for conducting instrument flight, which corresponds to the situations in which visibility is less than one-half mile because of fog or clouds.

Interhospital Transport

The transport of a patient from one medical facility to another.

Intramural Field (IMA) Helistop

The existing helicopter takeoff and landing area located on the University of Washington's East Campus. The helistop is sometimes referred to as Graves Field, which is located several hundred feet to the east.

Intubation

Insertion of a tube into any hollow organ, such as a larynx or trachea, in order to provide air flow.

IV

Intravenous Treatment. The provision of a medicinal solution for medical treatment through a patient's vein. Either a syringe or a bottle connected to the needle by a plastic or rubber tubing is used to store and convey the solution.

Isolette

An enclosed unit used for the transport of babies. The 160-pound isolette contains a self-contained battery pack, which can be used when the isolette is not powered by aircraft or other electric system, as well as medical support equipment that can be configured to the specific needs of the transported patient.

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Military Assistance to Safety and Traffic (MAST)
The U.S. Army's helicopter service designed to provide services such as support in search and rescue operations, as well as the transport of patients to medical facilities.

Mission
One or more flight segments designed to accomplish a particular objective, including such objectives as patient transport, fueling, and training.

National Emergency Medical Services Pilots Association (NEMSPA)
A voluntary association whose primary concern is safety in the EMS industry.

Neonate
A child younger than one month.

Neonatology
A specialized branch of medicine that deals with children younger than one month old.

NICU
Neonatal Intensive Care Unit. The NICU is a medical unit similar to the IICU, however, the NICU is associated with an obstetric unit, while the IICU is not. The University of Washington Medical Center has a 32-bed NICU. Additional NICUs are located at Tacoma General Hospital, Madigan Army Medical Center and in Spokane.

Paramedic
An individual with a minimum of 1500 hours of training in the treatment of medical emergencies.

Pediatrics
Medical science related to the care of children and the treatment of their diseases.

PICU
Pediatric Intensive Care Unit. Children's 17-bed PICU treats critical pediatric medical emergencies. Other PICUs are located at Mary Bridge in Tacoma, and Tacoma.

Pre-hospital Transport
The transport of a patient from non-hospital settings (home, work, play or accident scene) to a hospital or medical center.

Primary care
Medical care that is offered by a physician who is the first contact with the patient and who provides entry for the patient into the health care system.

Secondary care
Medical care by a physician(s) who acts as a consultant at the request of the primary physician. More sophisticated care is referred to as tertiary care (see below).

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Sound Measurement

L_{eq}: The level of a steady sound that contains the same acoustical energy as the fluctuating noise over a given period of time.

L_{dn}: The L_{eq} over a 24-hour period, with a 10 dBA penalty included when averaging the L_{eq} for the hours between 10 p.m. and 7 a.m.

L_{max}: The highest instantaneous sound level occurring during a given period of time.

SEL: The Sound Exposure Level of a steady one-second sound that contains the same amount of sound energy as the entire event.

Standard of Care

The average degree of skill, care, and diligence exercised by members of the same profession, practicing in the same or similar locality in light of the present state of medical and surgical science.

Tertiary care

Advanced medical care involving those services necessary to deal with illnesses characterized by complex patho-physiological processes. Children's is a pediatric tertiary care center.

Transport or Transport Mission

One or more flight segments whose purpose is to transport a critically ill or injured patient from the point of origin to his/her destination and return the helicopter to its base or start of its next mission, See Flight segment, above. Flight segments may include picking up specialty medical transport crew.

Trauma

An injury caused by a mechanical or physical agent.

Visual Flight Rules (VFR)

Under Federal Aviation Regulation (FAR) Part 135, the rules under which the helicopter typically is operated when visibility is more than one-half mile. See Instrument Flight Rules, above.

Weather Minimums

Weather conditions that determine whether the aircraft will fly under Instrument Flight Rules, Visual Flight Rules, or not fly at all.

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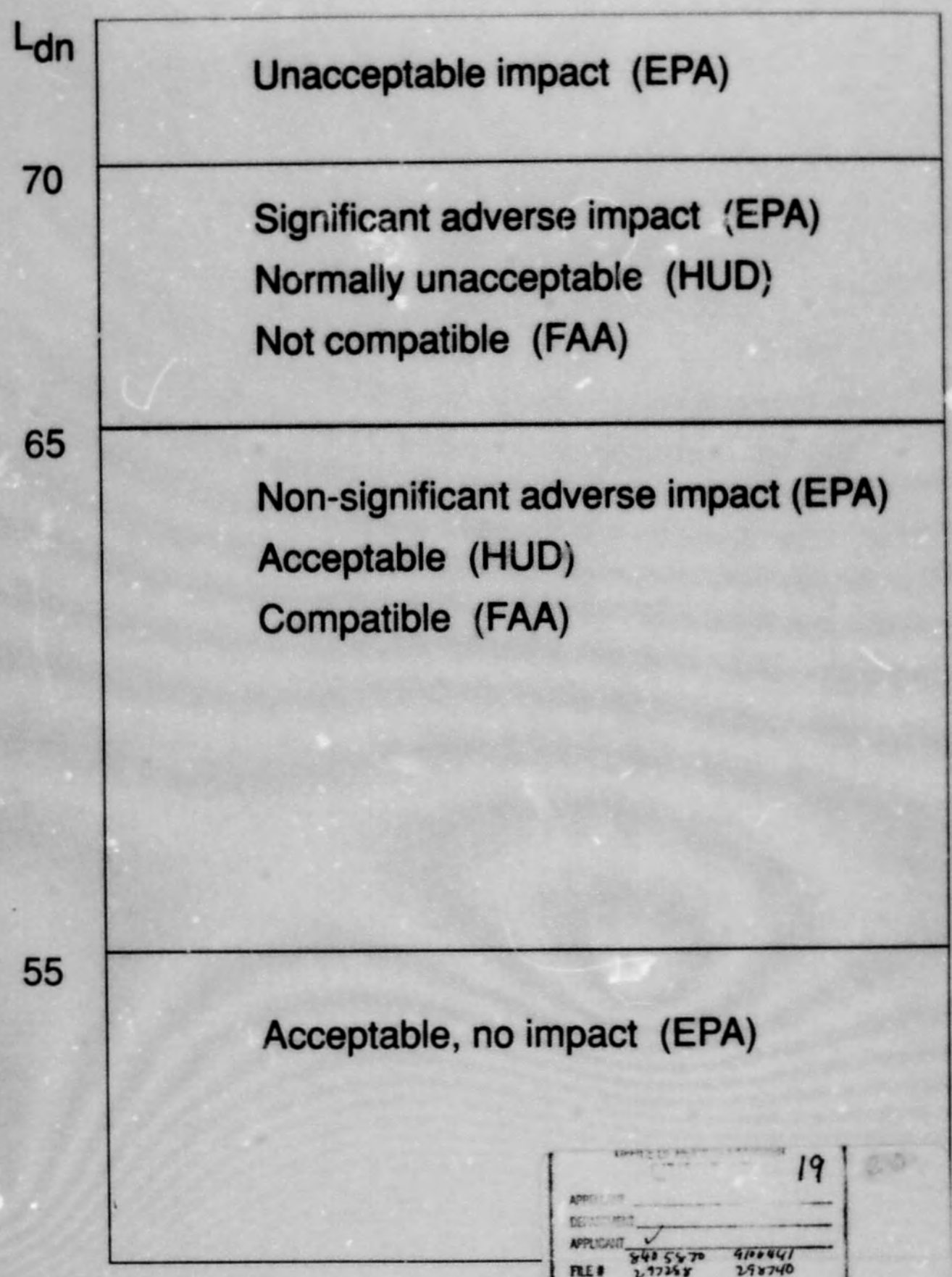
RESIDENTIAL NOISE CRITERIA



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19

APPLICANT ✓

FILE # 840 5470 4100641
277268 298740

SOUND LEVELS OF VARIOUS NOISE SOURCES

Sound Level, dBA	Source or Condition
140	Hearing damage risk for short exposure
130	Threshold of pain
120	Race car at 50 feet
110	Orchestra fortisimmo; rock and roll concert
100	Ambulance siren at 50 feet
90	Occupational noise limit for 8 hours/day exposure
85	Accelerating truck or bus at 50 feet; power lawn mower
84	Agusta helicopter, measured at receptor location closest to Children's campus
80	Ambulance siren at 500 feet; average downtown traffic noise
75	Inside auto, accelerating
70	Inside auto, steady speed
65	Typical auto measured at residential setback; urban residential average noise
60	Normal conversation
55	Suburban residential average noise
50	General office
45	Typical residential indoor
40	Quiet indoor
20	Whisper
0	Threshold of hearing

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FILE # 340570 257288 910441 29940

1987 - 1992 COMPARISONS

ROTARY WING LANDINGS - PEDIATRIC

LANDING SITE

LANDING SITE	1987	1988	1989	1990	1991	1992
CHMC	23.9%	22.2%	22.3%	29.6%	30.0%	21.8%
GRAVES	58.9%	73.5%	77.3%	69.3%	69.5%	74.2%
HARBORVIEW	16.7%	3.1%	0.0%	0.5%	0.5%	2.0%
BFI	0.5%	0.6%	0.4%	0.6%	0.0%	2.0%
OTHER	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%
TOTALS	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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21
APPLICANT
DEPARTMENT
APPLICANT ✓
FILE # 840587D 9106744
297288 287410

1987 - 1992 COMPARISONS

TOTAL AIRLIFT-NORTHWEST PEDIATRIC RW FLIGHTS

YEAR	FLIGHTS
1987	180
1988	163 *
1989	220 *
1990	199 *
1991	253 *
1992(est)	237

*Includes pick ups at CHMC

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1987 - 1992 COMPARISONS

AIRLIFT NORTHWEST PEDIATRIC RW LANDINGS AT CHMC
HISTORICAL AND PROJECTED

YEAR	LANDINGS
1987	43
1988	36
1989	49
1990	59
1991	76
1992(est)	61
1993	58
1994	59
1995	60

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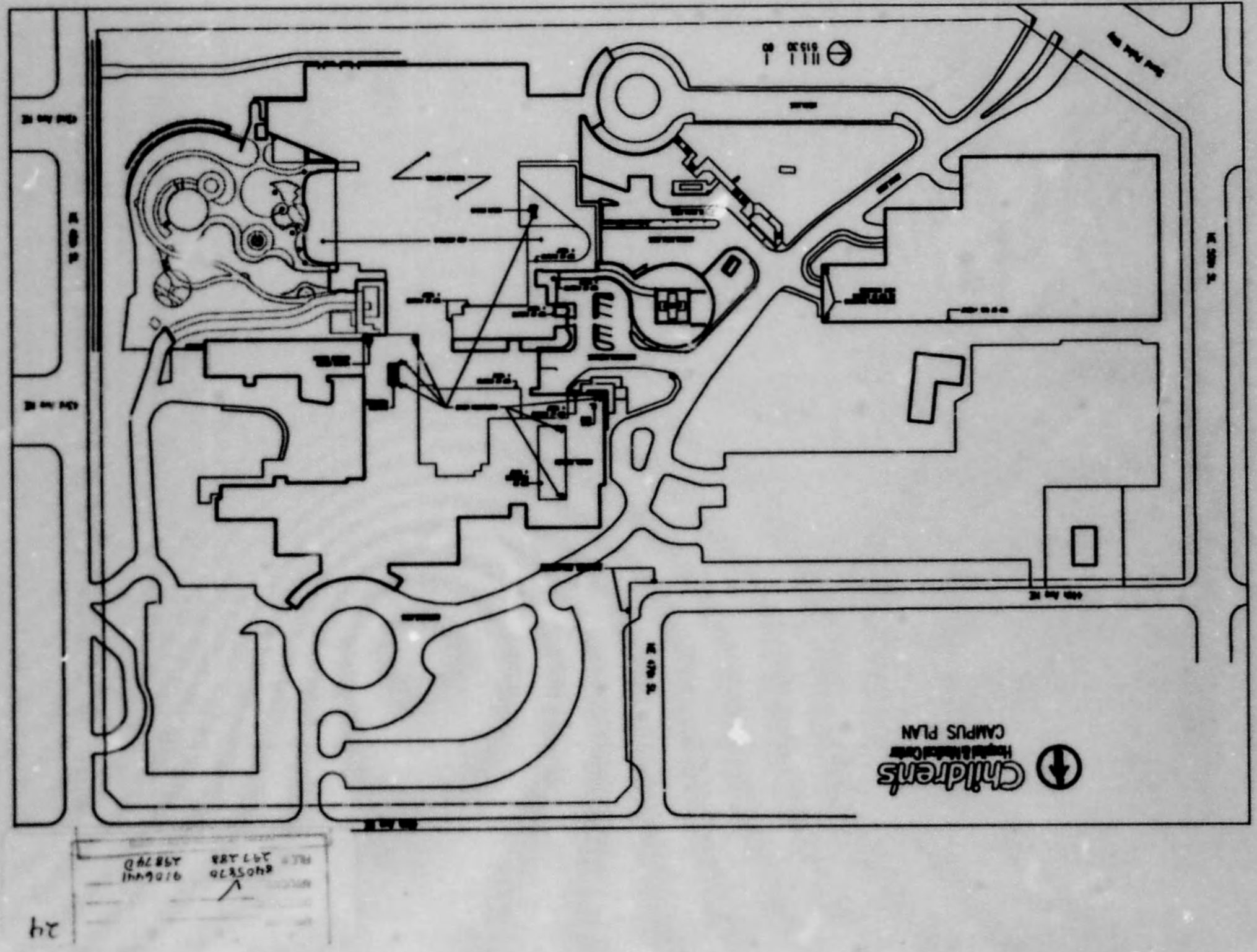
APPROVAL
BY
APPROVED
FILE 8405870 4106441
297288 298740

Children's Hospital & Medical Center
HELISTOP

PENNY DRIVE

PVT

12


Children's
Hospital & Medical Center
CAMPUS PLAN

Seattle Department of Construction and Land Use

Laura Gilbert, Acting Director
Norman B. Rice, Mayor

May 14, 1992

MASTER USE PERMIT

NOTICE OF DIRECTOR'S RECOMMENDATION ON COUNCIL CONDITIONAL USE, ENVIRONMENTAL DETERMINATION AND PUBLIC HEARING

Children's Hospital and Medical Center has applied for a permit to allow an emergency helistop on the CHMC campus and a second, primary helistop on the University of Washington campus near the intramural fields.

Project numbers: 8405870 and 9106441
Addresses: 4800 Sand Point Way N.E. and 2501 N.E. 45th Street
CF numbers: 297288 and 298740

The Director's recommendation is that the Council Conditional Use be conditionally approved. Recommended conditions relate to limiting noise, improving safety and monitoring of landings (types of equipment used and flight paths).

ENVIRONMENTAL DETERMINATION

DCLU has determined that the Final Environmental Impact Statement (FEIS) adequately describes and assesses the adverse impacts of the proposal. The proposal has been conditioned to mitigate impacts. Although significant noise impacts occur, the benefits of the proposal have been found to outweigh the adverse impacts.

INFORMATION AVAILABLE

Copies of the Director's Report and Recommendation and the application materials are available at the DCLU Master Use Permit Information and Notification Center, 710 Second Avenue, Suite 200, Dexter Horton Building. Questions may be directed to Faith Lumsden, Senior Land Use Specialist, 684-8875, at DCLU.

PUBLIC HEARING

A public hearing to take public comment on the Director's recommendation and to establish the record for this application will be held on **June 23, 1992**, beginning at 9:00 a.m. in Room 1310 Alaska Building, 618 Second Avenue. The first two hours of the hearing have been scheduled for presentations by DCLU and CHMC. (This location is accessible.) Citizens may call the Office of Hearing Examiner in June to confirm timing for public testimony or to request accommodations for disability.

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WRITTEN COMMENTS

Written comments may be submitted through **June 23, 1992**. Comments may be sent to:

Office of Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

Those persons who want to receive a notice of the Hearing Examiner's recommendation should specify that request in their comment letter.

HOW TO APPEAL THE ENVIRONMENTAL DETERMINATION

Appeals of the decision finding the EIS to be adequate may be submitted to the Hearing Examiner through **May 29, 1992**. Appeals should be addressed to the Hearing Examiner at the address above.

Any appeal of the SEPA determination will be heard at the conclusion of the public hearing. A second day, June 24, 1992, is available for the appeal, if necessary.

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(460)

#9100626
#9405870 & 9106441
300' list

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UNITED C[illegible] PALSY ASSN
4409 INTE[illegible]E AVE N
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4526 45TH AVE NE
SEATTLE, WA 98105

WAYNE PATTY BEVERLY JONES
4541 46TH AVE NE
SEATTLE, WA 98105

ESTHER KILLUP-TRUSTEE
5011 45TH AVE NE
SEATTLE, WA 98105

CLARK SORENSEN
SUSAN WAY
4530 45TH AVE NE
SEATTLE, WA 98105

G LIVESLEY
4535 46TH AVE NE
SEATTLE, WA 98105

HARRY & HELEN OSTROM
5014 44TH AVE NE
SEATTLE, WA 98105

ROY AMUNDSEN
4536 45TH AVE NE
SEATTLE, WA 98105

KEVIN SCHMITZ-ROBINSON
5133 46TH AVE NE
SEATTLE, WA 98105

JERRY SCHNEIDER
5003 45TH AVE NE
SEATTLE, WA 98105

ELIZABETH SHINOLT
4540 45TH AVE NE
SEATTLE, WA 98105

RANDALL & DARLENE GERBER
4521 46TH AVE NE
SEATTLE, WA 98105

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KENNETH & SUSAN FAIRCHILD
4527 46TH AVE NE
SEATTLE, WA 98105

GEOFFREY & KATHRYN HARRIS
4750 45TH AVE NE
SEATTLE, WA 98105

JENS JORGENSEN
4727 46TH AVE NE
SEATTLE, WA 98105

OLIVE HIRSCHORN
4517 46TH AVE NE
SEATTLE, WA 98105

KIMBERLEE BRILLHART
4758 45TH AVE NE
SEATTLE, WA 98105

NANCY COACHMAN
4717 46TH AVE NE
SEATTLE, WA 98105

RICHARD & BARBARA SHAFER
4706 45TH AVE NE
SEATTLE, WA 98105

ROBERT JONES
4753 46TH AVE NE
SEATTLE, WA 98105

BRUCE VANNORMAN
4711 46TH AVE NE
SEATTLE, WA 98105

HUGO SCHIMMELBUSCH
4702 45TH AVE NE
SEATTLE, WA 98105

MAYONE NEELY
3235 106TH AVE SE
BELLEVUE, WA 98004

GLADYS SAVAGE
4709 46TH AVE NE
SEATTLE, WA 98105

SUSAN DOUGHTEN
4716 45TH AVE NE
SEATTLE, WA 98105

KEITH PRINCE
4747 46TH AVE NE
SEATTLE, WA 98105

DOROTHY SCHOLZ
4701 46TH AVE NE
SEATTLE, WA 98105

JOHN & KAREN SERKLAND
4722 45TH AVE NE
SEATTLE, WA 98105

SALLY AINSLIE
4741 46TH AVE NE
SEATTLE, WA 98105

ROBERT BOHRER
4557 55TH AVE NE
SEATTLE, WA 98105

PAUL MENDELMAN
C/O BOX 34040
SEATTLE, WA 98124

SHIRLEY BONNEY
4737 46TH AVE NE
SEATTLE, WA 98105

ARTHUR BESTOR
4553 55TH AVE NE
SEATTLE, WA 98105

FREDERICK & KATHERINE FARR
4732 45TH AVE NE
SEATTLE, WA 98105

CHESTER KINGSBURY
4731 46TH AVE NE
SEATTLE, WA 98105

RICHARD & LAURA LINDSTROM
4546 E LAUREL DR NE
SEATTLE, WA 98105

THOMAS & SUSANNE SIMPSON
4746 45TH AVE NE
SEATTLE, WA 98105

LELAND DALE
4723 46TH AVE NE
SEATTLE, WA 98105

JOHN & NANCY OBLANAS
4545 55TH AVE NE
SEATTLE, WA 98105

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AGNES SMITH
4539 55TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4532 E LAUREL DR NE
SEATTLE, WA 98105

KAREN & DEE MCGONIGLE
4319 43RD AVE NE
SEATTLE, WA 98105

K HEMER
4537 55TH AVE NE
SEATTLE, WA 98105

RANDOLPH CLEMENTS
4540 E LAUREL DR NE
SEATTLE, WA 98105

JOHN CLARK
4170 42ND AVE NE
SEATTLE, WA 98105

TERRENCE SHOWMAN
4531 55TH AVE NE
SEATTLE, WA 98105

RICHARD & LAURA LINDSTROM
4546 E LAUREL DR NE
SEATTLE, WA 98105

THOMAS & BEVERLY MCGUFFIN
4172 42ND AVE NE
SEATTLE, WA 98105

C WARREN BIERMAN
4524 E LAUREL DRIVE
SEATTLE, WA 98105

RICHARD SHIKIAR
4552 E LAUREL DR NE
SEATTLE, WA 98105

JEFFREY CASH
JANET LIN
4178 42ND AVE NE
SEATTLE, WA 98105

LUIS HUEBNER
4521 55TH AVE NE
SEATTLE, WA 98105

WILLIAM & NANCY CATTERALL
4556 E LAUREL DR NE
SEATTLE, WA 98105

RUSSELL PALMER
4180 42ND AVE NE
SEATTLE, WA 98105

KERMIT MEYERS
4511 55TH AVE NE
SEATTLE, WA 98105

RUTH DAM
4415 43RD AVE NE
SEATTLE, WA 98105

JOHN SHORT
4186 42ND AVE NE
SEATTLE, WA 98105

JOSEPH BECKER
4505 55TH AVE NE
SEATTLE, WA 98105

WINSTON JOHNSON
4411 43RD AVE NE
SEATTLE, WA 98105

ERIC & CAROL STOLER
4188 42ND AVE NE
SEATTLE, WA 98105

GUY & MAUREEN KRAUSE
4520 E LAUREL DR NE
SEATTLE, WA 98105

DOUGLAS SMITH
JERI LEE PUYEAR
4407 43RD AVE NE
SEATTLE, WA 98105

FRANK NICHOLSON
4205 NE 45TH AVE NE
SEATTLE, WA 98105

HEINRICH TENCKHOFF
4528 E LAUREL DR NE
SEATTLE, WA 98105

WILLIAM & NANCY NICHOLS
4323 43RD AVE NE
SEATTLE, WA 98105

C HOLMQUIST
4107 NE 45TH ST
SEATTLE, WA 98105

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THERESA STANLEY
1324 N 40TH ST
SEATTLE, WA 98103

ALAN & JOYCE ODEGARD
2308 EVERGREEN POINT ROAD
BELLEVUE, WA 98004

BRYCE & TERESA MICHEL
4181 42ND AVE NE
SEATTLE, WA 98105

THOMAS TOUNTAS
PO BOX 849
FALL CITY, WA 98024

ALAN SOMERS
22306 JEFFERSON BEACH RD NE
KINGSTON, WA 98346

THOMAS & SUSAN SAMS
10427 22ND AVE SW
SEATTLE, WA 98146

AUGUSTA LITMER
4173 42ND AVE NE
SEATTLE, WA 98105

FLORA MILNER
4757 41ST AVE NE
SEATTLE, WA 98105

MARGARET MCKENNA
4169 42ND AVE NE
SEATTLE, WA 98105

ALAN & JOYCE ODEGARD
2307 EVERGREEN POINT ROAD
BELLEVUE, WA 98004

FRANK BOYLE
4163 42ND AVE NE
SEATTLE, WA 98105

SEATTLE FIRST NATL BANK
RIACH TRUST
PO BOX 3586 TRUST R/E DEPT
SEATTLE, WA 98124

JACK HAYES
117 NW 198TH ST
SEATTLE, WA 98177

HENRY LEWISON
2100 124TH AVE NE
BELLEVUE, WA 98005

DANIEL & DIANA WALLACE
BRETT & SUSAN FIDLER
11245 NE 37TH PL
BELLEVUE, WA 98004

HENRY LEWISON
2100 124TH AVE NE
BELLEVUE, WA 98005

WILLIAM GEORGE
P O BOX 5115
STANFORD CA 94309

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9100620

OCCUPANT
4510 40TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4728 40TH AVE NE #1A
SEATTLE, WA 98105

OCCUPANT
4728 40TH AVE NE #1B
SEATTLE, WA 98105

OCCUPANT
4728 40TH AVE NE #2A
SEATTLE, WA 98105

OCCUPANT
4728 40TH AVE NE #2B
SEATTLE, WA 98105

OCCUPANT
4728 40TH AVE NE #3A
SEATTLE, WA 98105

OCCUPANT
4728 40TH AVE NE #3B
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #A
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #B
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #C
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #D
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #E
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #F
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #G
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #H
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #I
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #J
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #K
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #L
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #M
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #N
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #O
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #P
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #Q
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #R
SEATTLE, WA 98105

OCCUPANT
4744 40TH AVE NE #A
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #B
SEATTLE, WA 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

OCCUPANT
4740 40TH AVE NE #C
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #D
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #E
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #F
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #G
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #H
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #I
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #J
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #K
SEATTLE, WA 98105

OCCUPANT
4740 40TH AVE NE #L
SEATTLE, WA 98105

OCCUPANT
5000 40TH AVE NE
SEATTLE, WA 98105

OCCUPANT
5020 40TH AVE NE #101
SEATTLE, WA 98105

OCCUPANT
5020 40TH AVE NE #102
SEATTLE, WA 98105

OCCUPANT
5020 40TH AVE NE #103
SEATTLE, WA 98105

OCCUPANT
5020 40TH AVE NE #104
SEATTLE, WA 98105

OCCUPANT
5020 40TH AVE NE #105
SEATTLE, WA 98105

OCCUPANT
5024 40TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4601 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4603 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4610 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4611 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4615 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4617 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4618 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4621 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4625 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4628 41ST AVE NE
SEATTLE, WA 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

OCCUPANT
4670 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4671 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4674 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4679 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4683 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4689 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4704 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4706 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4710 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4630 41ST AVE NE
SLATTLE, WA 98105

OCCUPANT
4631 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4632 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4633 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4634 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4639 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4640 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4641 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4647 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4649 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4650 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4651 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4652 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4660 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4664 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4667 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4668 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4669 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4720 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4724 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4747 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4749 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4761 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
4705 SAND POINT WAY NE
SEATTLE, WA 98105

OCCUPANT
4711 SAND POINT WAY NE
SEATTLE, WA 98105

OCCUPANT
4713 SAND POINT WAY NE
SEATTLE, WA 98105

OCCUPANT
4715 SAND POINT WAY NE
SEATTLE, WA 98105

OCCUPANT
4717 SAND POINT WAY NE
SEATTLE, WA 98105

OCCUPANT
4733 SAND POINT WAY NE - UPPER
SEATTLE, WA 98105

OCCUPANT
4733 SAND POINT WAY NE - LOWER
SEATTLE, WA 98105

OCCUPANT
4743 SAND POINT WAY NE
SEATTLE, WA 98105

OCCUPANT
4755 SAND POINT WAY NE
SEATTLE, WA 98105

OCCUPANT
4757 SAND POINT WAY NE
SEATTLE, WA 98105

OCCUPANT
4800 SAND POINT WAY NE
SEATTLE, WA 98105

OCCUPANT
5026 SAND POINT WAY NE
SEATTLE, WA 98105

OCCUPANT
5000 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
5005 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
5007 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
5015 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
5016 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
5017 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
5018 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
5021 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
5027 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
5023 SAND POINT PLACE NE
SEATTLE, WA 98105

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IT IS DUE TO THE QUALITY OF THE DOCUMENT.

OCCUPANT
5024 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
5026 SAND POINT PLACE NE - UPPER
SEATTLE, WA 98105

OCCUPANT
5026 SAND POINT PLACE NE - LOWER
SEATTLE, WA 98105

OCCUPANT
5030 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
5031 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
5032 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
5035 SAND POINT PLACE NE
SEATTLE, WA 98105

OCCUPANT
4720 44TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4744 44TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4745 44TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4750 44TH AVE NE
SEATTLE, WA 98105

OCCUPANT
5000 44TH AVE NE
SEATTLE, WA 98105

OCCUPANT
5005 44TH AVE NE
SEATTLE, WA 98105

OCCUPANT
5007 44TH AVE NE #A
SEATTLE, WA 98105

OCCUPANT
5007 44TH AVE NE #B
SEATTLE, WA 98105

OCCUPANT
5009 44TH AVE NE
SEATTLE, WA 98105

OCCUPANT
5011 44TH AVE NE
SEATTLE, WA 98105

OCCUPANT
5019 44TH AVE NE
SEATTLE, WA 98105

OCCUPANT
5023 44TH AVE NE
SEATTLE, WA 98105

OCCUPANT
5027 44TH AVE NE
SEATTLE, WA 98105

OCCUPANT
5028 44TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4516 45TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4520 45TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4705 45TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4736 45TH AVE NE
SEATTLE, WA 98105

OCCUPANT
5011 45TH AVE NE - UPPER
SEATTLE, WA 98105

OCCUPANT
5011 45TH AVE NE - LOWER
SEATTLE, WA 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE,
IT IS DUE TO THE QUALITY OF THE DOCUMENT.

OCCUPANT
5022 45TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #D
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #M
SEATTLE, WA 98105

OCCUPANT
4531 46TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #E
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #N
SEATTLE, WA 98105

OCCUPANT
4545 46TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #F
SEATTLE, WA 98105

OCCUPANT
4200 NE 50TH ST
SEATTLE, WA 98105

OCCUPANT
5009 46TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #G
SEATTLE, WA 98105

OCCUPANT
4202 NE 50TH ST
SEATTLE, WA 98105

OCCUPANT
5019 46TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #H
SEATTLE, WA 98105

OCCUPANT
4204 NE 50TH ST
SEATTLE, WA 98105

OCCUPANT
5021 46TH AVE NE
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #I
SEATTLE, WA 98105

OCCUPANT
4250 NE 50TH ST
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #A
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #J
SEATTLE, WA 98105

OCCUPANT
4260 NE 50TH ST
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #B
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #K
SEATTLE, WA 98105

OCCUPANT
4262 NE 50TH ST
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #C
SEATTLE, WA 98105

OCCUPANT
4001 NE 50TH ST #L
SEATTLE, WA 98105

OCCUPANT
4264 NE 50TH ST
SEATTLE, WA 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

OCCUPANT
4270 NE 50TH ST
SEATTLE, WA 98105

OCCUPANT
4007 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4323 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4270 1/2 NE 50TH ST
SEATTLE, WA 98105

OCCUPANT
4013 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4327 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4400 NE 50TH ST
SEATTLE, WA 98105

OCCUPANT
4022 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4331 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4402 NE 50TH ST
SEATTLE, WA 98105

OCCUPANT
4027 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4335 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4500 NE 50TH ST
SEATTLE, WA 98105

OCCUPANT
4030 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4339 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4515 NE 50TH ST
SEATTLE, WA 98105

OCCUPANT
4032 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4177 42ND AVE NE
SEATTLE, WA 98105

OCCUPANT
4516 NE 50TH ST
SEATTLE, WA 98105

OCCUPANT
4036 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4191 42ND AVE NE
SEATTLE, WA 98105

OCCUPANT
4002 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4315 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4406 43RD AVE NE
SEATTLE, WA 98105

OCCUPANT
4006 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4319 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4412 43RD AVE NE
SEATTLE, WA 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

OCCUPANT
4415 43RD AVE NE
SEATTLE, WA 98105

OCCUPANT
4338 NE 44TH ST
SEATTLE, WA 98105

OCCUPANT
4416 43RD AVE NE
SEATTLE, WA 98105

OCCUPANT
4003 NE 45TH ST
SEATTLE, WA 98105

OCCUPANT
4300 NE 44TH ST
SEATTLE, WA 98105

OCCUPANT
4316 NE 44TH ST
SEATTLE, WA 98105

OCCUPANT
4320 NE 44TH ST
SEATTLE, WA 98105

OCCUPANT
4324 NE 44TH ST
SEATTLE, WA 98105

OCCUPANT
4326 NE 44TH ST
SEATTLE, WA 98105

OCCUPANT
4330 NE 44TH ST
SEATTLE, WA 98105

OCCUPANT
4334 NE 44TH ST
SEATTLE, WA 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

CHMC CHILDRENS LIST CHILDLST P.1 6.
Parties of Record
435T 460

HERBERT ABELSON MD
4800 SANDPOINT WAY NE
PO BOX 5371
SEATTLE, WA 98105

DEBBIE ADAIR
18104 NE 196TH ST
WOODINVILLE, WA 98072

RUSS ALTERMATT
SETON JOHNSON & ODELL
133 SW 2ND ST
PORTLAND, OR 97204

LIZ ANDERSON-LAND USE COMMITTEE
LAURELHURST COMMUNITY CLUB
4746 45TH AVE NE
SEATTLE, WA 98105

LORI ANDERSON
12645 SE 211TH ST
KENT, WA 98031

PATRICIA WOOD
4036 NE 45TH ST
SEATTLE, WA 98105

MARLIN APPELWICK-46TH DISTRICT
HOUSE OF REPRESENTATIVES
STATE OF WASHINGTON
OLYMPIA, WA 98504

MIRIAM ARMOUR
4830 NE 44TH ST
SEATTLE, WA 98105

SUSAN ARMSTRONG
1376 85TH AVE NE
BELLEVUE, WA 98004

GEORGE AVIS
751 KEARNEY ST
PORT TOWNSEND, WA 98368

STEPHANIE AXELROD
2416 N 43RD ST
SEATTLE, WA 98103

SHAPIRO & ASSOCIATES
506 2ND AVE
SMITH TOWER STE 1812
SEATTLE, WA 98104

S BAKER
3851 44TH AVE NE
SEATTLE, WA 98105

BRUCE BALICK
2118 E SHELBY ST
SEATTLE, WA 98112

MARY VIRGINIA BALLARD
4613 41ST AVE NE
SEATTLE, WA 98105

BART BAXTER
3905 48TH PL NE
SEATTLE, WA 98105

CHRIS & SHARON BEASLEY
5132 46TH AVE NE
SEATTLE, WA 98105

THOMAS BELL M.D.
4217 51ST AVE NE
SEATTLE, WA 98105-4930

DAVID & HELEN BELVIN
4757 45TH AVE NE
SEATTLE, WA 98105

HERDIS BENEDIKTSON
4609 41ST AVE NE
SEATTLE, WA 98105

RUTH BENFIELD
7215 26TH AVE NE
SEATTLE, WA 98105

DIANE HUCKS BERGER
649 12TH AVE
KIRKLAND, WA 98033

WILLIAM BERGQUIST
3662 42ND AVE NE
SEATTLE, WA 98105

LUCILLE BETCONE
9025 NE 24TH ST
BELLEVUE, WA 98004

DR JAMES BINGHAM
4112 43RD AVE NE
SEATTLE, WA 98105

D BLISS
1429 QUINCY
PORT TOWNSEND, WA 98368

TRISH BLOOR
5038 44TH AVE NE
SEATTLE, WA 98105

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ROBERT BOICE
607 WATER ST
PORT TOWNSEND, WA 98368

P A BREYSSE-ASSSOC PROFESSOR EMERITUS
SCHOOL OF PUBLIC HEALTH
SC-34 UW
SEATTLE, WA 98195

GAIL CHRISTENSEN
19461 NORMANDY PARK DR SW
SEATTLE, WA 98166

JUDITH BONIFACI
19615 182ND AVE NE
WOODINVILLE, WA 98072

DAVID BRICKLIN
FOURTH & PIKE BLDG
1424 FOURTH AVENUE
SEATTLE, WA 98101

RON CHRISTIANSEN
2429 140TH PL SE
MILL CREEK, WA 98012

E L BOOSE
MINNA PARKS GUILD
3402 NE 45TH PL
SEATTLE, WA 98105

MAUREEN BROTHERTON
4542 49TH AVE NE
SEATTLE, WA 98105

MARVIN CHRISTMAN
4350 53RD AVE NE
SEATTLE, WA 98105

SHARON BOSTROM
18109 NE 197TH PL
WOODINVILLE, WA 98072

MR & MRS RAYMOND BROWN
6023 NE 61ST ST
SEATTLE, WA 98115

MARVIN CHRISTMAN
EVERGREEN SAFETY COUNCIL
7600 SAND POINT WY NE C-15700
SEATTLE, WA 98115-0070

SCOTT BOYD
FLAHERTY NEWSPAPERS
1225 N 43RD ST
SEATTLE, WA 98103

MRS STEPHEN BROWN
16725 140TH AVE NE
WOODINVILLE, WA 98072

CATHE CLAPP
10714 1ST AVE NW
SEATTLE, WA 98177

WILLIAM & ESTHER BRANCH
5011 45TH AVE NE
SEATTLE, WA 98105

E BRYAN
4141 42ND AVE NE
SEATTLE, WA 98105

PAUL & MARGARET CLINE
4840 38TH AVE NE
SEATTLE, WA 98105

MARY BRANNON
642 MAULSBY LANE
EVERETT, WA 98201

E BULL
1027 NE 123RD ST
SEATTLE, WA 98125

SCOTT COBB
4654 41ST AVE NE
SEATTLE, WA 98105

REP JOANNE BREKKE-STATE HOUSE
COMM ON SOCIAL & HEALTH NOTIFICATION
HOUSE OFFICE BLDG-2ND FL
OLYMPIA, WA 98504

CHILDREN'S DAY SURGERY
CHILDRENS ORTHOPEDIC HOSPITAL
4800 SAND POINT WAY NE-BOX C5371
SEATTLE, WA 98105

MICHAEL COCHRAN
3838 SUBURBAN DR NE
SEATTLE, WA 98105

MRS BETTY BREWSTER
146 NW 74TH ST
SEATTLE, WA 98117

JACK CHOURRE
4828 37TH AVE NE
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PHILLIS COLEMAN
18121 NE 197TH PL
WOODINVILLE, WA 98072

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CHMC P.3

LUCILLE CONRAD
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SEATTLE, WA 98105

DORIS BAXTER BURNS
2511 W MONTLAKE PL E
SEATTLE, WA 98112

IRA DUDEN
16033 SE 46TH PL
BELLEVUE, WA 98006

GREGORY BUSH
METRO-ENVIRONMENTAL PLANNING
821 2ND AVE
SEATTLE, WA 98104

BARBARA COOK
21235 24TH AVE S
SEATTLE, WA 98198

NANCY EARNEST
3428 S 263RD ST
KENT, WA 98032

MONIQUE CORNIER
SEATTLE CENTRAL COMM COLLEGE
1701 BROADWAY AVE
SEATTLE, WA 98122

STEVEN CALL-EMERGENCY MEDICAL SERVICES
SMITH TOWER STE 508
506 2ND AVE
SEATTLE, WA 98104-2388

CAROLYN EDWARDS
9232 NE 139TH ST
KIRKLAND, WA 98034

RAY CUSHMAN
160 COLEMAN DR
PORT TOWNSEND, WA 98360

JENNY & ERIC CARLSON
4516 NE 38TH ST
SEATTLE, WA 98105

PETER EGLICK
SUITE 1130
1411 4TH AVE BLDG
SEATTLE, WA 98101

DIANE CUTHBERTSON
20005 NE 192ND ST
WOODINVILLE, WA 98072

CARVER RESIDENCE
4305 43RD AVE NE
SEATTLE, WA 98105

ELEANOR EMERY
4814 NE 44TH ST
SEATTLE, WA 98105

MARIANNE DAILEY
5132 45TH AVE NE
SEATTLE, WA 98105

MRS RANDALL CASE
4111 43RD AVE NE
SEATTLE, WA 98105

RUTH ENGELBERG
4717 45TH AVE NE
SEATTLE, WA 98105

RUTH DAM
4415 43RD AVE NE
SEATTLE, WA 98105

DR MARCI CATANZARO
4801 TERRACE DR NE
SEATTLE, WA 98105

BARBARA ERAK
6807 54TH AVE NE
SEATTLE, WA 98115

PAMELA DAVID
4522 129TH PL NE
MARYSVILLE, WA 98270

LISA CHASTAIN
14512 NE 178TH PL
WOODINVILLE, WA 98072

VICKI EVANS
4822 SUNNYSIDE BLVD #A
MARYSVILLE, WA 98270

MARK & JUANITA BUNCH
4715 45TH AVE NE
SEATTLE, WA 98105

BOB & JO CHATALAS
3906 50TH AVE NE
SEATTLE, WA 98105

CAROLINE EVANS
9046 E SHOREWOOD DR #282
MERCER ISLAND, WA 98040

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CHMC P.4

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SEATTLE, WA 98105

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CALAWAH MEDICAL CLINIC
RR 3 BOX 3576
FORKS, WA 98331

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SEATTLE, WA 98105

SHARON DITTENBERGER
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EDMONDS, WA 98020

NUDA GIDDENS
4338 NE 44TH ST
SEATTLE, WA 98105

GOODWIN DEACON
3042 12TH AVE W
SEATTLE, WA 98119

LAWRENCE DONOHUE MD
801 BROADWAY-SUITE 511
SEATTLE, WA 98122

RITA GILL
4700 NE 40TH ST
SEATTLE, WA 98105

HARLAN DEAN
4001 NE SURBER DR
SEATTLE, WA 98105

THERESA FREY
12803 SE 231ST WAY
KENT, WA 98031

BETTY GIRDLER
2831 91ST ST SE
EVERETT, WA 98204

RITA DEGGINGER
4721 45TH AVE NE
SEATTLE, WA 98105

LULA FULMER
7208 57TH AVE NE
SEATTLE, WA 98115

DON FENNO
9714 3RD AVE NW
SEATTLE, WA 98117

WSDOT/DIV OF AERONOTICS
8600 PERIMETER ROAD
KING CO AIRPORT
SEATTLE, WA 98108

ERIC FURMAN MD
4416 45TH AVE NE
SEATTLE, WA 98105

BRIAN & MARLA FENSKE
4625 41ST AVE NE
SEATTLE, WA 98105

GLENN DEXTER
5151 47TH AVE NE
SEATTLE, WA 98105

LOLA GAETZ
4708 44TH AVE NE
SEATTLE, WA 98105

SUE FERRELL
6208 39TH AVE NE
SEATTLE, WA 98115

MICHELE DICKENS
18516 NE 189TH ST
WOODINVILLE, WA 98072

VICTORIA GALANTI
3517 NE 50TH ST
SEATTLE, WA 98105

JUDY FIELD
12926 NE 136TH ST
KIRKLAND, WA 98034

VAL DIDJURGIS
19915 182ND AVE NE
WOODINVILLE, WA 98072

JAY GIBBS
5038 44TH AVE NE
SEATTLE, WA 98105

PATRICK FITZSIMONS
POLICE DEPARTMENT
02-04-01,

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CHMC P.5

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KIRKLAND, WA 98034

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1000 NW NORTHWOOD ROAD
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HARLEY & MARCIA GRABER
2294 OLD DAY CREEK ROAD
SEDRO WOOLLEY, WA 98284

ANITA FRANCIS
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SEATTLE, WA 98105

MAXINE HAYES
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BELLEVUE, WA 98006

NANCY GREENAWALT-CHILDRENS HOSPITAL
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MRS FRANKLAND
4811 NE 43RD ST
SEATTLE, WA 98105

C HECK
18120 NE 189 H ST
WOODINVILLE, WA 98072

ALMA GRIFFIN
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KIRKLAND, WA 98033

NANCY FREEMAN
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BAINBRIDGE, WA 98110

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PROFESSOR OF PATHOLOGY-UW
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SEATTLE, WA 98105

JEAN HARKINS
4659 41ST AVE NE
SEATTLE, WA 98105

KATE HEMER-LAURELHURST COMM CLUB
HOSPITAL LIASON COMM.
4537 55TH AVE NE
SEATTLE, WA 98105

LINDA HAMMER
4529 129TH PL NE
MARYSVILLE, WA 98270

NANCY HARKNESS
17433 SYLVESTER ROAD SW
SEATTLE, WA 98166

KATHLYN GORDON
19615 182ND AVE NE
WOODINVILLE, WA 98072

MARTIN HANSEN
3843 120TH AVE SE
BELLEVUE, WA 98006

CLAUDE HARRIS
FIRE DEPT
301 2ND AVE S
SEATTLE, WA 98104

G GORDON
4002 NE 45TH ST
SEATTLE, WA 98105

LILLIAN HANSEN
16704 188TH PL NE
WOODINVILLE, WA 98072

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DELORES HYATT
4614 41ST AVE NE
SEATTLE, WA 98105

MICHELLE HYATT
10020 SHOULTES
MARYSVILLE, WA 98270

JOYCE HYDEE
15226 NE 195TH ST
MARYSVILLE, WA 98270

JOYCE ISHIDA
6854 18TH AVE NE
SEATTLE, WA 98115

JOYCE JACKSON
19304 193RD AVE NE
WOODINVILLE, WA 98072

PHYLLIS JACKSON
4307 NE 57TH ST
SEATTLE, WA 98105

KEN JACOBSEN
7307 40TH AVE NE
SEATTLE, WA 98105

LIESA JENSEN
10853 37TH AVE SW
SEATTLE, WA 98146

KEN JACOBSEN-46TH DISTRICT
HOUSE OF REPRESENTATIVES
STATE OF WASHINGTON
98504, JEREMY MATTOX & ASSOC

ANITA JOHANSEN
3908 MISSION BEACH DR
MARYSVILLE, WA 98270

MRS HENDRICKSON
1092 ALDER
MARYSVILLE, WA 98270

JANET & VERN HERREN
11822 102ND AVE SE
KENT, WA 98032

EUGENE HILL
12104 SE 223RD PL NE
KIRKLAND, WA 98034

MRS HIRSCHORN
4517 46TH AVE NE
SEATTLE, WA 98105

KAREN & STEVE HOFFMAN
10933 SE 183RD PL
RENTON, WA 98055

RUTH HOKUESTAD
PO BOX 196
SUQUAMISH, WA 98392

CHARLES HOUGH
5054 44TH AVE NE
SEATTLE, WA 98105

WILLIAM HOWARD
932 PIERCE ST
PORT TOWNSEND, WA 98368

LAURIE HUNTER
18221 NE 186TH ST
WOODINVILLE, WA 98072

MAE KEMP
5050 50TH AVE NE
SEATTLE, WA 98115

VICTORIA KING-PRESIDENT
VIEW RIDGE COMM CLUB
PO BOX 15218
SEATTLE, WA 98115

JOAN KING
3914 NE BELVOIR PL
SEATTLE, WA 98105

C KIPPENHAN
3908 NE 38TH ST
SEATTLE, WA 98105

DAN KIPPERBERG
5002 84TH ST NE
MARYSVILLE, WA 98270

GERARD KIRCHER
1528 NE 91ST ST
SEATTLE, WA 98115

BEV KIRKLAND
18321 NE 191ST ST
WOODINVILLE, WA 98072

CHERYL KITCHIN
4702 44TH AVE NE
SEATTLE, WA 98105

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CHMC P.7

ARTHUR & EDITH KLASSEN
5011 45TH AVE NE
SEATTLE, WA 98105

KAH TAI CARE CENTER
751 KEARNEY
PORT TOWNSEND, WA 98368

LOTERBAUER RESIDENCE
11603 SE 163RD ST
RENTON, WA 98055

ROBERT KLUG
LAURELHURST COMM CLUB
4326 NE 42ND ST
SEATTLE, WA 98105

DIANE KANNING
4022 EASTERN AVE N
SEATTLE, WA 98103

ERNEST LOTZ
2316 NW 95TH ST
SEATTLE, WA 98117

DAVID KNIGHT
12040 NE 128TH ST
KIRKLAND, WA 98033

TREUMAN KATZ
PO BOX C5371
SEATTLE, WA 98105

LINDA LOUGDON
18246 NE 196TH CT
WOODINVILLE, WA 98072

JANE JOHNSON
4323 NE 45TH ST
SEATTLE, WA 98105

JOHN KEHOE
5208 NE 50TH ST
SEATTLE, WA 98105

JILL LOVELAND
4110 42ND AVE NE
SEATTLE, WA 98105

S JOHNSON
4411 43RD AVE NE
SEATTLE, WA 98105

OLIVER LAWRENCE
10660 LAKESIDE AVE NE
SEATTLE, WA 98125

FRANK LULL
4123 42ND AVE NE
SEATTLE, WA 98105

SARA JANE JOHNSON
4221 43RD AVE NE
SEATTLE, WA 98105

G LAWRENCE
4316 37TH AVE NE
SEATTLE, WA 98105

PAT LUNDQIST
4685 41ST AVE NE
SEATTLE, WA 98105

KATHLEEN MCHUGH JOHNSTON
LEO JOHNSTON
4200 NE 50TH ST
SEATTLE, WA 98105

MARILYN SMITH LAYTON
4412 43RD AVE NE
SEATTLE, WA 98105

TED KOLLMAN
124 105TH AVE SE
EVERETT, WA 98204

LEO JOHNSTON
4200 NE 50TH ST
SEATTLE, WA 98105

MRS DAVID LEONHARDT
12684 SE 161ST ST
RENTON, WA 98058

MARJORIE KRESGE
4014 NE 46TH ST
SEATTLE, WA 98105

PAUL JULIO
7035 51ST AVE NE
SEATTLE, WA 98115

E LINCOLN
4708 41ST AVE NE
SEATTLE, WA 98105

J KRISTIANSON
827 LAKE ST S
KIRKLAND, WA 98033

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CONNIE KUKULL
4612 108TH AVE NE
MARYSVILLE, WA 98270

MR & MRS HAROLD KURTZ
5043 SAND POINT PL NE
SEATTLE, WA 98105

JACK LAMEY MD
801 BROADWAY-SUITE 511
SEATTLE, WA 98122

N LEIGHT
C LANG
1206 ASH #2
MARYSVILLE, WA 98270

A LANHAM
2047 ROSE POINT LANE
KIRKLAND, WA 98033

ED LAPIC
3822 43RD AVE NE
SEATTLE, WA 98105

NANCY LAWRENCE
10660 LAKESIDE AVE NE
SEATTLE, WA 98125

EDGAR MARCUSE MD
2153 E SHELY ST
SEATTLE, WA 98112

BRUCE & CAROLY MARGON
3650 42ND AVE NE
SEATTLE, WA 98105

MS CLAIRE MARSTON
4250 NE 50TH ST
SEATTLE, WA 98105

SEELYE MARTIN
5217 NE 43RD ST
SEATTLE, WA 98105

JOHN MARTIN
4315 NE 43RD ST
SEATTLE, WA 98105

JEREMY MATTOX
2591 PERKINS LANE W
SEATTLE, WA 98199

ANNE MCBRIDE
4232 EASTERN AVE N
SEATTLE, WA 98103

RITA MCCLARTY
3610 WALLINGFORD AVE N
SEATTLE, WA 98103

CAROLE MCCONNELL
18522 NE 186TH ST
WOODINVILLE, WA 98072

DOROTHY MCCORMICK
6639 58TH AVE NE
SEATTLE, WA 98115

ROBERT MCCROSKEY
3329 W LARUELHURST DR
SEATTLE, WA 98105

MARY LYDUM
CCH-MEDICAL RECORDS DEPT
PO BOX C5371
SEATTLE, WA 98105

SUE LYON
4658 EASTERN AVE N
SEATTLE, WA 98103

SUSAN MACEK
19844 10TH AVE NW
SEATTLE, WA 98177

NONA MACKENZIE
2020 E CALHOUN ST
SEATTLE, WA 98112

N MACMARTIN
4036 NE 45TH ST
SEATTLE, WA 98105

JON MAGRUDER
14717 106TH AVE NE
BOTHELL, WA 98011

MRS RICHARD MAIDER
3832 48TH AVE NE
SEATTLE, WA 98105

BRUCE MAINES
5051 NE 75TH ST
SEATTLE, WA 98115

KATHARINA MALOOF
3638 42ND AVE NE
SEATTLE, WA 98105

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CHMC P.9

JOYCE MARCH
12023 NE 164TH ST
RENTON, WA 98058

ROBERT MOICE
PORT TOWNSEND POLICE DEPT
607 WATER ST
PORT TOWNSEND, WA 98368

ROGER MONSON
4733 54TH AVE S
SEATTLE, WA 98118

RICHARD MOODY
4720 47TH AVE NE
SEATTLE, WA 98105

ELIZABETH MORRISON
3643 42ND AVE NE
SEATTLE, WA 98105

M MORROW
3656 42ND AVE NE
SEATTLE, WA 98105

MULLAVEY PROUT ET AL
2401 NW 65TH ST
PO BOX 70567
SEATTLE, WA 98107

MRS KATHY MULLER ET AL
~~19918 WINESAP LANE~~ 22408 1st Pl. W.
~~BOTHELL, WA 98012~~ Bothell, WA.
98021-8320

MR & MRS WESLEY MURCHISON
11929 SE 222ND PL
KENT, WA 98031

SUSAN NADON
16924 161ST AVE SE
RENTON, WA 98055

JOHN NEFF MD
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CYNTHIA NCFALLS
4204 NE 50TH ST
SEATTLE, WA 98105

RITA NCGOVERN
4600 NE 40TH ST
SEATTLE, WA 98105

SHIRLEY NCJOUELL
3930 NE BELVOIR
SEATTLE, WA 98105

MRS JOANN NCMAHON
CLARA WALKER ORTHOPEDIC GUILD
17923 BRITTANY DR SW
SEATTLE, WA 98166

SUZANNE NCQUARY
4849 NE 42ND ST
SEATTLE, WA 98105

MR & MRS ROBERT NEANS
5038 48TH AVE NE
SEATTLE, WA 98105

PAUL NENDELMAN MD
CON PO BOX C5371
4800 SAND POINT WAY NE
SEATTLE, WA 98105

LEONARD NILLER
VIEW RIDGE CONN CLUB
PO BOX 15218
SEATTLE, WA 98115

MRS NILLS
3921 47TH AVE NE
SEATTLE, WA 98105

EDITH NIELSEN
4848 NE 43RD ST
SEATTLE, WA 98105

BOB & FRANCES NIGHTINGALE
19631 SE 24TH WAY
ISSAQUAH, WA 98027

OCCUPANT
4545 SAND POINT WAY NE
SEATTLE, WA 98105

OCCUPANT
4514 41ST AVE NE
SEATTLE, WA 98105

OCCUPANT
10644 NAPLEWOOD PL SW
SEATTLE, WA 981946

STEVE OH
4559 51ST AVE NE
SEATTLE, WA 98105

NITCHELL OLEJKO
2600 CENTURY SQUARE
1501 4TH AVE
SEATTLE, WA 98101-1688

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MELANIE OLSON
13948 SUNRISE DR
BAINBRIDGE, WA 98110

FLORENCE OSBORNE
134 SW 202ND ST
SEATTLE, WA 98166

J OSTAUDER
618 11TH AVE W
KIRKLAND, WA 98033

S KENNETH PAI
4331 NE 45TH ST
SEATTLE, WA 98105

JAMES NELL-PRESIDENT
SEATTLE AREA HOSPITAL COUNCIL
190 QUEEN ANNE AVE N
SEATTLE, WA 98109

CHARLES NELSON
4921 NE 39TH ST
SEATTLE, WA 98105

NANCY NELSON
14002 80TH AVE NE
BOTHELL, WA 98011

ARIEL NELSON
4652 41ST AVE NE
SEATTLE, WA 98105

BONNIE & BRYCE NELSON
4127 42ND AVE NE
SEATTLE, WA 98105

DAVID NEMEREVER
6016 57TH AVE NE
SEATTLE, WA 98115

MRS JOSEPH NEUBERT
4714 41ST AVE NE
SEATTLE, WA 98115

NEURATH RESIDENCE
4101 55TH AVE NE
SEATTLE, WA 98105

HELEN NEWMAN
4252 NE 50TH ST
SEATTLE, WA 98105

D NICHOLS
5126 NE 42ND ST
SEATTLE, WA 98105

KAY NICHOLSON
4205 NE 45TH ST
SEATTLE, WA 98105

JUDITH PLATT
4526 45T AVE NE
SEATTLE, WA 98105

MARK & JANETTE PLUNKETT
4100 36TH AVE NE
SEATTLE, WA 98105

MARIE DAVIS
JOHN PRINZIN
4810 134TH PL NE
MARYSVILLE, WA 98270

BARBARA QUINN
5264 16TH AVE NE
SEATTLE, WA 98105

SALLY RAGSDALE
701 17TH AVE #203
SEATTLE, WA 98122

KAREN OLSON RASMUSSEN/FRANKLIN &
WATKINS
4TH & BLANCHARD BLDG STE 2300
2121 4TH AVE
SEATTLE, WA 98101

KERRY COLLEEN READ
15125 NE 67TH PL
REDMOND, WA 98052

MARJORIE REESE
5007 112TH AVE NE
KIRKLAND, WA 98033

OCCUPANT
3804 48TH AVE NE
SEATTLE, WA 98105

OCCUPANT
3115 W LAURELHURST
SEATTLE, WA 98105

OCCUPANT
4317 50TH AVE NE
SEATTLE, WA 98105

JACQUELINE PENDERGRASS
13410 98TH AVE NE
KIRKLAND, WA 98034

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CHMC P.11

LARRY PENSIERO
4841 NE 44TH ST
SEATTLE, WA 98105

MICHEL PERLMAN
4500 NE 50TH ST
SEATTLE, WA 98105

K PETERSON
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LOWER APT
SEATTLE, WA 98105

DOROTHY PETERSON
4300 NE 44TH ST
SEATTLE, WA 98105

MARJAN PETTY
3720 SUNNYSIDE AVE N
SEATTLE, WA 98103

NANCY PHILIPS
1788 GREVELIA ST
SOUTH PASADENA, CA 98403

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4728 41ST AVE NE
SEATTLE, WA 98105

DR LOTHAR PINKERS
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HELEN PINKNEY
3812 48TH AVE NE
SEATTLE, WA 98105

KAREN ROUNDS
207 BIRCH AVE
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LUCILLE ROWLEY
5040 44TH AVE NE
SEATTLE, WA 98105

BRIAN RUBENAKER
8040 35TH AVE NE
SEATTLE, WA 98105

DANNY & LINDA RUDE
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MAPLE VALLEY, WA 98038

MRS FLORA RUGGLES
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SEATTLE, WA 98105

CLAUDIA SANDERS
4230 51ST AVE NE
SEATTLE, WA 98105

CRISTY SANTEFORD
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MARYSVILLE, WA 98270

MYRON SAYLES
4027 NE 45TH ST
SEATTLE, WA 98105

PATRICIA SCANLON-PRESIDENT
LAURELON TERRACE CONDO
4015 NE 46TH ST
SEATTLE, WA 98105

GREGORY SCHELL
4712 33RD AVE NE
SEATTLE, WA 98105

HUGO & GISELA SCHIMMELBUSCH
4702 45TH AVE NE
SEATTLE, WA 98105

ANN REYNOLDS
1020 W RAYE ST
SEATTLE, WA 98119

D RICE
3815 46TH AVE NE
SEATTLE, WA 98105

J RICHEY
2020 E HOWE ST
SEATTLE, WA 98112

JOHN RICHMOND-REAL ESTATE MGR
SEATTLE PUBLIC SCHOOLS
4141 4TH AVE S
SEATTLE, WA 98134

DAVID RIGBY
RAVENNA-BRYANT COMM ASSOC
6559 RAVENNA BLVD NE
SEATTLE, WA 98115

MR & MRS RINABARGER
12812 SE 231ST WY
KENT, WA 98031

WESLEY ROBERTS
4134 42ND AVE NE
SEATTLE, WA 98105

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VIRGINIA RONDE
14208 NE 40TH PL
BELLEVUE, WA 98007

ERNESTINE ROMBOUTS
4675 41ST AVE NE
SEATTLE, WA 98105

J W ROSE
5005 80TH ST NE
MARYSVILLE, WA 98270

MR & MRS SCOTT
3915 49TH PL NE
SEATTLE, WA 98105

SEATTLE-KING COUNTY HOSPITAL SOC.
2161 E HAMLIN ST
SEATTLE, WA 98102

LALA SELLS
4620 41ST AVE NE
SEATTLE, WA 98105

SUSAN SHANE CRN
FORKS WOMENS CLINIC
PO BOX 1022
FORKS, WA 98331

BEA SHARPE
5013 SANDPOINT WAY NE
SEATTLE, WA 98105

HELENE SHAWCROFT
UNIVERSITY HOSPITAL RC-34
1959 NE PACIFIC ST
SEATTLE, WA 98195

ASTRID SHELTON
PACIFIC COUNTY ORTHOPEDIC AUXILIARY
ROUTE 3 BOX 1066
RAYMOND, WA 98577

JERRY SHERRARD
4339 NE 44TH ST
SEATTLE, WA 98105

BETSY LYNN SHERROW
4715 47TH AVE NE
SEATTLE, WA 98105

DOUGLAS SHERROW
4004 NE 46TH ST
SEATTLE, WA 98105

JERRY SCHNEIDER
5003 45TH AVE NE
SEATTLE, WA 98105

MR & MRS SCHROEDER
PO BOX 344
KIRKLAND, WA 98083

ILA SCHULZE
4303 50TH AVE NE
SEATTLE, WA 98105

KIM SCHUYLER
4851 NE 39TH ST
SEATTLE, WA 98105

EMILIE SCHWABACHER
2209 39TH PL E
SEATTLE, WA 98112

SARAH SCOTT
4339 NE 45TH ST
SEATTLE, WA 98105

ROBERT SCOTT
UW SCHOOL OF BUSINESS
DJ-10
SEATTLE, WA 98195

PHYLLIS SPENCER
4224 4TH AVE NE
SEATTLE, WA 98105

EMMA SPITZER
5018 SAND POINT PL NE
SEATTLE, WA 98105

BERNICE STERN/TRANSPORTATION
COMMISSION
KING CO INTERNAT AIRPORT
9600 PERIMETER ROAD
SEATTLE, WA 98108

PAMELA STEWART
11829 7TH PL SE
LK STEVENS, WA 98258

MR & MRS SIMPSON
4715 45TH AVE NE
SEATTLE, WA 98105

THOMAS STRANDJORD MD
5038 SAND POINT WAY NE
SEATTLE, WA 98105

MARNETTA STRAFORD
22307 52ND AVE W
MOUNTLAKE TERRACE, WA 98043

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CHMC P. 13

MR & MRS LEONARD STROM
7245 NE W PORT MADISON ROAD
BAINBRIDGE, WA 98110

SUSAN STUBBS RRA
CON MED RECORDS DEPT-DIRECTOR
BOX C5371
SEATTLE, WA 98105

DALE SHERROW JR
3625 1ST AVE NE
SEATTLE, WA 98105

GERALDINE SHORT
5917 40TH ST NE
MARYSVILLE, WA 98270

SANDRA SOMMENMON
18228 NE 191ST ST
WOODINVILLE, WA 98072

HERMAN SIQUELAND
1200 WESTLAKE AVE N #801
SEATTLE, WA 98109-3530

MRS SVERRE SIQUELAND
4702 41ST AVE NE
SEATTLE, WA 98105

BARBARA SMITH
5169 NE LAURELCREST LN
SEATTLE, WA 98105

JOY SMITH
4050 S 160TH ST
SEATTLE, WA 98188

LINDA SMITH
9014 EVANSTON AVE N
SEATTLE, WA 98103

ELORYCE SMITH
22055 28TH AVE S
LOT 35
SEATTLE, WA 98188

LINDA SMITH
3608 42ND AVE NE
SEATTLE, WA 98105

SNOHOMISH COUNTY FIRE DISTR #4
1525 AVE D-PO BOX 820
SNOHOMISH, WA 98290

ELLEN TOBIN
4610 41ST AVE NE
SEATTLE, WA 98105

SALLY TONKIN
4833 NE 42ND ST
SEATTLE, WA 98105

TALLMAN TRASK
306 ADMINISTRATION BLDG-AH-05
UNIVERSITY OF WASHINGTON
SEATTLE, WA 98105

WILLIAM TRUDGIAN
9600 MANDUS OLSON RD NE
BAINBRIDGE, WA 98110

CHARLES & REA TRZCINSKI
6547 52ND AVE NE
SEATTLE, WA 98115

LOIS TURNER
900 UNIVERSITY #PK
SEATTLE, WA 98101

EUGENE TURNER MD
902 E CAROLINE ST
PT ANGELES, WA 98362

COMMANDER 54TH MEDICAL DETACHMT
ATTN: CAPT DAN MADDEN
US ARMY 54TH MAST
FT LEWIS, WA 98433

UNITED STATE ENVIRONMENTAL PROTECTION
AGENCY
WASHINGTON, DC 20460

NORMA VALBERG
1724 OLYMPIA AVE SE
RENTON, WA 98058

EDITH SUJOR
4671 41ST AVE NE
SEATTLE, WA 98105

DALE SWANSON
5036 45TH AVE NE
SEATTLE, WA 98105

LEE BOSSUNG-SWEENEY BSN-RNC
PO BOX C5371
SEATTLE, WA 98105

ROBERT SWENSON
3808 42ND AVE NE
SEATTLE, WA 98105

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LISA TALLEY
101 SHOTWELL ROAD
HADLOCK, WA 98339

STEVEN WISNER MD
1800 C ST
SUITE G-22
BELLINGHAM, WA 98225

VICKY WALL
16238 16TH AVE NE
SEATTLE, WA 98155

WALLACE TAYLOR
4701 109TH PL NE
KIRKLAND, WA 98033

PATRICIA ANN WOOD
4036 NE 45TH ST
SEATTLE, WA 98105

MRS F WALLACE
4668 41ST AVE NE
SEATTLE, WA 98105

LARRY THOMPSON-DIRECTOR
PUGET SOUND HEALTH SYSTEMS AGENCY
601 VALLEY ST
SEATTLE, WA 98109

EILEEN WOODSON
10016 NE 122ND ST #NC
KIRKLAND, WA 98034

LOLA WALLER
25404 SE 389TH
ENUMCLAW, WA 98022

JOEL WATKINS
FRANKLIN & WATKINS LAW OFFICES
2121 4TH AVE
SEATTLE, WA 98121

EDITH THOMSON
14239 36TH AVE NE
SEATTLE, WA 98125

JANET WOODY
4520 NE 38TH ST
SEATTLE, WA 98105

WAYNE TIMBERLAKE
3335 43RD AVE NE
SEATTLE, WA 98105

MR & MRS WRIGHT
3925 48TH AVE NE
SEATTLE, WA 98105

MARVEL WECKENBURG
4705 45TH AVE NE
SEATTLE, WA 98105

EARL WHEATLEY-PRESIDENT
MONTLAKE COMMUNITY CLUB
2008 E LOUISA ST
SEATTLE, WA 98112

LOIS JEAN ZANDER
4679 41ST AVE NE
SEATTLE, WA 98105

CAROL WELLER
534 ALCAZAR ST
ARLINGTON, WA 98223

ROBERT WHITLAM
OFFICE OF ARCHAEOLOGY & HISTORIC PRES
111 W 21ST AVE-KL-11
OLYMPIA, WA 98504

MARY VANECEK
3524 W LAURELHURST DR NE
SEATTLE, WA 98105

WARREN & PAULINE WESTLUND
5150 NE LATIMER PL
SEATTLE, WA 98105

MARUEL WICKENBURG
4705 45TH AVE NE
SEATTLE, WA 98105

MRS W WAAK
14527 28TH AVE NE
SEATTLE, WA 98155

CAROL WILKINSON
1837 E SHELBY ST
SEATTLE, WA 98112

RAE WADDINGHAM
4701 45TH AVE NE
SEATTLE, WA 98105

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Availability of FEIS Sent 4/24/81

ROBERT KLUG,PRESIDENT
BOARD OF TRUSTEES
LAURELHURST COMM.CLUB
4013 N E 46TH STREET
SEATTLE WA 98105

MIKE McLOKUM
2621 S W NEVADA
SEATTLE WA 98126

ALLEN CADDY
4658 41ST AVENUE N E
SEATTLE WA 98105

MARVIN CHRISTMAN
4350 53RD AVENUE N E
SEATTLE WA 98105

FRANK CHESTNUT,DIRECTOR
CERTIFICATE OF NEED
PROGRAM ET-33
DEPT.OF SOCIAL & HEALTH
OLYMPIA,WA 98504

HAROLD AND MILDRED KURTZ
5043 SAND POINT PLACE N E
SEATTLE WA 98105

CHARLES McCLELLAND
8415 ROOSEVELT WAY N E
SEATTLE WA 98115

MRS. MARYANN SPANGLER
4013 N E 46TH STREET
SEATTLE WA 98105

H NEWMAN
5043 SAND POINT PLACE N E
SEATTLE WA 98105

HELEN NEWMAN
4525 N E 50TH STREET
SEATTLE WA 98105

THOMAS SAVAGE
4814 PURDUE AVENUE N E
SEATTLE WA 98105

EILEEN EGAN
4527 N E 55TH #2
SEATTLE WA 98105

VIOLA MEREDITH
19806 127TH CT N E
BOTHELL, WA 98011

GAYLE GRAY
3926½ N E SURBER DR.
SEATTLE WA 98105

JAMES CHIRALLI
6500 N E WINDERMERE ROAD
SEATTLE WA 98105

ROBERT HEILMAN
4554 45TH AVENUE N E
SEATTLE WA 98105

CARL DOMBEK
23912 12TH PLACE S 31
DES MOINES, WA 98198

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ALBERT FELDMANN
4873 TERRACE DR. N E
SEATTLE WA 98105

CHERYL KITCHIN
4702 44TH AVENUE N E
SEATTLE WA 98105

JOHN MENDENHALL
5033 44TH AVENUE N E
SEATTLE WA 98105

DALE SWANSON
5036 45TH AVENUE N E
SEATTLE WA 98105

LUCILLE CONROD
4656 41ST AVENUE N E
SEATTLE WA 98105

OCCUPANT
4708 44TH AVENUE N E
SEATTLE WA 98105

JUDITH PLATT
4526 45TH AVENUE N E
SEATTLE WA 98105

GUDA GIDDENS
4338 N E 44TH STREET
SEATTLE WA 98105

LARRY PENSIERO
4841 N E 44TH STREET
SEATTLE WA 98105

WESLEY ROBERTS
4134 42ND AVENUE N E
SEATTLE WA 98105

OCCUPANT
4411 43RD AVENUE N E
SEATTLE WA 98105

SEELYE MARTIN
5217 NE 43RD ST.
SEATTLE WA 98105

ANITA FRANCIS
5003 45TH AVENUE N E
SEATTLE WA 98105

OCCUPANT
3115 W LAURELHURST
SEATTLE WA 98105

PATRICIA ANNWOOD
4036 N E 45TH STREET
SEATTLE WA 98105

PRESIDENT
HAWTHRONE HILLS COMMUNITY CLUB
6060 50TH AVE.N E
SEATTLE WA 98115

OCCUPANT
4620 41ST AVENUE N E
SEATTLE WA 98105

OCCUPANT
4851 N E 39TH ST.
SEATTLE WA 98105

OCCUPANT
4328 N E 43RD ST.
SEATTLE WA 98105

JOY SCOTT
4339 N E 45TH ST.
SEATTLE WA 98105

CHARLES NELSON
4921 NE 39TH STREET
SEATTLE WA 98105

BART BAXTER
3905 48TH PLACE N E
SEATTLE WA 98105

PAUL JULIO
7035 51ST AVENUE N E
SEATTLE WA 98115

SCOTT COBB
4654 41ST AVENUE N E
SEATTLE WA 98105

DAMARIS RICE
3815 46TH AVENUE N E
SEATTLE WA 98105

JANE JOHNSON
4323 N E 45TH STREET
SEATTLE WA 98105

HUGO SCHIMMELBUSCH
4702 45TH AVENUE N E
SEATTLE WA 98105

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ENOCH BURGAN
4141 42ND AVENUE N E
SEATTLE WA 98105

RICHARD MERRELL
4541 51ST AVENUE N E
SEATTLE WA 98105

BARBARA DAVIS
4525 51ST AVENUE N E
SEATTLE WA 98105

BART BAXTER
3905 48TH PLACE N E
SEATTLE WA 98105

ED LAPIC
3822 43RD AVENUE N E
SEATTLE WA 98105

KEN JACOBSON
7307 40TH AVENUE N E
SEATTLE WA 98105

DAVE BELVIN
4757 45TH AVENUE N E
SEATTLE WA 98105

BILL BRANCH
5011 45TH AVENUE N E
SEATTLE WA 98105

RICHARD DIMOND
4318 55TH AVENUE N E
SEATTLE WA 98105

DORIS BURNS
2511 W MONTLAKE E.
SEATTLE WA 98112

CYNTHIA SULLIVAN
402 KING COUNTY COURT HOUSE
THIRD AVENUE
SEATTLE WA 98104

BARBARA QUINN
5264 16TH AVENUE N E
SEATTLE WA 98105

LIZ ANDERSON
4746 45TH AVENUE N E
SEATTLE WA 98105

OCCUPANT
4331 N E 45TH STREET
SEATTLE WA 98105

RICHARD MERRELL
4541 51ST AVENUE N E
SEATTLE WA 98105

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JTD

DAVIS WRIGHT TREMAINE

LAW OFFICES

2600 CENTURY SQUARE · 1501 FOURTH AVENUE · SEATTLE, WASHINGTON 98101-1688
(206) 622-3150

MITCHELL J. OLEJKO

March 28, 1991

RECEIVED
APR 01 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dona Cloud
Deputy Hearing Examiner
Seattle Office of Hearing Examiner
Room 1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

Re: Hearing Examiner File Nos. LUCE-86-004 and LUCE-86-005; Appeals by Children's Orthopedic Hospital and Airlift Northwest, et al., from an Order and Notice of Violation of DCLU

Dear Ms. Cloud:

This letter follows up on your order of March 27, 1990 requesting that we provide an update on the status of this matter by March 29, 1991. My understanding is that the final environmental impact statement is to be published within the next 60 days. After the final environmental impact statement is published, further proceedings on the council conditional use permit request by Children's Hospital and Medical Center for the establishment of a helistop would be taken as required by ordinance.

Should you have any questions, please do not hesitate to contact me.

Very truly yours,

DAVIS WRIGHT TREMAINE

Mitchell J. Olejko

Mitchell J. Olejko

MJO:jt
Enclosure
cc: John Doan
Steve Milam
Suzanne Petersen

OLE.WM\02164.D20
Seattle

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JTD

BEFORE THE SEATTLE HEARING EXAMINER
CITY OF SEATTLE

In the Matter of the Appeals of

CHILDREN'S ORTHOPEDIC HOSPITAL
AND AIRLIFT NORTHWEST ET AL.

FILE NOS. LUCE-86-004 and
LUCE-86-005

from a final Order and Notice of
Violation of the Land Use Code issued
by the Director, Department of Construction
and Land Use

ORDER ON CONTINUANCE

RECEIVED
MAR 26 1990
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

On November 3, 1987, an order was entered by the Hearing Examiner continuing the hearing on the captioned matters subject to call. A status report from the parties was requested therein.

On March 21, 1990, a status report was received from appellants CHMC. Based on the information contained therein, the undersigned reaffirms the order of continuance subject to call and requests that a further status report from the parties be filed with this office by 5:00 p.m. March 31, 1990.

Entered this 26th day of March, 1990.

Dona Cloud

Dona Cloud
Deputy Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104
Telephone: (206) 684-0521

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

NOTICE OF VIOLATION

of Land Use Code

Seattle Municipal Code - Title 23

August 30, 1985
File No. Z853959
Page 1

Trevman Katz, Chief Executive Officer
Childrens Orthopedic Hospital
4800 Sand Point Way Northeast
Seattle, Washington 98105

Michael Copass, Medical Director
Airlift Northwest
325 - 9th Avenue
Seattle, Washington 98104

Subject: Premises known as 4800 Sandpoint Way Northeast
legally described as:

That portion of the West half of the Southeast quarter of the Southwest Quarter of Section 10, Township 25 North, Range 4 East, W. M., in King County, Washington, described as follows:

Beginning on the Easterly line of said subdivision at a point 658.20 feet Northerly of the Southeast corner thereof; thence West 271.44 feet, more or less, to the Northerly production of the Westerly line of Block 1, of Gwinn's Laurelhurst Manor Addition according to Plat recorded in Volume 41 of Plats Page 27, in King County, Washington; thence North 0'26'19" East along the Northerly production of said Westerly line to the Southeasterly line of Sand Point Way; thence Northeasterly along said Southeasterly line of East 50th Street; thence Easterly along said Southerly line to the Easterly line of said subdivision thence Southerly along said Easterly line 630 feet, more or less, to the point of beginning.

PARCEL B

The West 5.00 feet of the Northeast quarter of the Southeast quarter of the Southwest Quarter of Section 10, Township 25 North, Ranger 4 East, W. M., in King County, Washington, except the North 30.00 feet thereof, and the South 25 thereof;

PARCEL C

Blocks 1, 2, 3, 4, 5, and 6 of Gwinn's Laurelhurst Manor addition to Plat recorded in Volume 41 of Plats, Page 27, in King County, Washington except Lot 12 in said Block 6;

PARCEL D

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Those portions of 42nd Avenue Northeast, 43rd Avenue Northeast, 44th Avenue Northeast and East 47th Street, vacated under Ordinance No. 76010 of the City of Seattle.

Subject to:

Right of the public to make neccesary slopes for cuts or fills upon said premises in the reasonable original grading of streets, avenues, alleys and roads, as dedicated in the Plat.

Also subject to:

Right to make necessary slopes for cuts of fills over the Northerly 558 feet of said Parcel as granted to the City of Seattle by Deed recorded under Auditor's File No. 2553722.

Also subject to:

Right of the public to use that portion of Lot 9 and 10, Block 4, of Gwinn's Laurelhurst Manor addition, lying within boundaries of East 47th Street.

As a result of a recent inspection, notice is hereby given that the subject property and/or person(s) responsible for that property are in violation of the Seattle Land Use Code, Section(s) 23.40.02C, 23.48.05A and 23.90.02B. CORRECTIVE ACTION BY THE DESIGNATED PERSON(S) IS REQUIRED NO LATER THAN SEPTEMBER 19, 1985.

The specific violation and corrections are as follows:

USING OR PERMITTING THE USE OF THE PREMISES AS A LANDING PAD FOR HELICOPTERS, IMMEDIATELY DISCONTINUE THE USE OF A HELICOPTER PAD.OR OBTAIN A PERMIT FOR SUCH USE.

The following paragraphs provide information on complying with this violation notice and procedures for appealing our determination. If you have questions, please call the inspector whose signature appears on the last page at 625-2271.

1. The Land Use Code provides that any party affected by a Notice of Violation may request a hearing before a Department Hearing Officer for reconsideration of this notice. Any affected party who decides to request a hearing should be aware that reconsideration hearings are very limited in scope. The Hearing Officer merely has the authority to review the facts of the case and determine whether there is a violation of the Zoning or Land Use Code. Although the Hearing Officer can extend the compliance date for a short period of time, the Hearing Officer CANNOT AUTHORIZE A VIOLATION TO CONTINUE.

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2. The request for reconsideration must be in writing, and filed with the Director no later than twenty (20) days following service of this notice, and contain the following:

   (a) A brief statement as to how the appellant is significantly affected by or interested in the reconsideration.

   (b) A brief statement containing explicit exceptions and objections with regard to the Notice of Violation.

   (c) The requested relief from the notice such as withdrawal or modification.

   (d) The signature, mailing address and telephone number of the appellant. In the event there are numerous appellants, the request for reconsideration shall designate the single representative to be contacted.

   NOTE: Requests for extension of the compliance date do not require a hearing. See Item 5.

3. If no request for reconsideration is received, the notice shall become a final order of the Director. A copy of the final order will be filed with the Department of Records and Elections of King County.

4. Any actions involving construction, demolition, or change of use are regulated by City Codes and Ordinance, and must be covered by the proper permits. Information on permits may be obtained at the Application Intake Center on the 5th Floor of the Municipal Building, or by calling 625-2293. Please bring this document with you when applying for any permits.

5. The date set for compliance with a final order takes precedence over work completion dates specified in any permit(s) and will be subordinante only to written extensions of the order. REQUESTS FOR EXTENSIONS MUST BE RECEIVED IN WRITING NOT LATER THAN FIFTEEN (15) DAYS PRIOR TO THE DATE SET FOR COMPLIANCE.

6. Any person failing to comply with a final order within the time specified shall be subject to a cumulative penalty as provided by law.

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An inspection will be made on approximately the date set for compliance to determine if the corrections have been made. If you have questions, or have completed the work and desire an inspection prior to the reinspection date, please call the undersigned inspector at 625-2271.

Sincerely,

BEATRICE FARRAR RYAN
Interim Director

By
HERMIA IP
Land Use Specialist

HI:ms

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LAW OFFICES OF
DAVIS, WRIGHT, TODD, RIESE & JONES
A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS
4200 SEATTLE-FIRST NATIONAL BANK BUILDING
SEATTLE, WASHINGTON 98154
(206) 622-3150
TELEX 32891
TELECOPIER (206) 622-4322

550 WEST 7TH AVENUE
SUITE 1450
ANCHORAGE, ALASKA 99501
(907) 276-4488
TELECOPIER (907) 279-1761

1752 N STREET N.W.
SUITE 800
WASHINGTON, D.C. 20036
(202) 822-9775
TELECOPIER (202) 296-3196

110 110TH AVENUE N.E.
SUITE 700
BELLEVUE, WASHINGTON 98004
(206) 451-8686
TELECOPIER (206) 451-9397

PLEASE REPLY TO SEATTLE OFFICE

RECEIVED
SEP 20 1985
Dept. of Construction & Land Use

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

September 20, 1985

HAND DELIVERED

Ms. Beatrice Farrar Ryan
Interim Director
Department of Construction and Land Use
400 Seattle Municipal Building
600 Fourth Avenue
Seattle, Washington 98104

Re: File Number: Z853959; Request for Reconsideration of Notice of Code Violation

Dear Ms. Ryan:

We represent Children's Orthopedic Hospital Medical Center ("COHMC") which received on September 2, 1985, a Notice of Violation of Land Use Code. The Notice states that the hospital is in violation of the Land Use Code for "using or permitting the use of the premises as a landing pad for helicopters . . . ." The notice does not indicate the facts upon which this allegation is based. It indicates that this activity is in violation of the following code sections: 23.40.02C[sic]; 23.48.05A[sic]; and, 23.90.02B[sic].

Seattle Municipal Code Section 23.40.020C identifies the elements which must be proven in order to obtain a variance. Seattle Municipal Code Section 23.48.005 states that a helistop is a council conditional use in the major institution classification. Seattle Municipal Code Section 23.90.002B states:

> It is a violation of this Land Use Code to use or cause to be used any structure or land or to construct, locate or cause to be constructed or located any structure within the City of Seattle in any manner that is not permitted by the terms of any permit or authorization issued pursuant to this Land Use Code . . .

The first two cited code sections suggest that the alleged violation relates to an impermissible structure. The language in the notice suggests that the violation relates to an unauthorized use under Seattle Municipal Code Section 23.90.002.

APPELLANTS' INTEREST IN RECONSIDERATION

COHMC is the owner of the land described in the notice. It in no way has caused helicopters to use this land as a landing pad. Application of the terms of this notice would wrongfully subject COHMC to penalties in the event of any similar occurances in the future.

OBJECTIONS TO NOTICE

Seattle Municipal Code Section 23.40.020C does not apply because there is no "structure" at issue.

Seattle Municipal Code Section 23.48.005A does not apply because COHMC does not have a "helistop" on the premises. This term is defined at 24.08.090 as "an area on a roof or on the ground used by helicopters . . . for the purpose of picking up or discharging passengers or cargo. . . ." There is no such designated area on the subject land. Helicopter landings have been so rare that it is impossible to identify "an area on . . . the ground used by helicopters . . . for the purpose of picking up or discharging passengers or cargo . . ."

Seattle Municipal Code Section 23.90.002B has not been violated by COHMC because it did not use its land or cause it to be used in an impermissible manner. Seattle Municipal Code Section 23.90.002B states that a violation occurs only if a person or entity used land in an impermissible manner or causes land to be so used. It cannot be shown that COHMC is responsible for any helicopter landings.

Furthermore, the rare instances of helicopters landing on the subject property have occurred only on the occasion of direct and immediate life threatening emergencies.

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REQUESTED RELIEF

COHMC respectfully requests that the notice and determination of code violation be withdrawn.

Very truly yours,

DAVIS, WRIGHT, TODD, RIESE & JONES

Rand Koler

Rand L. Koler

RLK:clh

cc: Mr. Treuman Katz
cc: Mrs. Dorothy Teeter

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File

Mailing List

Seattle Department of Construction and Land Use

Dennis J. McLerran, Director
Norman B. Rice, Mayor
April 25, 1991



AVAILABILITY OF FINAL ENVIRONMENTAL IMPACT STATEMENT

A Final Environmental Impact Statement (FEIS) on the project described below is available for public review. The lead agency is the Seattle Department of Construction and Land Use (DCLU).

Project number and name: 8405870 Children's Hospital and Medical Center Helistop
Address and zone: 4800 Sand Point Way NE I-4/I-2/SF
Project description: Council Land Use Action to allow an emergency helistop facility accessory to a major institution (Children's Hospital and Medical Center).

INFORMATION AVAILABLE

A copy of the Final EIS is available for public review at the Downtown Seattle Public Library, 1000 Fourth Avenue; the Governmental Research Assistance Library, Seattle Municipal Building; Northeast Branch, 6804 35th Avenue N.E.; University Branch, 5009 Roosevelt Way N.E.; and University of Washington Suzallo and Health Sciences Libraries. Additional information about the project and a limited number of copies of the Final EIS are available through the Master Use Permit Information and Notification Center, 408 Seattle Municipal Building (684-8467).

The DCLU Director will issue a decision on the adequacy of the Final EIS and a recommendation on whether to grant, condition or deny the project described above no sooner than seven days after publication of the Final EIS. The final decision on the proposal will be made by the Seattle City Council. Notice of the Director's recommendation will be mailed to interested parties. If you wish to receive a copy of the notice, please telephone the Master Use Permit Information Center at 684-8467.

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Availability of FEIS Sent 4/24/91

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Children's Hospital & Medical Center
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Ron Christiansen
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Loterbauer
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Seattle, Washington 98105

Pat Lundquist
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Ted Kollman
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Everett, Washington 98204

Marjorie D. Kresge
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Janet Kristianson
827 Lake Street S.
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Commander, 54th Medical Detachment
Attention Capt. Dan Madden
U.S. Army 54th M.A.S.T.
Fort Lewis, Washington 98433

Deborah J. Uno, Coordinator
Foreign Student Services
Seattle Community College
1701 Broadway
Seattle, Washington 98122

United States Environmental
Protection Agency
Washington DC 20460

Norma M. Valberg
1724 Olympia Avenue S.E.
Renton, Washington 98058

Edith Sujor
4671 41st N.E.
Seattle, Washington 98105

Cynthia Sullivan
402 King County Courthouse
Seattle, Washington 98104

Dale Swanson
5036 45th Avenue
Seattle, Washington 98105

Dale Swanson
5036 45th Avenue N.E.
Seattle, Washington 98105

Lee Bossung-Sweeney, B.S.N., R.N.C.
P. O. Box C5371
Seattle, Washington 98105

Robert D. Swenson
3808 42nd Avenue N.E.
Seattle, Washington 98105

Lisa Talley
101 Shotwell Rd.
Hadlock, Washington 98339

Mrs. Wallace Taylor
4701 109th Pl. N.E.
Kirkland, Washington 98033

Larry A. Thompson, Executive Director
Puget Sound Health Systems Agency
601 Valley Street
Seattle, Washington 98109

Edith E. Thomson
14239 36th N.E.
Seattle, Washington 98125

Wayne J. Timberlake
3335 43rd N.E.
Seattle, Washington 98105

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Earl E. Wheatley, President
Mountlake Community Club
2008 E. Louisa Street
Seattle, Washington 98112

Robert G. Whitlam
Office of Archaeology and Historic Preservation
111 West Twenty-First Avenue, KL-11
Olympia, Washington 98504

Maruel Wickenburg
4705 45th N.E.
Seattle, Washington 98105

Carol Wilkinson
1837 E. Shelby
Seattle, Washington 98112

Jim and Carolyn Zimmer
26210 200 Avenue S.E.
Seattle, Washington 98042
NSA

Steven Wisner, M.D.
Sutie G-22 1800 C. Street
Bellingham, Washington 98225

Patricia Ann Wood
4036 N.E. 45th
Seattle, Washington 98105

Eillieen Woodson
10016 N.E. 122nd #N.C.
Kirkland, Washington 98034

Janet Woody
4520 N.E. 38th
Seattle, Washington 98105

Mr. and Mrs. Fred M. Wright
3925 48th Avenue N.E.
Seattle, Washington 98105

Lois Jean Zander
4679 41st N.E.
Seattle, Washington 98105

Mary L. Vanecek
3524 W. Laurelhurst Dr. N.E.
Seattle, Washington 98105

~~Gordon F. Vickery~~
2621 Second Avenue Ste 1804
Seattle, Washington 98121

Mrs. W. W. Waak
14527 28th N.E.
Seattle, Washington 98155

Rae F. Waddingham
4701 45th Avenue N.E.
Seattle, Washington 98105

Vicky Wall
16238 16th Avenue N.E.
Seattle, Washington 98155

Mrs. F. G. Wallace
4668 41st Avenue N.E.
Seattle, Washington 98105

Lola Waller
25404 S.E. 389
Enunclaw, Washington 98022

Joel Watkins, Jr.
Franklin & Watkins Law Offices
Suite 2300 Fourth & Blanchard
2121 Fourth Avenue
Seattle, Washington 98121

Marvel Weckenburg
4705 45th N.E.
Seattle, Washington 98105

Carol A. Weller
534 Alcazar
Arlington, Washington 98223

Warren and Pauline Westlund
5150 N.E. Latimer Place
Seattle, Washington 98105

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airlift n.w.
Dr. Michael Copass, MD
Airlift N.W.
325 9th Avenue
Seattle, Washington 98104

allied arts of seattle,
Allied Arts of Seattle
107 S. Main Street
Seattle, Washington 98104

belvedere terrace community council
Belvedere Terrace Community Council
Keith Forest, President
5811 N.E. 59th Street
Seattle, Washington 98105

central seattle community council federation
Central Seattle Community Council Federation
Allan Davis, Director
4710 University Way N.E.
Seattle, Washington 98105

citizen service bureau
Ms. Judith Flemings
Citizen Service Bureau
01-01-05

citizens concerned about helicopter transport
Citizens Concerned About Helicopter Transport
c/o Liz Anderson
4746 45th Avenue N.E.
Seattle, Washington 98105

city council
City Council
01-11-01

city light
Superintendent
City Light
05-00-01

city university citizens advisory committee
City University Citizens
Advisory Committee (CUCAC)
Barbara Quinn, Co-chair
5264 16th Avenue N.E.
Seattle, Washington 98105

city university citizens advisory committee
City University Citizens
Advisory Committee (CUCAC)
George Hilsey, Co-chair

pc:
AGENCY
LISTING
for CHMC - letter + EIS

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5819 17th Avenue N.E.
Seattle, Washington 98105

Commerce and Economic Development
Commerce and Economic Development
101 Gen. Admin. Builidng MS AX-13
Olympia, Washington 98504

daily journal of commerce
Daily Journal of Commerce
P. O. Box 11050
Seattle, Washington 98111

dcd,
Director
DCD
09-03-02

department of community development,
G.Voorhees
Design Commission
Department of Community Development
09-03-02

department of ecology
SEPA Register
Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504

department of social and health services
Frank Chestnut, Director
Certificate of Need Program
Department of Social and Health Services
Olympia, Washington 98504

dept of transportation,
Department of Transportation
District Design Engineer
Environmental Review
9611 S.E. 36th St.
Mercer Island, Washington 98040

dept. of housing and urban dev.
Dick Moore, Env. Officer
Community Planning
Department of Housing and Urban Development
Arcade Plans 10.3.SS
Seattle, Washington 98101

dept. of social and health services
Department of Social and Health Services
Water Supply and Waste MS LD-11
Olympia, Washington 98504

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eastlake community council
Eastlake Community Council
58 East Boston
Seattle, Washington 98102

economic development assoc.,
Reg. Director Dept. of Commerce
Economic Development Assoc.
1700 Westlake Avenue N. #500
Seattle, Washington 98109

engineering department
Engineering Department
01-09-01

federal aviation admin.,
Frank Benedict
Flight Standards Division
Federal Aviation Admin.
7300 Perimeter Rd. South
Seattle, Washington 98108

fire deparment,
Chief
Fire Department
04-44-04

harborview medical center
Lloyd David, Director of Planning
Harborview Medical Center
325 9th Avenue
Seattle, Washington 98104

hawthorne hills community club
Hawthorne Hills Community Club
Mae W. Kemp, President
6060 51st Avenue N.E.
Seattle, Washington 98115

health department
Director
Health Department 09-07-01

human resources
Director
Human Resources
09-01-01
Seattle, Washington 98105

king county ems coord. co.
King County EMS Coord. Co.
c/o Jack Cvitanovic
EMS Section
1112 So. Quince

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MS ET-34
Olympia, Washington 98504

king county medical society
King County Medical Society
200 Broadway
Seattle, Washington 98122

kranz, 98122
Jay M. Kranz, M.D., Chairman
801 Broadway Suite 927
Seattle, Washington 98122

land use and transportation,
Land Use and Transportation
Project
01-02-06

laurelhurst community club
Laurelhurst Community Club
Attention: Kate Hemer
4537 55th Avenue N.E.
Seattle, Washington 98105

laurelhurst community club
Laurelhurst Community Club
Jerry Schnieder
5003 45th Avenue N.E.
Seattle, Washington 98105

laurelhurst community club
Laurelhurst Community Club
Attention: Bob Klug
4326 N.E. 42nd Street
Seattle, Washington 98105

laurelhurst community club
Laurelhurst Community Club
John Koe, President
5208 N.E. 50th Street
Seattle, Washington 98105

law department
Law Department
01-10-01

league of women voters of seattle,
Lucy Steers
Land Use Chairperson
League of Women Voters of Seattle
1402 18th Avenue
Seattle, Washington 98122

madden,
William Madden, M.D. Colonel Med. Corps.

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Chief Pediatric Pulmonology
Assistant Chief, Department of Pediatrics
Madigan Army Medical Center
Ft. Lewis, Washington 98433

marks, 98195
Sally Marks
Campus Planning Office, FJ-05
University of Washington
Seattle, Washington 98195

metro,
Bill Roach, Program Manager
METRO
Exchange Building 99-01-01

metro ms 63,
Environmental Manager
METRO MS 63
821 Second Avenue
Seattle, Washington 98104

montlake community club
Montlake Community Club
2064 23rd Avenue East
Seattle, Washington 98112

montlake community council
Montlake Community Council
Earl Wheatley, Land Use Chair
2008 East Louisa Street
Seattle, Washington 98112

office of the governor
Office of the Governor
Legislative Building
Olympia, Washington 98504

office of the mayor
Office of the Mayor
01-12-01

parks department
Parks Department
01-02-10

planning and community affairs
Planning and Community Affairs
400 Capitol Center Building FN-41
Olympia, Washington 98504

police department,
Chief
Police Department
02-04-01

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psapca,
Mr. A. R. Dammkoehler
PSAPCA
P. O. Box 9863
Seattle, Washington 98119

pscog,
Ms. Barbara Hastings
PSCOG
216 First Avenue S.
Seattle, Washington 98104

public archaeology,
Jerry Jermann, Director
Public Archaeology, U of W
213 Engineering Annex FM-12
Seattle, Washington 98195

puget sound health systems agency
Larry Thompson, Executive Director
Puget Sound Health Systems Agency
601 Valley Street
Seattle, Washington 98109

ravenna-bryant community association
Ravenna-Bryant Community Association
Mary McDaniels
2250 N.E. 65th Street
Seattle, Washington 98115

seattle area hospital co.
Seattle Area Hospital Company
190 Queen Anne Avenue N., 3rd floor
Seattle, Washington 98109

seattle p. i. real estate
Seattle P. I. Real Estate
521 Wall Street
Seattle, Washington 98121

seattle times,
Seattle Times
P. O. Box 70
Seattle, Washington 98111
Attention Ms. Polly Lane

sepa, gra, branch library,
SEPA Center
GRA Library
Branch Library

university district community council
University District Community Council
Linda Doupe

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5222 17th N.E.
Seattle, Washington 98105

university herald
Susan Berg
University Herald
1225 N. 43rd
Seattle, Washington 98103

university of washington
University of Washington
University Hospital
Seattle, Washington 98195

view ridge community club
View Ridge Community Club
Vicki King, President
P. O. Box 15218
Seattle, Washington 98115

washington natural gas
Washington Natural Gas
815 Mercer Street
P. O. Box 1869
Seattle, Washington 98111

washington state historic office
Director
Washington State Historic Office
111 W. 21st Avenue MS KL-11
Olympia, Washington 98504

washington state hospital assn.
Washington State Hospital Assn.
190 Queen Anne Avenue N., 3rd Floor
Seattle, Washington 98109

washington state medical association
Washington State Medical Association
2033 6th Avenue
Seattle, Washington 98101

water department
Superintendent
Water Department
99-11-01

windemere corporation
Windemere Corporation
Becky Weed, President
5151 Kenilworth Pl. N.E.
Seattle, Washington 98105

(agencies)
LU63/agency.1-3
870217

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Seattle Department of Construction and Land Use

Beatrice Farrer Ryan, Interim Director
Charles Royer, Mayor

MASTER USE PERMIT

January 13 1986

NOTICE OF DECISION (DECLARATION OF SIGNIFICANCE & SCOPING)

The Director of the Department of Construction and Land Use has reviewed the Master Use Permit application described below and has issued a Declaration of Significance (DS) on this project.
The public is invited to identify specific significant environmental impacts and issues which should be addressed in the Environmental Impact Statement.
If an EIS is prepared, you will be notified of the time, date and place of the public hearing.

Comments on the scope of the Environmental Impact Statement are to be sent to the following address by FEBRUARY 03, 1986 :

Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

The Declaration of Significance is a part of the file on this matter and is available for public viewing in Room 408 of the Seattle Municipal Building

NORTHEAST

4800 SAND POINT WY NE ZONE I-4/I-2/SF 5 PROJ #8406870/KROLL 16W
TO CONSTRUCT AN EMERGENCY HELISTOP FACILITY ACCESSORY TO AN EXISTING HOSPITAL/ MEDICAL CENTER.

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Marion B Terry
4545 Sand Pt Way N.E. #208
Seattle, WA 98105

Linda Janson
4510 40th N.E.
Seattle, WA 98105

Ruth Osborn
4627 41st N.E.
Seattle, WA 98105

Craig Timerlake
8612 29th N.E.
Seattle, WA 98105

Evonne Sullivan
6037 37th S.W.
Seattle, WA 98105

Glen L Juel
4545 Sand Pt Way N.E.
Seattle, WA 98105

W.J. Timberlake
3335 43rd Ave N.E.
Seattle, WA 98105

Marion P. MaeMartin
4036 N.E. 45th
Seattle, WA 98105

Agnes Larson
4545 Sand Pt Way N.E.
Seattle, WA 98105

Sharon Lustig
10015 46th N.E.
Seattle, WA 98105

Mr. & Mrs. Bueneman
4026 N.E. 45th
Seattle, WA 98105

Douglas Sherron
4004 N.E. 46th
Seattle, WA 98105

Roland S Patterson Jr.
1202 N.E. 105th Pl
Seattle, WA 98105

Eric Ziegler
4014 N.E. 45th St
Seattle, WA 98105

Add: 1.14.86
Mr. & Mrs. Robt. Miller
4508 N 254th St.
Seattle, WA 98105

Carol Wilkinson
1837 E SHelby
Seattle, WA 98105

Thelma Charters
4006 N.E. 46th
Seattle, WA 98105

Occupant
4002 N.E. 46th
Seattle, WA 98105

Occupant
3125 Laurelhurst Dr N.E.
Seattle, WA 98105

Gladys Clifton
4009 N.E. 46th
Seattle, WA 98105

Mary Walpole
4517½ 46th N.E.
Seattle, WA 98105

Alsea LaRose
4002 50th N.E.
Seattle, WA 98105

C.R. Trzlinski
4014 N.E. 45th St
Seattle, WA 98105

Pauline Kesselring
5146 46th N.E.
Seattle, WA 98105

Alberta R Chaput
4545½ 40th N.E.
Seattle, WA 98105

M Owais Jafrey
4012 N.E. 45th
Seattle, WA 98105

E Adaline Muzzy
4001 N.E. 46th
Seattle, WA 98105

Georgia Loverud
4511 40th N.E.
Seattle, WA 98105

Masarrat Jafrey
4012 N.E. 45th
Seattle, WA 98105

Bosamond Powell
3218 28th W
Seattle, WA 98199

Helen Elzey
4519 40th N.E.
Seattle, WA 98105

Molly E Merrick
4008 N.E. 45th
Seattle, WA 98105

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Dr. Marci Catanzaro, President
Laurelcrest Residential Park
4801 Terrace Dr N.E.
Seattle, WA 98105

Anita M. Francis
Jerry B. Schneider
(and petitioners)
5003 45th N. E.
Seattle, WA 98105

Mrs. Maryann E. Spangler
4013 N. E. 46th Street
Seattle, WA 98105

Dr. & Mrs. P. G. Parapas
3367 46th AVe. N. E.
Seattle, WA 98105

Elizabeth Anderson
4746 45th N. E.
Seattle, WA 98105

David S. Belvin
4757 45th N. E.
Seattle, WA 98105

Helen B. Belvin
4757 45th N. E.
Seattle, WA 98105

Freida Neurath
4101 55th N. E.
Seattle, WA 98105

H. Giddens
4338 N. E. 44th
Seattle, WA 98105

Lucille H. Rowley
5040 44th Avenue N. E.
Seattle, WA 98105

Lucille A. Conrad
4656 41st Ave. N. E.
Seattle, WA 98105

Ruth B Legg
3711 N.E. 44th
Seattle, WA 98105

Richard S. Moody
4720 47th Avenue N. E.
Seattle, WA 98105

Elizabeth L Morrison
3643 42nd N.E. Ave
Seattle, WA 98105

Ramy Hardwick
4714 44th Ave N.E.
Seattle, WA 98105

Patricia Ann Wood
4036 N.E. 45th St
Seattle, WA 98105

Mr. & Mrs Dorman
3305 43rd N.E.
Seattle, WA 98105

Dr. & Mrs. Wayne J. Timberlake
3335 43rd Ave N.E.
Seattle, WA 98105

Ms. Patricia Ann Wood
4036 N.E. 45th
Seattle, WA 98105

Elizabeth L. Morrison
3643 42nd N.E.
Seattle, WA 98105

Carolyn Margon
3650 42nd Ave N.E.
Seattle, WA 98105

Bess Silverman
4545 Sand Pt Way N.E.
Seattle, WA 98105

Frances Wolfestone
4545 Sand Pt Way N.E.
Seattle, WA 98105

Patricia Merrill
4545 Sand Pt Way N.E.
Seattle, WA 98105

Myrtle Robbles
4545 Sand Pt Way N.E.
Seattle, WA 98105

Robert T Potter
4545 Sand Pt Way N.E.
Seattle, WA 98105

Norma Monson
4545 Sand Pt Way N.E.
Seattle, WA 98105

Marguerite Shay
4545 Sand Pt Way N.E.
Seattle, WA 98105

Leef Sughet
4545 Sand Pt Way N.E.
Seattle, WA 98105

Bess Anderson
4545 Sand Pt Way N.E. #203
Seattle, WA 98105

Isabel Conroy
4545 Sand Pt Way N.E. #302
Seattle, WA 98105

Flora Ruggles
4545 Sand Pt Way #408 N.E.
Seattle, WA 98105

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Ariel Nelson
4652 41st Ave N.E.
Seattle, WA 98105

Rita T Gill
4700 N.E. 40th St
Seattle, WA 98105

Katharina Maloof
36338 42nd N.E.
Seattle, WA 98105

Bernice Stern, Chairman,
Transportation Commission
WSDOT Division of
Aeronautics
8600 Perimeter Road
King County International
Airport
Seattle, Washington 98108

Karen Rasmussen for
Laurelhurst Condominium
Suite 2300
4th & Blanchard Building
2121 4th Avenue
Seattle, WA. 98121

Grace H. Malson
P. O. Box 51087
Seattle, Washington 98115

Lola Goetz
4708 44th Avenue N. E.
Seattle, Washington 98105

Marvel Wickenburg
4705 45th Avenue N. E.
Seattle, Washington 98105

Dorothy Teeter **
4800 Sand Point Way N. E.
P. O. Box C5371
University Station
Seattle, Washington 98105

Representative Joanne Brekke
State House Committee on Social
and Health Services
House Office Building, 2nd Floor
Olympia, Washington 98504

Larry Thompson, Executive Dir.
Puget Sound Health Systems
Agency
601 Valley Street
Seattle, Washington 98109

Frank Chestnut, Director
Certificate of Need Program HB-3
State Department of Social and
Health Services
Olympia, Washington 98504

King County Medical Society
200 Broadway
Seattle, Washington 98122

Washington State Medical Assoc.
2033 6th Avenue
Seattle, Washington 98101

Seattle-King County Hospital
Society
2161 East Hamlin
Seattle, Washington 98102

Seattle Area Hospital Council
419 Occidental South, 5th Floor
Seattle, Washington 98104

Dr. Michael Copass, Medical Dir.
Airlift Northwest
325 9th Avenue
Seattle, Washington 98104

Helen M. Shawcroft
Director of Planning
University Hospital RC-34
1959 N. E. Pacific Street
Seattle, Washington 98195

Parties of Record
CC-84-022
Notice of
Public Hearing
Sent 10/9/85

Ramy N. Hough
5054 44th Avenue N. E. #3
Seattle, Washington 98105

Kathleen McHugh Johnston
4200 N. E. 50th Street
Seattle, Washington 98105

Helen Newman
4252 N. E. 50th Street
Seattle, Washington 98105

Seattle-King County
Health Department **
Dr. Bud Nicola
09-07-01

Dept. of Ecology **
State of Washington
Olympia, WA. 98502

Ann Ormsby **

Notice of D.S. Decision
Sent 1/10/86 by

** Notice of D.S.
Decision + Report
Sent 1/10/86 by

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Elizabeth M Wood
3863 42nd N.E.
Seattle, WA 98105

Occupant
3355 Laurelhurst Dr. N.E.
Seattle, WA 98105

Winnifred Raymond
4319 N.E. 42nd St
Seattle, WA 98105

Occupant
5115 N.E. 45th
Seattle, WA 98105

Mark & Juanita Bunch
4715 45th N.E.
Seattle, WA 98105

Cynthia McFalls
4204 N.E. 50th St
Seattle, WA 98105

Occupant
4326 N.E. 41st
Seattle, WA 98105

Judith J. Platt
4526 45th Ave N.E.
Seattle, WA 98105

Barbara L Carver
4305 43rd N.E.
Seattle, WA 98105

Occupant
4303 N.E. 35th
Seattle, WA 98105

Ellen M. Tobui
4610 41st N.E.
Seattle, WA 98105

S Kenneth Pai
4331 N.E. 45th St
Seattle, WA 98105

Occupant
3854 42nd N.E.
Seattle, WA 98105

View Ridge Comm. Club, Inc
P.O. Box 15218
Seattle, WA 98115

Nancy J. Philips
4635 41st N.E.
Seattle, WA 98105

Occupant
3500 46th Ave N.E.
Seattle, WA 98105

Mrs. Joseph W. Neubert
4714 41st Ave N.E.
Seattle, WA 98105

Mrs. F.G. Wallace
4668 41st Ave N.E.
Seattle, WA 98105

Occupant
3323 43rd Ave N.E.
Seattle, WA 98105

D. Hyatt
4614 41st Ave N.E.
Seattle, WA 98105

Occupant
4700 N.E. 40th
Seattle, WA 98105

Brian & Marla Fenske
4625 41st N.E.
Seattle, WA 98105

Ken Jacobsen / 46th District
House of Representatives
State of Washington
Olympia, WA 98504

Marilyn & Jim Morrow
3656 42nd Ave N.E.
Seattle, WA 98105

Marlin Appelwick/ 46th District
House of Representatives
State of Washington
Olympia, WA 98504

Dale E. Sherrow, Jr.
3625 1st Ave S
P.O. Box 80181
Seattle, WA 98108

Bruce Margon
3650 42nd Ave N.E.
Seattle, WA 98105

Siqueland Partnership
1200 Westlake Ave N, Suite 801
Seattle, WA 98109

Mr. Michael M. Cochran
3838 Suburban Dr N.E.
Seattle, WA 98105

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Mrs. Leo Hirschorn
4517 46th Ave N.E.
Seattle, WA 98105

Julie Pai
4331 N.E. 45th
Seattle, WA 98105

Steven Oh
4559 51st Ave N.E.
Seattle, WA 98105

Philip Fleckman
5041 Ivanhoe Pl. N. E.
Seattle, WA 98105

Scott Cobb
4654 41st Ave. N. E.
Seattle, WA 98105

Jerry Sherrard
4339 N. E. 44th
Seattle, WA 98105

Kate Hemer
4537 55th N. E.
Seattle, WA 98105

Elizabeth Forrester
4151 42nd N. E.
Seattle, WA 98105

Julie & Kenneth Pai
4331 N. E. 45th St.
Seattle, WA 98105

Mrs. Edith Sujor
4671 41st N .E.
Seattle, WA 98105

Miriam Armour
4830 N. E. 44th
Seattle, WA 98105

Ila M. Schulze (Mrs. C.L.)
4303 50th Ave. N. E.
Seattle, WA 98105

Myron Sayles
4027 N. E. 45th
Seattle, WA 98105

Ms. Nancy Lawrence
10660 Lakeside Avenue N. E.
Seattle, WA 98125

Esther Branch
5011 45th Ave. N. E.
Seattle, WA 98105

Joy Scott
Business/Asia
4339 N.E. 45th
Seattle, WA 98105

Dorothy Peterson
4300 N. E. 44th St.
Seattle, WA 98105

Marjorie Kresge
4014 N. E. 46th St.
Seattle, WA 98105

Ronald C. Kinsey
4545 Sand Pt Way N.E.
Seattle, WA 98105

Ruth Engelberg
Laurelhurst Community Club Bd.
of Trustrees
4717 45h Ave. N. E.
Seattle, WA 98105

Jerry Schneider
5003 45th Ave. N. E.
Seattle, WA 98105

Doe Kaufman
4545 Sand Pt Way N.E.
Seattle, WA 98105

Michael & Dorothy Perlman
4500 N. E. 50th
Seattle, WA 98105

Esther Brown
4545 Sand Pt Way N.E.
Seattle, WA 98105

Joy Scott
Business/Asia
4339 N. E. 45th St.
Seattle, WA 98105

Jack Chourre
4828 37th Ave. N. E.
Seattle, WA 98105

Janet A Wilkie
4545 Sand Pt Way N.E.
Seattle, WA 98105

Jean T. Harkins
4659 41st N. E.
Seattle, WA 98105

Mrs. H. C. Mills
3921 47th Ave. N. E.
Seattle, WA 98105

Paula Douglas
4545 Sand Pt Way N.E.
Seattle, WA 98105

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Occupant
4671 41st N.E.
Seattle, WA 98105

S.W. Baker
3851 44th N.E.
Seattle, WA 98105

Rolfe Turnure
3959 N.E. Surber Dr
Seattle, WA 98105

Maryann E Spangler
4013 N.E. 46th St
Seattle, WA 98105
DUP

Brian Fenske
4625 41st N.E.
Seattle, WA 98105

Nancy Turnure
3959 N.E. Surber Dr
Seattle, WA 98105

Dorothy S. Murphy
3821 46th N.E.
Seattle, WA 98105

Iola Sells
4620 41st Ave N.E.
Seattle, WA 98105

William D Jameron
3949 N.E. Surber Dr
Seattle, WA 98105

Joyce M Woody
4520 N.E. 38th St
Seattle, WA 98105

Lucille Conrad
4656 41st Ave N.E.
Seattle, WA 98105

Karl E. Hellstrom
3925 N.E. Surber Dr
Seattle, WA 98105

Damaris Rice
3815 46th Ave N.E.
Seattle, WA 98105

Switt Cobb
4654 41st N.E.
Seattle, WA 98105

Leonard Gerber
3921 N.E. Surber Dr
Seattle, WA 98105

Lucy Krause
4666 41st Ave N.E.
Seattle, WA 98105

Richard S Moody
4720 47th Ave N.E.
Seattle, WA 98105

Marlys Gerber
3921 N.E. Surber Dr
Seattle, WA 98105

John Mendenhall
5033 44th N.E.
Seattle, WA 98105

Charles Jennings
4724 44th N.E.
Seattle, WA 98105

Stanley Jones
3915 N.E. Surber Dr
Seattle, WA 98105

Patricia S Jennings
4724 44th Ave N.E.
Seattle, WA 98105

Jane Kippenhan
3908 N.E. 38th
Srattle, WA 98105

Hugo W Schimmelbusch
4702 45th N.E.
Seattle, WA 98105

Daryl Dahloard
3904 N.E. Belvoir
Seattle, WA 98105

Norma D Baker
3851 44th N.E.
Seattle, WA 98105

Alice H Swergert
3812 45th N.E.
Seattle, WA 98105

Alma E. Grevstad
3830 Surber Dr N.E.
Seattle, WA 98105

L R Hennings Jr.
4314 54th N.E.
Seattle, WA 98105

Mrs. Harlan Dean
4001 N.E. Surber Dr
Seattle, WA 98105

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3852 Surber Dr N.E.
Seattle, WA 98105

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5007 44th N.E.
Seattle, WA 98105

Richard Senseney
3335 W Laurelhurst Dr N.E.
Seattle, WA 98105

Jean B Phillips
4728 41st N.E.
Seattle, WA 98105

Annie T Warsinske
4515 52nd Ave N.E.
Seattle, WA 98105

Carolyn W Corson
3854 42nd N.E.
Seattle, WA 98105

Marilyn Morrow
3656 42nd N.E.
Seattle, WA 98105

Ernestine J Rombouts
4675 41st Ave N.E.
Seattle, WA 98105

H.H. Corson
3854 42nd N.E.
Seattle, WA 98105

William Branch
5011 45th N.E.
Seattle, WA 98105

Stan & Bea Sharpe
5013 Sand Pt Pl. N.E.
Seattle, WA 98105

Dorothy A Perlman
4500 N.E. 50th
Seattle, WA 98105

Carolyn Margon
3650 42nd N.E.
Seattle, WA 98105

Lucille Rowley
5040 44th N.E.
Seattle, WA 98105

Keith F Prince
4747 46th N.E.
Seattle, WA 98105

Frances Ottmar
5019 44th Ave N.E.
Seattle, WA 98105

Claire A Marston
4250 N.E. 50th
Seattle, WA 98105

Esther Maekilcup
5011 45th N.E.
Seattle, WA 98105

Kenneth R Boyle
4211 50th Ave N.E.
Seattle, WA 98105

Marjorie Kresge
4014 N.E. 46th
Seattle, WA 98105

Anita Francis
5003 45th N.E.
Seattle, WA 98105

Carolyn Corson
3854 42nd N.E.
Seattle, WA 98105

Juanita Bunch
4715 45th N.E.
Seattle, WA 98105

John M Maloof
3638 42nd N.E.
Seattle, WA 98105

Otto Rombouts
4675 41st N.E.
Seattle, WA 98105

Dale E Sharrow
4715 47th Ave
Seattle, WA 98134

Patrick Mabong
3657 42nd Ave N.E.
Seattle, WA 98105

Kinne McCabe
4745 45th N.E.
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Helen Senseney
3335 W Laurelhurst Dr N.E.
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Seattle, WA 98105

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Gail Gordan
4002 N.E. 45th
Seattle, WA 98105

Karl Erik Hellstrom, MD
Professor of Pathology, U.W.
3925 N.E. Surber Dr
Seattle, WA 98105

Herdis Benediktson
4609 41st Ave N.E.
Seattle, WA 98105

Irving A. Sonkin
2401 N.W. 65th
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Margaret N. Bingham
4112 43rd Ave N.E.
Seattle, WA 98105

H.L. Kurtz
5043 Sand Point Pl N.E.
Seattle, WA 98105

Eleanor Haldane
4123 43rd Ave N.E.
Seattle, WA 98105

Shirley W. Youell
3930 N.E. Belvoir Pl
Seattle, WA 98105

Mrs. Randall Case
4111 43rd Ave N.E.
Seattle, WA 98105

Mrs. Richard W. Maider
3832 48th Ave N.E.
Seattle, WA 98105

Helen A Senseney
3335 W Laurelhurst Pl N.E.
Seattle, WA 98105

Marianne Dailey
5132 45th N.E.
Seattle, WA 98105

M. Wickenburg
4705 45th N.E.
Seattle, WA 98105

Beverly Lycette
88 Virginia
Seattle, WA 98101

Mary F. Mahoney
3657 42nd N.E.
Seattle, WA 98105

Bea & Stan Sharpe
5013 Sand Pt. Pl N.E.
Seattle, WA 98105

Gloria M Hennings
4314 54th N.E.
Seattle, WA 98105

Bonnie & Bryce Nelson
4127 42nd N.E.
Seattle, WA 98105

Mr. & Mrs. Robert D Swenson
3808 42nd Ave N.E.
Seattle, WA 98105

Mr. & Mrs. Raymond W. Brown
6023 N.E. 61st St
Seattle, WA 98115

Marilyn Smith Layton
4412 43rd Ave N.E.
Seattle, WA 98105

Betty Ann Christian
4350 53rd Ave N.E.
Seattle, WA 98105

Gjertrud J. Siqueland
4702 41st Ave N.E.
Seattle, WA 98105

Martha F Kane
3386 46th Ave N.E.
Seattle, WA 98105

Nancy J. Philips
4635 41st N.E.
Seattle, WA 98105

Pauline F Westlund
5150 N.E. Latimer Pl
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6504 Ravenna N. E.
Seattle, WA 98115

Helen Newman
4252 N. E. 50th
Seattle, WA 98105

Barbara L. Erak
6807 54th N. E.
Seattle, WA 98105

Mrs. H. C. Mills
3921 47th Ave. N. E.
Seattle, WA 98105

Claire A. Marston
4250 N. E. 50th
Seattle, WA 98105

Charles R. Hough
5054 44th Ave. N. E.
Seattle, WA 98105

Mrs. Frank C. Lull III
4123 42nd Ave. N. E.
Seattle, WA 98105

Jane Johnson
4323 N. E. 45th St.
Seattle, WA 98105

Mrs. Flora J. Ruggles
4545 Sand Point Way N. E.
Seattle, WA 98105

Michael D. Perlman
4500 N. E. 50th
Seattle, WA 98105

Edith Nielsen
4848 N. E. 43rd St.
Seattle, WA 98105

Mrs. J. R. Anderson
4746 45th N. E.
Seattle, WA 98105

Dr. James Bingham
4112 43rd N. E.
Seattle, WA 98105

Members Minna Parks Guild
c/o Mrs. E. L. Boose, Sec'y
3402 N. E. 45th Place
Seattle, WA 98105

Anita Francis DUP
5003 45th N. E.
Seattle, WA 98105

Paul M. Mendelman, M. D.
Assistant Professor of Pediatri
University of Washington
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4800 Sand Point Way N. E.
Seattle, WA 98105

Ann Reynolds
1020 W. Raye
Seattle, WA 98119

PETITIONERS (IN CARE OF:)
Jerry B. Schneider
5003 45th N. E.
Seattle, WA 98105 DUP

Eleanor Haldane
4123 43rd N. E.
Seattle, WA 98105

Elizabeth L. Morrison
3643 42nd N. E. Ave.
Seattle, WA 98105

Warren and Pauline Westlund
5150 N. E. Latimer Place
Seattle, WA 98105

Ramy Hardwick
4714 44th Ave N.E.
Seattle, WA 98105

Sara Jane Johnsen
4221 43rd N. E.
Seattle, WA 98105

Kathleen McHugh Johnston
4200 N. E. 50th
Seattle, WA 98105

Carolyn Margon
3650 42nd Ave. N. E.
Seattle, WA 98105

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Seattle, WA 98105

Gail Gordan
4002 N.E. 45th
Seattle, WA 98105

Occupant
100 N.E. 62nd
Seattle, WA98105

John Jones
4851 N.E. 44th
Seattle, WA 98105

Occupant
4714 41st Ave N.E.
Seattle, WA 98105

Marvie Aspluno
4120 50th Ave N.E.
Seattle, WA 98105

Ruth M Cheever
4710 41st N.E.
Seattle, WA 98105

James R Anderson
4746 45th Ave N.E.
Seattle, WA 98105

Lula B Fulmer
7208 57th Ave N.E.
Seattle, WA 98105

Borghild C. Lee
4706 41st N.E.
Seattle, WA 98105

Ruth Engelberg
4717 45th Ave N.E.
Seattle, WA 98105

Barbara G Babb
4756 48th N.E.
Seattle, WA 98105

Siqueland
4702 41st N.E.
Seattle, WA 98105

B A Almvig, Jr
5624 59th Ave N.E.
Seattle, WA 98105

Jeff Babb
4756 48th Ave N.E.
Seattle, WA 98105

Peggy Pettenquill
4670 41st N.E.
Seattle, WA 98105

James O Gunderson
3914 47th Ave N.E.
Seattle, WA 98105

J. Baker
4743 48th Ave N.E.
Seattle, WA 98105

Lucy Krause
4666 41st Ave N.E.
Seattle, WA 98105

Elizabeth Miller
4508 N.E. 54th
Seattle, WA 98105

M. O. Dannenmiller
7022 17th Ave N.E.
Sea-tle, WA 98105

Linnea S Holmstrom
12223 Meridian N
Seattle, WA 98133

Joan W Scheller
5226 Sand Pt Way N.E.
Seattle, WA 98105

D W Marlowe
4603 N.E. 40th
Seattle, WA 98105

Marilyn B Sloan
3627 42nd N.E.
Seattle, WA 98105

Debbie Caplan
7727 33rd N.E.
Seattle, WA 98105

James Cline
100 Roy St A-10
Seattle, WA 98109

Mrs. Ernest M. Lotz
2316 N.E. 95th St
Seattle, WA 98117

Elizabeth Scott
4339 N.E. 41st
Seattle, WA 98105

Cynthia Marshall
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Seattle, WA 98105

Grace Davis
7524 19th N.E.
Seattle, WA 98115

Mrs. W.D. Sells
4620 41st Ave N.E.
Seattle, WA 98105

Edna Lincoln
4708 41st Ave N.E.
Seattle, WA 98105

James L Hicks
4705 N.E. 54th
Seattle, WA 98105

Mr. Roseborough
Federal Aviation Agency
7300 South Perimeter Rd S.
Seattle, WA 98108

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Seattle, WA 98105

Katherine L Simmons
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Seattle. WA 98119

Larry A Thompson
Puget Sound Health Systems
Agency
601 Valley St
Seattle, WA 98109

Sally N Maider
3832 48th N.E.
Seattle, WA 98105

Richard Rice
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Seattle, WA 98105

Anne Johnson
3649 42nd N.E.
Seattle, WA 9810

Hugh S Davis
7524 19th Ave N.E.
Seattle, WA 98115

Frances Gerber
4545 Sand Pt Way N.E. #406
Seattle, WA 98105

Mrs. David H. Pinkney
3812 48th Ave N.E.
Seattle, WA 98105

Hilmer Samuelson
2317 N.W. 95th St
Seattle, WA 98117

Tom Cornils
4545 Sand Point Way N.E.
Seattle, WA 98105

Marci L Catanzaro
4801 Terrace Dr N.E.
Seattle, WA 98105

Mae D. Olson
524 Harvard Ave E
Seattle, WA 98102

Kathleen E Moore
2310 N.W. 95th
Seattle, WA 98105

Pamel G & Michael C Cochran
3838 Surber Dr N.E.
Seattle, WA 98105

Veryl G Toms
1909 N.E. Northgate
Seattle, WA 98125

Colleen L. O'Leary
4270 N.E. 50th
Seattle, WA 98105

Ernestine J Rombouts
4675 41st Ave N.E.
Seattle, WA 98105

Mrs. Edith Suzor
4671 41st N.E.
Seattle, WA 98105

Dorothy Peterson
4300 N.E. 44th St
Seattle, WA 98105

Beth Morrison
3643 42nd Ave N,E.
Seattle, WA 98105

Diann Kirkwood
6669 N.E. Windermere Rd
Seattle, WA 98115

Bob & Jo Chatalas
3906 50th N.E.
Seattle, WA 98105

Dale Watkins
4331 N.E. 44th
Seattle, WA 98105

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4315 N.E. 45th
Seattle, WA 98105

Irene Robinson
4327 N.E. 44th
Seattle, WA 98105

Susan Marcotte
4644 41st N.E.
Seattle, WA 98105

Conrad Jacobsen
4315 N.E. 45th
Seattle, WA 98105

Emma Birkvold
4319 N.E. 44th
Seattle, WA 98105

Jann Blackbourn
3024 N.E. 95th
Seattle, WA 98105

Marilyn Smith
4412 43rd N.E.
Seattle, WA 98105

Kristy Wall
4316 43rd N.E.
Seattle, WA 98105

Steve Blackbourn
3024 N.E. 95th
Seattle, WA 98105

Occupant
4324 N.E. 44th
Seattle, WA 98105

Paul Grant
4302 43rd N.E.
Seattle, WA 98105

Elsie Marcotte
4644 41st N.E.
Seattle, WA 98105

Alan Houland
4326 N.E. 44th
Seattle, WA 98105

Marilyn Phillips
4322 N.E. 43rd
Seattle, WA 98105

Gerald L Marlotte
4644 41st Ave N.E.
Seattle, WA 98105

Diana Houland
4326 N.E. 44th
Seattle, WA 98105

Margaret M Impett
4629 41st Ave N.E.
Seattle, WA 98105

Mrs. J.F. Sherrard
4339 N.E. 44th
Seattle, WA 98105

Lucille A Conrad
4656 41st Ave N.E.
Seattle, WA 98105

Mary Virginia Ballard
4613 41st Ave N.E.
Seattle, WA 98105

Jackie Kelly
4335 N.E. 44th
Seattle, WA 98105

Temple E Cobb
7320 45th N.E.
Seattle, WA 98105

Helen Randles
5757 N.E. 61st
Seattle, WA 98105

William R Cobb
7320 45th N.E.
Seattle, WA 98105

Raymond W Brown
6023 N.E. 61st
Seattle, WA 98105

Ruth Lewarch
4316 N.E. 44th
Seattle, WA 98105

Jayne Brown
6023 N.E. 61st
Seattle, WA 98105

H. Eileen Miller
4742 38th Ave N.E.
Seattle, WA 98105

Mrs M J Verretto
4334 N.E. 44th
Seattle, WA 98105

Rosemary Forkey
4622 41st N.E.
Seattle, WA 98105

Jane L Johnson
4323 N.E. 45th
Seattle, WA 98105

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4331 N.E. 45th
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Hugh C Sobottka
4403 54th N.E.
Seattle, WA 98105

Kathleen G Fisher
4319 43rd N.E.
Seattle, WA 98105

Rae Waddingham
4701 45th N.E.
Seattle, WA 98105

Bertha M Perry
5307 N.E. 43rd
Seattle, WA 98105

S.E. Solberg
4311 43rd Ave N.E.
Seattle, WA 98105

Tony Bruner
4701 45th N.E.
Seattle, WA 98105

Joan M Sobattka
4403 54th N.E.
Seattle, WA 98105

Barbara L. Carver
4305 43rd N. E.
Seattle, WA 98105

Judith A Bruner
4701 45th N.E.
Seattle, WA 98105

Eleanor Leithead
4402 54th N.E.
Seattle, WA 98105

Nancy L Grant
4302 43rd N.E.
Seattle, WA 98105

Robert Leithead
4402 54th N.E.
Seattle, WA 98105

Shirley Gay
4406 43rd N.E.
Seattle, WA 98105

Linda World
4516 45th N.E.
Seattle, WA 98105

Deanna Fraker
4510 54th Ave N.E.
Seattle, WA 98105

Michael A Leach
4319 N.E. 45th
Seattle, WA 98105

Mark Ahlness
4512 45th N.E.
Seattle, WA 98105

Scott Pollock
4427 55th N.E.
Seattle, WA 98105

Gail O Leach
4319 N.E. 45th
Seattle, WA 98105

Jerry Schneider
5003 45th Ave N.E.
Seattle, WA 98105

Kathleen J Shaw
4421 55th N.E.
Seattle, WA 98105

Jason Leach
4319 N.E. 45th
Seattle, WA 98105

Robert D McCroskey
3329 W Laurelhurst Dr N.E.
Seattle, WA 98105

Lillian Mickel
4300 54th N.E.
Seattle, WA 98105

Julie Pai
4331 N.E. 45th
Seattle, WA 98105

David M Perry
5307 N.E. 43rd
Seattle, WA 98105

Gloria Hennings
4314 54th N.E.
Seattle, WA 98105

Ayesha Pai
4331 N.E. 45th
Seattle, WA 98105

Mary Murray
4315 54th N.E.
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Seattle, WA 98105

Rudolph J Mathers
4191 42nd N.E.
Seattle, WA 98105

Eileen Peterson
5003 47th N.E.
Seattle, WA 98105

Janet Thomson
4150 42nd N.E.
Seattle, WA 98105

Kathleen Bryan
4141 42nd N.E.
Seattle, WA 98105

Mary Alice Sanguineti
5103 47th Ave N.E.
Seattle, WA 98105

Alan C Hess
4142 42nd N.E.
Seattle, WA 98105

Morgan Bryan
4141 42nd N.E.
Seattle, WA 98105

Nancy M Robert
5126 47th N.E.
Seattle, WA 98105

Jane Hess
4142 42nd N.E.
Seattle, WA 98105

Richard B Counts
4131 42nd N.E.
Seattle, WA 98105

Julio Comaduran
5136 47th N.E.
Seattle, WA 98105

Lauren A Druby
4152 42nd N.E.
Seattle, WA 98105

Bonnie Nelson
4127 42nd N.E.
Seattle, WA 98105

Adrienne Borg
5136 47th N.E.
Seattle, WA 98105

Margery S. Hellmann
4154 42nd Ave N.E.
Seattle, WA 98105

Tim Fishel
4107 42nd N.E.
Seattle, WA 98105

Jack Roher
5126 47th Ave N.E.
Seattle, WA 98105

Donald C. Hellmann
4154 42nd Ave N.E.
Seattle, WA 98105

Glenn E. Dexter
5151 47th N.E.
Seattle, WA 98105

Michelle Duggan
5132 47th Ave N.E.
Seattle, WA 98105

Irene L Kelso
4160 42nd N.E.
Seattle, WA 98105

Marge Rice
5017 47th N.E.
Seattle, WA 98105

Kay Lansverk
5127 47th Ave N.E.
Seattle, WA 98105

Occupant
4166 42nd N.E.
Seattle, WA 98105

Olivette E Geer
5036 47th N.E.
Seattle, WA 98105

Kenneth R. Bell
5123 47th Ave N.E.
Seattle, WA 98105

Rusty Palmer
4180 42nd N.E.
Seattle, WA 98105

Rachel Fucella
5022 47th Ave N.E.
Seattle, WA 98105

Kathryn Kigh.
5123 47th Ave N.E.
Seattle, WA 98105

Susan Short
4186 42nd N.E.
Seattle, WA 98105

Edith A Klassen
5011 45th N.E.
Seattle, WA 98105

Gwendolyn Lawrence
4316 37th N.E.
Seattle, WA 98105

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3649 42nd N.E.
Seattle, WA 98105

Eleanor Morse
4319 N.E. 43rd
Seattle, WA 98105

Richard Acarregui
4107 43rd N.E.
Seattle, WA 98105

Joan Schulte
3614 42nd N.E.
Seattle, WA 98105

Wm. C. Morse
4319 N.E. 43rd
Seattle, WA 98105

Madelyne Case
4111 43rd Ave N.E.
Seattle, WA 98105

John B Martin
4315 N.E. 43rd
Seattle, WA 98105

Ward Haldane
4123 43rd N.E.
Seattle, WA 98105

R D Swenson
3808 42nd Ave N.E.
Seattle, WA 98105

Nancy Konicow
4314 N.E. 42nd
Seattle, WA 98105

Elizabeth Beder
4407 43rd N.E.
Seattle, WA 98105

Phyllis E Swenson
3808 42nd Ave N.E.
Seattle, WA 98105

Joel Konicow
4314 N.E. 42nd
Seattle, WA 98105

Oscar E Beder
4407 43rd N.E.
Seattle, WA 98105

Thomas G. Swansos
4120 N.E. Surber Dr
Seattle, WA 98105

Marjone Harslom
4318 N.E. 42nd
Seattle, WA 98105

Winston A Johnson
4411 43rd Ave N.E.
Seattle, WA 98105

Elizabeth Swansos
4120 N.E. Surber
Seattle, WA 98105

Robert H Klug
4326 N.E. 42nd
Seattle, WA 98105

Irma G. Johnson
4411 43rd Ave N.E.
Seattle, WA 98105

Anita Francis
5003 45th N.E.
Seattle, WA 98105

Margaret Brooks
4339 N.E. 42nd
Seattle, WA 98105

Huda Giddens
4338 N.E. 44th
Seattle, WA 98105

Robert Haney Scott
4339 N.E. 45th
Seattle, WA 98105

David Brooks
4339 N.E. 42nd
Seattle, WA 98105

Sarah Scott
4339 N.E. 45th
Seattle, WA 98105

Lillian O Warner
4338 N.E. 43rd
Seattle, WA 98105

Winifred L Raymond
4319 N.E. 42nd
Seattle, WA 98105

Kathryn Anderson
4327 N.E. 45th
Seattle, WA 98105

Frederica Sulzbacher
4323 N.E. 43rd St
Seattle, WA 98105

Laura Greene
4108 43rd N.E.
Seattle, WA 98105

Edwin F Anderson
4327 N.E. 45th
Seattle, WA 98105

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Jeanne Snodgrass
3026 12th W
Seattle, WA 98119

H Scherner
4545 Sand Pt Way N.E.
Seattle, WA 98105

Delores I Hyatt
4614 41st Ave N.E.
Seattle, WA 98105

Ronald L Kinsey
4346 N.E. 58th
Seattle, WA 98105

Lars G Carlson
3626 N.E. 45th
Seattle, WA 98105

Ellen M Tobin
4610 41st N.E.
Seattle, WA 98105

Vernon E Toney
4715 N.E. 39th
Seattle, WA 98105

Rudolf Newman
4252 N.E. 50th
Seattle, WA 98105

Neva Fulcher
4604 41st N.E.
Seattle, WA 98105

Ila Kinsey
4545 Sand Pt Way #505
Seattle, WA 98105

Helen Newman
4252 N.E. 50th
Seattle, WA 98105

Eileen Wilson
4624 41st N.E.
Seattle, WA 98105

Emma Spitzer
5018 Sand Pt Way N.E.
Seattle, WA 98105

June Crawford
4601 41st Ave N.E.
Seattle, WA 98105

Frank H. Morris
4545 Sand Point Way N.E.
Seattle, WA 98105

Cynthia McFalls
4204 N.E. 50th St
Seattle, WA 98105

Patsy M Sawa
4612 41st N.E.
Seattle, WA 98105

Edwin T Lewis
4619 41st Ave N.E.
Seattle, WA 98105

John McFalls
4204 N.E. 50th St
Seattle, WA 98105

Tina J Norwalk
4003 N.E. 46th
Seattle, WA 98105

Sandra Lewis
4017 N.E. 46th
Seattle, WA 98105

Alma K Bacon
5055 Sand Pt Pl N.E.
Seattle, WA 98105

Grace H Malson
4011 N.E. 46th
Seattle, WA 98105

Richard Dallam
3914 E Garfield
Seattle, WA 98112

Jane B Gallup
5208 Sand Pt Pl N.E.
Seattle, WA 98105

Virginia Sherrow
4004 N.E. 46th
Seattle, WA 98105

John T S Keeler
4015 N.E. 46th
Seattle, WA 98105

John C Gallup
5208 Sand Pt Pl N.E.
Seattle, WA 98105

Alice Scherner
4545 Sand Pt Way N.E.
Seattle, WA 98105

Margaret A Beaver
3001 N.E. 97th
Seattle, WA 98105

Jack V Denton
5208 Sand Point Pl N.E.
Seattle, WA 98105

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Jane Keyes
4304 37th N.E.
Seattle, WA 98105

Mark & Linda Nolting
3518 N.E. 42nd St
Seattle, WA 98105

Peggy Demarest
3323 43rd Ave N.E.
Seattle, WA 98105

Susan M Garske
3717 N.E. 43rd
Seattle, WA 98105

Markhan Harris
3507 N.E. 43rd
Seattle, WA 98105

V D Demcrest Jr.
3323 43rd Ave N.E.
Seattle, WA 98105

Dan Faubert
3707 N.E. 43rd
Seattle, WA 98105

Kevin Carabine
3508 N.E. 43rd
Seattle, WA 98105

K L McGary
3950 N.E. Surber Dr
Seattle, WA 98105

Geraldine Chang
4212 37th Ave N.E.
Seattle, WA 98105

Vevette Gordan
3612 N.E. 43rd St
Seattle, WA 98105

John A MGary
3950 N.E. Surber Dr
Seattle, WA 98105

Yen Ching Chang
4212 37th Ave N.E.
Seattle, WA 98105

Lynda Smith
3608 42nd N.E.
Seattle, WA 98105

Gregory B Davis
3940 N.E. Surber Dr
Seattle, WA 98105

Louise Jarkow
3717 N.E. 42nd
Seattle, WA 98105

Joan Hannah
3502 43rd Ave N.E.
Seattle, WA 98105

I. Hellstrom
3925 N.E. Surber Dr
Seattle, WA 98105

Marc Jarkow
3717 N.E. 42nd
Seattle, WA 98105

Judith Thornton
3338 43rd Ave N.E.
Seattle, VA 98105

Mary Bernson
3900 N.E. 38th
Seattle, WA 98105

Jean B Robins
4114 37th Ave N.E.
Seattle, WA 98105

Sue A Tong
3333 43rd Ave
Seattle, WA 98105

Norman V Johnston
3905 N.E. Belvoir Pl
Seattle, WA 98105 *

Thomas Robins III
4114 37th Ave N.E.
Seattle, WA 98105

Christy Timberlake
3335 43rd Ave
Seattle, WA 98105

Marilyn L Goux
8001 Sand Pt Wy N.E.
Seattle, WA 98105

Isabella M Anderson
4100 36th Ave N.E.
Seattle, WA 98105

Hugo W Schimmelbusch
4702 45th N.E.
Seattle, WA 98105

Shari L Treadwell
Jim Treadwell
3302 43rd Ave N.E.
Seattle, WA 98105

Anneliese Schimmelbusch
842 N.E. 55th
Seattle, WA 98105

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Elizabeth Anderson
4746 45th N.E.
Seattle, WA 98105

Patricia Francland
4811 N.E. 43rd
Seattle, WA 98105

Mr. & Mrs Mikal
4740 47th Ave N.E.
Seattle, WA 98105

Ron Reichter
4738 17th N.E. #1
Seattle, WA 98105

Donna Fay
4823 N.E. 43rd
Seattle, WA 98105

Kathy Gilliland
4760 47th Ave N.E.
Seattle, WA 98105

Judith K Rudow
4831 N.E. 44th
Seattle, WA 98105

Occupant
4827 N.E. 43rd
Seattle, WA 98105

Carolyn J Dunham
5002 47th Ave N.E.
Seattle, WA 98105

Janeen Mount
4823 N.E. 44th
Seattle, WA 98105

Dick Crowther
4827 N.E. 43rd
Seattle, WA 98105

Kenneth S Husby
5002 47th Ave N.E.
Seattle, WA 98105

Jeannette Carter
4821 N.E. 44th
Seattle, WA 98105

Carolyn Prince
4747 46th N.E.
Seattle, WA 98105

Priscilla W Crittenden
5014 47th Ave N.E.
Seattle, WA 98105

Edith Nielsen
4848 N.E. 43rd
Seattle, WA 98105

Catherine M Redecker
4845 N.E. 43rd
Seattle, WA 98105

Charles C Crittenden
5014 47th Ave N.E.
Seattle, WA 98105

Mary Wright
4830 N.E. 43rd
Seattle, WA 98105

Anne Weber
4217 50th N.E.
Seattle, WA 98105

Lauretta Macdonald
5028 47th Ave N.E.
Seattle, WA 98105

Rose Perrino
4844 N.E. 42nd
Seattle, WA 98105

A. Peteron
4802 N.E. 45th
Seattle, WA 98105

Marian Murphy
4820 N.E. 43rd
Seattle, WA 98105

Katherine A Horsman
5402 N.E 58th
Seattle, WA 98105

Richard Greiner
5116 47th Ave N.E.
Seattle, WA 98105

Betsy Lynn Sherrow
4715 47th N.E.
Seattle, WA 98105

Sarah C Rice
5122 47th Ave N.E.
Seattle, WA 98105

Jean Francland
4811 N.E. 43rd
Seattle, WA 98105

Lorene M Sherman
4738 47th N.E.
Seattle, WA 98105

Frances H Rice
5122 47th Ave N.E.
Seattle, WA 98105

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Ramy Hough
5054 44th N.E.
Seattle, WA 98105

Occupant
5013 Sandpoint Way N.E.
Seattle, WA 98105

Muriel & Susan Headley
5040 Sand Pt Pl N.E.
Seattle, WA 98105

Charles R Hough
5054 44th Ave N.E.
Seattle, WA 98105

Harold L Kurtz
5043 Sand Point Pl N.E.
Seattle, WA 98105

Leo C Johnston
4200 N.E. 50th
Seattle, WA 98105

Lucille Rowley
5040 44th Ave N.E.
Seattle, WA 98105

Mildred D Kurtz
5043 Sand Point Pl N.E.
Seattle, WA 98105

Kathleen Johnston
4200 N.E. 50th
Seattle, WA 98105

Occupant
5035 44th Ave N.E.
Seattle, WA 98105

Anna Gold
5047 Sand Pt Pl N.E.
Seattle, WA 98105

Geraldine H. Meissner
3115 N.E. 84th
Seattle, WA 98105

John Mendenhall
5033 44th Ave N.E.
Seattle, WA 98105

Richard W Walsh
5311 N.E. 62nd St
Seattle, WA 98105

James J. Stone
6841 42nd N.E.
Seattle, WA 98105

Helen C Pommerwing
5034 44th Ave N.E.
Seattle, WA 98105

Evelyn A Walsh
5311 N.E. 62nd St
Seattle, WA 98105

Peter Newman
2408 22nd Ave E
Seattle, WA 98105

Alwine Jerbert
5029 44th Ave N.E.
Seattle, WA 98105

Tillie Prottas
5048 Sand Pt Way N.E.
Seattle, WA 98105

Vita Rekevics
4312 37th N.E.
Seattle, WA 98105

Frances Ottmar
5019 44th Ave N.E.
Seattle, WA 98105

Helen M Rogers
5042 Sand Pt Pl N.E.
Seattle, WA 98105

Enid Carlander
414542nd N.E.
Seattle, WA 98105

Lee Shulman
5015 44th Ave N.E.
Seattle, WA 98105

Jack R Michkils
5042 Sand Point Pl N.E.
Seattle, WA 98105

James Toi
4166 42nd N.E.
Seattle, WA 98105

Mary A Nadeau
5055 Sand Pt Pl N.E.
Seattle, WA 98105

Gary Tomlinson
4181 42nd Ave N.E.
Seattle, WA 98105

Occupant
5049 Sand Point Pl N.E.
Seattle, WA 98105

Eleanor R Emery
4814 N.E. 44th St
Seattle, WA 98105

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Larry T Swetnam
5122 47th Ave N.E.
Seattle, WA 98105

Frances M Pocock
3608 43rd N.E.
Seattle, WA 98105

Rita G Degginger
4721 45th Ave N.E.
Seattle, WA 98105

W F Bryce
4741 47th Ave N.E.
Seattle, WA 98105

Mary L Canecek
3524 W Laurelhurst Dr
Seattle, WA 98105

Ellen D Rubin
7520 42nd Ave N.E.
Seattle, WA 98115

Janet Woody
4520 N.E. 38th
Seattle, WA 98105

Catherine Johnson
3861 45th Ave N.E.
Seattle, WA 98105

Wendy C Degginger
4721 45th Ave N.E.
Seattle, WA 98105

Jennifer Yates
7326 22nd Ave N.E.
Seattle, WA 98107

Sara Jane Johnson
4221 43rd N.E.
Seattle, WA 98105

Craig P Degginger
4721 45th Ave N.E.
Seattle, WA 98105

Kenneth A Yates
7326 22nd Ave N.E.
Seattle, WA 98107

Marie Glasse Tapp
4234 51st N.E.
Seattle, WA 98105

Kathleen W Harley
4725 45th Ave N.E.
Seattle, WA 98105

Howard B Woody
4920 N.E. 38th
Seattle, WA 98105

Anne C Morrow
6300 Sand Point Way N.E.
Seattle, WA 98105

Jennie S Savage
5007 44th Ave N.E.
Seattle, WA 98105

F.M. Draper
3801 46th N.E.
Seattle, WA 98105

Ronald J Vanecek
3524 W Laurelhurst Dr
Seattle, WA 98105

Barbara Coppin
4729 45th Ave N.E.
Seattle, WA 98105

Sally R Draper
3801 46th Ave N.E.
Seattle, WA 98105

Mary Vanecek
4724 41st Ave N.E.
Seattle, WA 98105

Kinne D McCabe
4745 45th Ave N.E.
Seattle, WA 98105

Lisa A Draper
3801 46th Ave N.E.
Seattle, WA 98105

Jody L Draper
3801 46th Ave N.E.
Seattle, WA 98105

Barbara M Scott
4747 45th Ave N.E.
Seattle, WA 98105

Jenny Carlson
4516 46th Ave N.E.
Seattle, WA 98105

Tom Draper
3801 46th Ave N.E.
Seattle, WA 98105

A. L. Scott
4747 45th Ave N.E.
Seattle, WA 98105

Eric F Carlson
4516 N.E. 38th St
Seattle, WA 98105

Maureen A Harley
3717 43rd Ave N.E.
Seattle, WA 98105

Helen B. Belvin
4757 45th N.E.
Seattle, WA 98105

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Betsy Mellins
4736 45th Ave N.E.
Seattle, WA 98105

Diana Houlann
4326 N.E. 44th
Seattle, WA 98105

Debbie Caplan
7727 33rd N.E.
Seattle, WA 98105

Paul Mendelman
4736 45th Ave N.E.
Seattle, WA 98105

Jerry Sherrard
4339 N.E. 44th
Seattle, WA 98105

Sarah Scott
4339 N.E. 45th
Seattle, WA 98105

Fred R Farr
4732 45th Ave N.E.
Seattle, WA 98105

Michael C Kelly
4335 N.E. 44th
Seattle, WA 98105

Jane Johnson
4323 N.E. 45th
Seattle, WA 98105

Susan Doughten
4716 45th Ave N.E.
Seattle, WA 98105

Dale Watkins
4331 N.E. 44th
Seattle, WA 98105

Judi Jacobsen
4315 N.E. 45th
Seattle, WA 98105

Occupant
4702 45th Ave N.E.
Seattle, WA 98105

Irene Robinson
4327 N.E. 44th
Seattle, WA 98105

Marilyn Smith
4412 43rd Ave N.E.
Seattle, WA 98105

Rae F Waddingham
4701 45th Ave N.E.
Seattle, WA 98105

Alla Tolchinsky
4323 N.E. 44th
Seattle, WA 98105

William Morese Jr
4316 N.E. 43rd
Seattle, WA 98105

Judith A Bruner
4701 45th Ave N.E.
Seattle, WA 98105

Emma Birkrold
4319 N.E. 44th St
Seattle, WA 98105

Joy Scott
4339 N.E. 45th
Seattle, WA 98105

Vance Burton
4705 45th Ave N.E.
Seattle, WA 98105

Charles A Barrett
4315 N.E. 44th
Seattle, WA 98105

Jim Figel
4218 N.E 42nd
Seattle, WA 98105

Juanita Bunch
4715 45th Ave N.E.
Seattle, WA 98105

Paul Grant
4302 43rd N.E.
Seattle, WA 98105

Marilyn Phillips
4322 N.E. 43rd
Seattle, WA 98105

Ann Masnik
10801 27th N.E.
Seattle, WA 98105

Dan Phillips
4322 N.E. 43rd
Seattle, WA 98105

L Alan Houland
4326 N.E. 44th
Seattle, WA 98105

Barbara Linklater
4116 50th Ave N.E.
Seattle, WA 98105

Susan Moe
4328 N.E. 43rd
Seattle, WA 98105

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Occupant
4323 N.E. 43rd
Seattle, WA 98105

Marjorie Rogers
7512 55th Ave N.E.
Seattle, WA 98105

Pamela McClaran
3826 42nd N.E.
Seattle, WA 98105

Lillian O. Warner
4338 N.E 43rd
Seattle, WA 98105

Anne Hartley
8052 Forest Dr
Seattle, WA 98105

Robert A Boher
4557 55th N.E.
Seattle, WA 98105

Ellen Harris
4325 N.E. 43rd
Seattle, WA 98105

Marion Hamilton
4514 51st Ave N.E.
Seattle, WA 98105

Charles A Barrett
4315 N.E. 44th
Seattle, WA 98105

Margaret Gander
4331 N.E. 43rd
Seattle, WA 98105

Lillian Martinez
6049 Priceton Ave N.E.
Seattle, WA 98105

Jean Bolton
6054 50th N.E.
Seattle, WA 98105

John B Martin
4315 N.E. 43rd
Seattle, WA 98105

Albert Feldman
4873 Terrace Dr
Seattle, WA 98105

Carol Macleod
6224 50th N.E.
Seattle, WA 98105

Jane Piehl
4203 N.E. 43nd
Seattle, WA 98105

Ruth B Dunn
4521 52nd N.E.
Seattle, WA 98105

Nancy Konikow
4314 N.E. 42nd
Seattle, WA 98105

Elizabeth Spaethe
4807 Terrace Dr N.E.
Seattle, WA 98105

Lila Gilbert
13558 41st N.E.
Seattle, WA 98105

Joel Konikow
4314 N.E. 42nd
Seattle, WA 98105

Myron Fishmon
4875 Terrace Dr N.E.
Seattle, WA 98105

Trude R Hirschmann
6427 Sand Pt Wy N.E.
Seattle, WA 98115

Margaret Brooks
4339 N.E. 42nd St
Seattle, WA 98105

Vick Herskovk &
G. Herskovk
4838 Terrace Dr N.E.
Seattle, WA 98105

Fritz Hirschmann
6427 Sand Pt Way N.E.
Seattle, WA 98105

Dorine Erb
8001 Sanp Pt Way N.E.
Seattle, WA 98105

Connie D Angelo
5058 Nicklas Pl N.E.
Seattle, WA 98105

Sally Ronkin
4833 N.E. 42nd St
Seattle, WA 98105

David Rohrbaugh
4533 E Laurel Dr N.E.
Seattle, WA 98105

Margaret Dwyer McCall
4843 N.E. 42nd
Seattle, WA 98105

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Joan E King
3914 N.E. Belvoir Pl
Seattle, WA 98105

Edna Lincoln
4708 41st Ave N.E.
Seattle, WA 98105

Fremont Dock Company
Suzanne M. Groves/Manager
3301 Fremont Ave N
Seattle, WA 98103

C.J. Kippenhan
3908 N.E. 38th St
Seattle, WA 98105

Mrs. Lois Jean Zander
4679 41st N.E.
Seattle, WA 98105

Rae F. Waddingham
4701 45th Ave N.E.
Seattle, WA 98105

Gordan F. Vickery
2621 Second Ave Suite 1804
Seattle, WA 98121

Scott Cobb
4654 41st Ave N.E.
Seattle, WA 98105

Anita Francis
Liz Anderson
4746 45th N.E.
Seattle, WA 98105

Mrs. C. William Frankland
4811 Northeast Forty-third
Seattle, WA 98105

Mary Jane Anderson, Chairman
4800 Sand Point Way N.E.
Seattle, WA 98105

J.B. Schneider
5003 45th Ave N.E.
Seattle, WA 98105
Dup

Brian Rubenaker
8040 35th Ave N.E.
Seattle, WA 98115

Property Systems Department
John J. Richmond
Real Estate Manager
810 Dester Ave N
Seattle, WA 98109

Glen Bachman
Shipiro & Assoc.
Smith Tower
Suite 1812
506 2nd Ave
Seattle, WA 98104

Patricia Lundquist
4685 41st N.E.
Seattle, WA 98105

Warren Westlund Buick-Opel-GMC
9600 First Ave N.E.
Seattle, WA 98115

Jenny & Eric Carlson
4516 N.E. 38th St
Seattle, WA 98105

Frank Chestnut, Director
Certificate of Need Program HB31
Dept of Social And Health
Olympia, WA 98504
Dup

Patricia O Wright
3925 48th Ave N.E.
Seattle, WA 98105

Claire A Marston
4250 N.E. 50th
Seattle, WA 98105

Dorothy Teeter
Director of Planning
Children's Ortho Hospital
4800 Sand Point Way N.E.
Seattle, WA 98105
Dup

Liz Anderson
Citizens Concerned About
Helicopter Transport
4746 45th N.E.
Seattle, WA 98105
Dup

Calawah Medical Clinic
R.R. 3 Box 3576
Forks, WA 98331

Kristina M Sparks
Project Review Unit
Certificate of Need Program
HB-31
Department of Social & Health
Services
Olympia, WA 98504

Forks Women Clinic
Susan Shane, CRN
P.O. Box 1022
Forks, WA 98331

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(HPC 2-5-82)
mailing list
for CHMC
(Parks Dept)

abelson, 98105
Herbert T. Abelson, M.D.
4800 Sand Point Way N.E.
P. O. Box 5371
Seattle, Washington 98105

adair, 98072
Debbie Adair
18104 N.E. 196th
Woodinville, Washington 98072

HP:
(1) Add these 2 names to this list:

Delores Hyatt ✓
4614 41st. Ave. NE
Seattle, WA 98105

Mrs. Stephen Brown /
16725 40th Ave. NE
Woodinville, WA 98072

To be
~~spoonfed~~.

- These people ~~only~~ get only the letter saying EIS is available

[illegible] Community Club
4746 45th Avenue N.E.
Seattle, Washington 98105

anderson,
Lori Anderson
12645 S.E. 211th St.
Kent, Washington 98031

ann wood, 98105
Patricia Ann Wood
4036 N.E. 45th
Seattle, Washington 98105

appelwick,
Marlin Appelwick, 46th District
House of Representatives
State of Washington
Olympia, Washington 98504

armour,
Miriam Armour
4830 N.E. 44th
Seattle, Washington 98105

armstrong, 98004
Susan Armstrong

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1376 85th Avenue N.E.
Bellevue, Washington 98004

avis, 98368
George Avis
751 Kearney Street
Port Townsend, Washington 98368

axelrod, 98103
Stephanie Axelrod
2416 North 43rd Street
Seattle, Washington 98103

Axelrod,
Stephanie Axelrod
2416 North 43rd St.
Seattle, Washington 98103

bachman, 98104
Glenn Bachman, Project Manager
Shapiro & Associates
The Smith Tower, Suite 1812
506 Second Avenue,
Seattle, Washington 98104

baker,
S. W. Baker
3851 44th Avenue N.E.
Seattle, Washington 98105

balick, 98112
Bruce Balick
2118 E. Shelby Street
Seattle, Washington 98112

ballard,
Ms. Mary Virginia Ballard
4613 41st Avenue N.E.
Seattle, Washington 98105

baxter, 98105
Bart E. Baxter
3905 48th Pl. N.E.
Seattle, Washington 98105

beasley, 98105
Chris and Sharon Beasley
5132 46th Avenue N.E.
Seattle, Washington 98105

bell, 98105
Thomas A. Bell, M.D., M.P.H.
4217 51st Avenue N.E.
Seattle, Washington 98105-4930

belvin, 98105
David and Helen Belvin
4757 45th Avenue N.E.
Seattle, Washington 98105

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benediktson,
Herdis Benediktson
4609 41st Avenue N.E.
Seattle, Washington 98105

benfield, 98115
Ruth M. Benfield
7215 26th N.E.
Seattle, Washington 98115

berger, 98033
Diane L. Hucks Berger
649 12th Avenue
Kirkland, Washington 98033

bergquist, 98105
William Bergquist
3662 42nd Avenue N.E.
Seattle, Washington 98105

betcone, 98004
Lucille Betcone
9025 N.E. 24th
Bellevue, Washington 98004

bingham, 98105
Dr. James Bingham
4112 43rd N.E.
Seattle, Washington 98105

bingham,
Margaret N.Bingham
4112 43rd Avenue N.E.
Seattle, Washington 98105

bliss, 98368
D. Bliss
1429 Quincy
Port Townsend, Washington 98368

bloor,
Trish Bloor
8 44th Avenue N.E.
Seattle, Washington 98105

boice, 98368
Robert A. Boice
607 Water Street
Port Townsend, Washington 98368

bonifaci, 98072
Judith Bonifaci
19615 182nd Avenue N.E.
Seattle, Washington 98072

boose,
Mrs. E. L. Boose
Minna Parks Guild

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3402 N.E. 45th Place
Seattle, Washington 98105

bostrom, 98072
Sharon Bostrom
18109 N.E. 197th Place
Woodinville, Washington 98072

boyd, 98103
Scott Boyd
Flaherty Newspapers
1225 N. 43rd
Seattle, Washington 98103

branch, 98105
William and Esther Branch
5011 45th Avenue N.E.
Seattle, Washington 98105

brannon, 98201
Mary Brannon
642 Maulsby Lane
Seattle, Washington 98201

brekke,
Representative Joanne Brekke
State House Committee on Social
& Health Notification
House Office Building, 2nd Floor
Olympia, Washington 98504

brewster, 98117
Mrs. Betty Brewster
146 N.W. 74th
Seattle, Washington 98117

breysse,
P. A. Breysse
Assoc. Professor Emeritus
Sch. of Public Health & Com. Med.
Dept. of Environmental Health
SC-34 University of Washington
Seattle, Washington 98195

bricklin
David A. Bricklin
Suite Fourth & Pike Building
1424 Fourth Avenue
Seattle, Washington 98101

brotherton, 98105
Maureen Brotherton
4542 49th N.E.
Seattle, Washington 98105

brown,
Mr. and Mrs. Raymond Brown
6023 N.E. 61st Street
Seattle, Washington 98115

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bryan, 98105
Enoch M. Bryan
4141 42nd Avenue N.E.
Seattle, Washington 98105

bull, 98125
Ethel Bull
1027 N.E. 123rd Street
Seattle, Washington 98125

bunch, 98105
Mark and Juanita Bunch
4715 45th Avenue N.E.
Seattle, Washington 98105

burns, 98112
Doris Baxter Burns
2511 West Montlake Place East
Seattle, Washington 98112

bush, 98104
Gregory M. Bush
Metro, Environmental Planning Division
821 2nd Avenue
Seattle, Washington 98104

call, 98104-2388
Steven Call
Emergency Medical Services
508 Smith Tower
506 Second Avenue
Seattle, Washington 98104-2388

carlson
Jenny and Eric Carlson
4516 N.E. 38th Street
Seattle, Washington 98105

carver,
Carver
4305 43rd N.E.
Seattle, Washington 98105

case,
Mrs. Randall Case
4111 43rd Avenue N.E.
Seattle, Washington 98105

catanzaro, 98105
Dr. Marci Catanzaro
4801 Terrace Dr. N.E.
Seattle, Washington 98105

chastain, 98072
Lisa Chastain
14512 N.E. 178th Place
Woodinville, Washington 98072

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chatalas,
Bob and Jo Chatala
3906 50th N.E.
Seattle, Washington 98105

children's day surgery, 98105
Children's Day Surgery
Children's Orthopedic Hospital and
Medical Center
4800 Sand Point Way N.E.
Seattle, Washington 98105

children's hospital & med. center, 98105
Children's Hospital & Medical Center
P. O. Box C5371
4800 Sand Point Way N.E.
Seattle, Washington 98105

chourre,
Jack Chourre
4828 37th Avenue N.E.
Seattle, Washington 98105

christensen, 98166
Gail Christensen
19461 Normandy Park Drive S.W.
Seattle, Washington 98166

christiansen, 98012
Ron Christiansen
2429 140th Pl. S.E.
Mill Creek, Washington 98012

christman, 98105
Marvin Christman
4350 53rd N.E.
Seattle, Washington 98105

christman,
Marvin O. Christman
Evergreen Safety Council
7600 Sand Point Way N.E., C-15700
Seattle, Washington 98115-0070

citizen service bureau
Ms. Judith Flemings
Citizen Service Bureau X
01-01-05

citizens concerned about helicopter transport
Citizens Concerned About Helicopter Transport X
c/o Liz Anderson
4746 45th Avenue N.E.
Seattle, Washington 98105

city council
City Council
01-11-01 X

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city light
Superintendent
City Light
05-00-01

clapp, 98177
Cathe Clapp
10714 1st Avenue N.W.
Seattle, Washington 98177

cline, 98105
Paul and Margaret Cline
4840 38th Avenue N.E.
Seattle, Washington 98105

cline, 98154
Jim Cline
3801 Seafirst Building
Seattle, Washington 98154

cobb, 98105
Scott Cobb
4654 41st N.E.
Seattle, Washington 98105

cochran,
Michael M. Cochran
3838 Suburban Dr. N.E.
Seattle, Washington 98105

coleman, 98072
Phillis Coleman
18121 N.E. 197th Place
Woodinville, Washington 98072

Commerce and Economic Development
Commerce and Economic Development
101 Gen. Admin. Buildng MS AX-13
Olympia, Washington 98504

conrad, 98105
Lucille Conrad
4656 41st Avenue N.E.
Seattle, Washington 98105

cook, 98198
Barbara E. Cook
21235 24th Avenue S.
Seattle, Washington 98198

cormier, 98122
Monique Cormier
Seattle Central Community College
1701 Broadway
Seattle, Washington 98122

cormier,
Monique Cormier

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Seattle Central Comm. Col.
1701 Broadway, Business Office
Seattle, Washington 98122

cushman, 98360
Ray Cushman
160 Coleman Drive
Port Townsend, Washington 98360

cuthbertson, 98072
Diane Cuthbertson
20005 N.E. 192nd
Woodinville, Washingtor 98072

dailey
Marianne Dailey
5132 45th N.E.
Seattle, Washington 98105

daily journal of commerce
Daily Journal of Commerce X
P. O. Box 11050
Seattle, Washington 98111

dam, 98105
Ruth Dam
4415 43rd Avenue N.E.
Seattle, Washington 98104

david, 98270
Pamela David
4522 129th Pl. N.E.
Marysville, Washington 98270

davis, 98105
Barbara H. Davis
4525 51st Avenue N.E.
Seattle, Washington 98105

dcd,
Director
DCD X
09-03-02

deacon, 98119
Goodwin S. Deacon
3042 12th Avenue West
Seattle, Washington 98119

dean,
Harlan Dean
4001 N.E. Surber Dr.
Seattle, Washington 98105

degginger,
Rita G. Degginger
4721 45th N.E.
Seattle, Washington 98105

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department of community development,
G.Voorhees
Design Commission
Department of Community Development
09-03-02

department of ecology
SEPA Register
Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504

department of social and health services
Frank Chestnut, Director
Certificate of Need Program
Department of Social and Health Services
Olympia, Washington 98504

department of transportation
State of Washington
Department of Transportation
Div. of Aeronautics
8600 Permiter Rd.
King County International Airport
Seattle, Washington 98108

dept of transportation,
Department of Transportation
District Design Engineer
Environmental Review
9611 S.E. 36th St.
Mercer Island, Washington 98040

dept. of housing and urban dev.
Dick Moore, Env. Officer
Community Planning
Department of Housing and Urban Development
Arcade Plans 10.3.SS
Seattle, Washington 98101

dept. of social and health services
Department of Social and Health Services
Water Supply and Waste MS LD-11
Olympia, Washington 98504

dexter,
Glenn E. Dexter
5151 47th N.E.
Seattle, Washington 98105

dickens, 98072
Michele Dickens
18516 N.E. 189th
Woodinville, Washington 98072

didjurgis, 98072
Val Didjurgis
19915 182nd Avenue N.E.
Woodinville, Washington 98072

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dimond, 98105
Richard Dimond
4318 55th Avenue N.E.
Seattle, Washington 98105

dittenberger
Sharon B. Dittenberger
13802 67th Avenue W.
Edmonds, Washington 98020

donohue, 98122
Lawrence R. Donohue, M.D.
801 Broadway, Suite 511
Seattle, Washington 98122

duden, 98006
Ira M. Duden
16033 S.E. 46th Place
Bellevue, Washington 98006

earnest, 98104
Nancy Earnest
3428 S. 263rd
Kent, Washington 98032

economic development assoc.,
Reg. Director Dept. of Commerce
Economic Development Assoc.
1700 Westlake Avenue N. #500
Seattle, Washington 98109

edwards, 98034
Carolyn Edwards
9232 N.E. 139th Street
Kirkland, Washington 98034

eglick
Peter J. Eglick
Suite 1130
1411 Fourth Avenue Building
Seattle, Washington 98101

emery
Eleanor R. Emery
4814 N.E. 44th Street
Seattle, Washington 98105

emory, 98104
Meade Emory
2400 Columbia Center
Seattle, Washington 98104

engelberg, 98105
Ruth Engelberg
4717 45th N.E.
Seattle, Washington 98105

engineering department
Engineering Department
01-09-01

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environmental prot. agency,
Director, Environmental Evaluation
Environment Protection Agency
1200 6th Avenue MS 443
Seattle, Washington 98101

erak, 98115
Barbara Erak
6807 54th N.E.
Seattle, Washington 98115

evans, 98270
Vicki Evans
4822 Sunnyside Blvd. #A
Marysville, Washington 98270

evans, 98040
Caroline Evans
9046 East Shorewood Drive #282
Mercer Island, Washington 98040

federal aviation admin.,
Frank Benedict
Flight Standards Division
Federal Aviation Admin.
7300 Perimeter Rd. South
Seattle, Washington 98108

feldmann, 98105
Albert A. Feldmann
4873 Terrace Dr. N.E.
Seattle, Washington 98105

fenno
Don Fenno
9714 3rd N.W.
Seattle, Washington 98117

fenske,
Brian and Marla Fenske
4625 41st N.E.
Seattle, Washington 98105

ferrell, 98115
Sue Ferrell
6208 39th N.E.
Seattle, Washington 98115

ferro, 98117
Don Ferro
9714 3rd N.W.
Seattle, Washington 98117

field, 98034
Judy Field
12926 N.E. 136th
Kirkland, Washington 98034

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fire deparment,
Chief
Fire Department
04-44-04

fitzsimons, 98104
Patrick S. Fitzsimons
Police Department
610 Third Avenue
Seattle, Washington 98104

fleckman,
Philip Fleckman
5041 Ivanhoe Place N.E.
Seattle, Washington 98105

forrester,
Elizabeth Forrester
4151 42nd N.E.
Seattle, Washington 98105

francis, 98105
Anita Francis
5003 45th N.E.
Seattle, Washington 98105

frankland,
Mrs. C. William Frankland
4811 N.E. 43rd
Seattle, Washington 98105

freeman, 98373
Nancy M. Freeman
6321 E. 144th Street
Puyallup, Washington 98373

frey, 98031
Theresa Frey
12803 S.E. 231st Way
Kent, Washington 98031

fulmer,
Lula B. Fulmer
7208 57th N.E.
Seattle, Washington 98115

furman,
Eric Furman, M.D.
4416 45th N.E.
Seattle, Washington 98105

gaetz, 98105
Lola Gaetz
4708 44th N.E.
Seattle, Washington 98105

galanti, 98105
Victoria S. Galanti

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3517 N.E. 50th Street
Seattle, Washington 98105

galtz, 98105
Lola Galtz
4708 44th N.E.
Seattle, Washington 98105

gibbs, 98105
Jay Gibbs
5038 44th Avenue
Seattle, Washington 98105

gibson,
Richard Gibson, MD
Calawah Medical Clinic
R.R. 3 Box 3576
Forks, Washington 98331

giddens, 98105
Huda Giddens
4338 N.E. 44th
Seattle, Washington 98105

gill,
Rita T. Gill
4700 N.E. 40th Street
Seattle, Washington 98105

girdler, 98204
Betty Girdler
2831 91st Street S.E.
Everett, Washington 98204

gordon, 98072
Kathlyn Gordon
19615 182nd Avenue N.E.
Seattle, Washington 98072

gordon,
G. Gordon
4002 N.E. 45th
Seattle, Washington 98105

gosney, 98370
Jeanne Gosney
635 N.E. Stenman Ln.
Poulsbo, Washington 98370

graber, 98284
Harley and Marcia Graber
2294 Old Day Creek Rd.
Sedro Woolley, Washington 98284

greenawalt, 98105
Nancy Greenawalt
Children's Hospital
4800 Sand Point Way N.E., Box C5371
Seattle, Washington 98105

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griffin, 98033
Alma Griffin
1613 10th Street West
Kirkland, Washington 98033

Seattle, Washington
grimm, 98110
Fred Grimm
Bainbridge Island Public Schools
Bainbridge Island, Washington

haldane, 98105
Eleanor Haldane
4123 43rd N.E.
Seattle, Washington 98105

hammer, 98270
Linda Hammer
4529 129th Place N.E.
Marysville, Washington 98270

hansen, 98006
Martin C. Hansen
3843 120th Southeast
Bellevue, Washington 98006

hansen, 98072
Lillian M. Hansen
16704 188th Place N.E.
Woodinville, Washington 98072

harborview medical center
Lloyd David, Director of Planning
Harborview Medical Center
325 9th Avenue
Seattle, Washington 98104

hardwicke,
Ramy Hardwick
4714 44th N.E.
Seattle, Washington 98105

harkins, 98105
Jean T. Harkins
4659 41st N.E.
Seattle, Washington 98105

harkness, 98166
Nancy Harkness
17433 Sylvester Rd. S.W.
Seattle, Washington 98166

harris, 98104
Claude Harris
Fire Department
301 2nd Avenue S.
Seattle, Washington 98104

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harvey, 98034
Susan Harvey
11212 82nd Pl. N.E.
Kirkland, Washington 98034

hauberg, 98177,
Ann Homer Hauberg
1000 N.W. Northwood Road
Seattle, Washington 98177

hayes, 98006
Maxine Hayes
4443 156th Pl. S.E.
Bellevue, Washington 98006

health department
Director X
Health Department 09-07-01

heck, 98072
Carolyn Heck
18120 N.E. 189th
Woodinville, Washington 98072

heilman, 98105
Robert B. Heilman
4554 45th Avenue N.E.
Seattle, Washington 98105

hellstrom,
Karl Erik Hellstrom, M.D.
Professor of Pathology, U.W.
3925 N.E. Surber Drive
Seattle, Washington 98105

hemer, 98105
Kate W. Hemer, Co-Chairman
Laurelhurst Community Club
Hospital Liaison Com.
4537 55th Northeast
Seattle, Washington 98105

hendrickson, 98270
Mrs. Larry Hendrickson
1092 Alder
Marysville, Washington 98270

herren,
Janet and Vern Herren
4750 Crystal Springs Drive N.E.
Bainbridge, Washington 98110

herron, 98034
Ruth Herron
11822 102nd Pl. N.E.
Kirkland, Washington 98034

hill,
Eugene R. Hill

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jackson, 98072
Joyce Jackson
19304 193rd Avenue N.E.
Woodinville, Washington 98072

jackson, 98105
Mrs. Phyllis L. Jackson
4307 N.E. 57 Street
Seattle, Washington 98105

jacobsen, 98105
Ken Jacobsen
7307 40th N.E.
Seattle, Washington 98105

jacobsen
Ken Jacobsen, 46th District
House of Representatives
State of Washington
Olympia, Washington 98504

jensen, 98146
Liesa M. Jensen
10853 37th Avenue S.W.
Seattle, Washington 98146

jeremy mattox & assoc.
Jeremy Mattox and Assoc.
2591 Perkins Lane West
Seattle, Washington 98199

johansen, 98270
Anita D. Johansen
3908 Mission Beach Drive
Marysville, Washington 98270

johnson, 98105
Jane L. Johnson
4323 N.E. 45th Street
Seattle, Washington 98105

johnson, 98105
S. Johnson
4411 43rd Avenue N.E.
Seattle, Washington 98105

johnson,
Sara Jane Johnson
4221 43rd N.E.
Seattle, Washington 98105

johnston, 98105
Kathleen McHugh Johnston
4200 N.E. 50th
Seattle, Washington 98105

johnston,
Leo C. Johnston

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12104 S.E. 223rd Avenue
Kent, Washington 98103

hirschorn,
Mrs. Leo Hirschorn
4517 46th Avenue N.E.
Seattle, Washington 98105

hoffman, 98055
Karen and Steve Hoffman
10933 S.E. 183rd Place
Renton, Washington 98055

hokuestad, 98392
Mrs. Norm (Ruth) Hokuestad
P. O. Box 196
Suquamish, Washington 98392

horner, 98104
Curt Horner
Room 1510 Public Safety Building
Seattle, Washington 98104

hough, 98105
Charles R. Hough
5054 44th Avenue N.E.
Seattle, Washington 98105

howard, 98368
William E. Howard
932 Pierce Street
Port Townsend, Washington 98368

human resources
Director
Human Resources
09-01-01

hunter, 98072
Laurie Hunter
18221 N.E. 186th
Woodinville, Washington 98072

hyatt, 98270
Michelle Hyatt
10020 Shoultes
Marysville, Washington 98270

hydee, 98072
Joyce Hydee
15226 N.E. 195th
Woodinville, Washington 98072

ishida, 98115
Joyce H. Ishida
6854 18th N.E.
Seattle, Washington 98115

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4200 N.E. 50th Street
Seattle, Washington 98105

johnston,
Leo C. Johnston
4200 N.E. 50th Street
Seattle, Washington 98105

julio, 98115
Paul Julio
7035 51st Avenue N.E.
Seattle, Washington 98115

kah tai care center
Kah Tai Care Center
751 Kearney
Port Townsend, Washington 98368

kanning, 98103
Diane Kanning
4022 Eastern Avenue N.
Seattle, Washington 98103

katz,
Treuman Katz, Chief Executive of C.O.H.
P. O. Box C5371
Seattle, Washington 98105

kehoe,
John Kehoe
5208 N.E. 50th
Seattle, Washington 98105

kemp, 98115
Mae U. Kemp
5050 50th N.E.
Seattle, Washington 98115

king, 98115
Victoria King, President
View Ridge Community Club, Inc.
P. O. Box 15218
Seattle, Washington 98115

king,
Joan E. King
3914 N.E. Belvoir Place
Seattle, Washington 98105

king county ems coord. co.
King County EMS Coord. Co.
c/o Jack Cvitanovic
EMS Section
1112 So. Quince
MS ET-34
Olympia, Washington 98504

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king county medical society
King County Medical Society
200 Broadway
Seattle, Washington 98122

kippenhan,
C. J. Kippenhan
3908 N.E. 38th Street
Seattle, Washington 98105

kipperberg, 98270
Mrs. Dan Kipperberg
5002 84th Street N.E.
Marysville, Washington 98270

kirchner, 98115
Gerard C. Kirchner
1528 N.E. 91st Street
Seattle, Washington 98115

kirkland, 98072
Bev Kirkland
18321 N.E. 191st
Woodinville, Washington 98072

kitchin, 98105
Cheryl Kitchin
4702 44th Avenue
Seattle, Washington 98105

klassen, 98105
Arthur and Edith Klassen
5011 45th Avenue N.E.
Seattle, Washington 98105

klug,
Robert Klug, President
Laurelhurst Community Club
4326 N.E. 42nd Street
Seattle, Washington 98105

knight, 98033
David Knight
12040 N.E. 128th
Kirkland, Washington 98033

kollman, 98204
Ted Kollman
124 105th S.E.
Everett, Washington 98204

kranz, 98122
Jay M. Kranz, M.D., Chairman
801 Broadway Suite 927
Seattle, Washington 98122

kresge, 98105
Marjorie D. Kresge

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4014 N.E. 46th Street
Seattle, Washington 98105

kristianson, 98033
J. S. Kristianson
827 Lake Street S.
Kirkland, Washington 98033

kristianson,
Janet Kristianson
827 Lake Street S.
Kirkland, Washington 98033

kukull, 98270
Connie Kukull
4612 108th N.E.
Marysville, Washington 98270

kurtz, 98105
Mr. and Mrs. Harold Kurtz
5043 Sand Point Place N.E.
Seattle, Washington 98105

lamey, 98122
Jack R. Lamey, M.D.
801 Broadway, Suite 511
Seattle, Washington 98122

land use and transportation,
Land Use and Transportation X
Project
01-02-06

lang, 98270
Mardee Leigh and Charles L. Lang
1206 Ash, Apartment 2
Marysville, Washington 98270

lanham, 98033
Mrs. A. L. Lanham
2047 Rose Point Lane
Kirkland, Washington 98033

lapic, 98105
Ed Lapic
3822 43rd Avenue N.E.
Seattle, Washington 98105

law department
Law Department X
01-10-01

lawrence, 98125
Nancy Lawrence
10660 Lakeside Avenue N.E.
Seattle, Washington 98125

lawrence, 98125
Oliver Lawrence

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10660 Lakeside Avenue N.E.
Seattle, Washington 98125

lawrence,
Gwendolyn Lawrence
4316 37th N.E.
Seattle, Washington 98105

layton,
Marilyn Smith Layton
4412 43rd Avenue N.E.
Seattle, Washington 98105

league of women voters of seattle,
Lucy Steers
Land Use Chairperson
League of Women Voters of Seattle X
1402 18th Avenue
Seattle, Washington 98122

leonhardt, 98058
Mrs. David Leonhardt
12684 S.E. 161
Renton, Washington 98058

lincoln
E. A. Lincoln
4708 41st Avenue N.E.
Seattle, Washington 98105

loterbauer
Loterbauer
11603 S.E. 163rd Street
Renton, Washington 98058

lotz,
Mrs. Ernest M. Lotz
2316 N.W. 95th
Seattle, Washington 98117

lougdon, 98072
Linda Lougdon
18246 N.E. 196th Ct.
Seattle, Washington 98072

loveland,
Jill Loveland
4110 42nd N.E.
Seattle, Washington 98105

lull,
Mrs. Frank C. Lull III
4123 42nd N.E.
Seattle, Washington 98105

lundquist, 98105
Pat Lundquist
4685 41st N.E.
Seattle, Washington 98105

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lydum,
Mary Lydum, Secretary
Medical Records Department
C.O.H. P. O. Box C5371
Seattle, Washington 98105

lyon, 98103
Sue Lyon
4658 Eastern Avenue N.
Seattle, Washington 98103

macek, 98177
Susan Macek
19844 10th Avenue N.W.
Seattle, Washington 98177

mackenzie, 98112
Nona MacKenzie
2020 E. Calhoun Street
Seattle, Washington 98112

macMartin
M. P. MacMartin
4036 N.E. 45th Street
Seattle, Washington 98105

madden,
William Madden, M.D. Colonel Med. Corps.
Chief Pediatric Pulmonology
Assistant Chief, Department of Pediatrics
Madigan Army Medical Center
Ft. Lewis, Washington 98433

magruder, 98011
Jon Magruder
14717 106th Avenue N.E.
Bothell, Washington 98011

Maider
Mrs. Richard W. Maider
3832 48th Avenue N.E.
Seattle, Washington 98105

maines, 98115
Bruce Maines
5051 N.E. 75th Street
Seattle, Washington 98115

maloof,
Katharina Maloof
3638 42nd N.E.
Seattle, Washington 98105

march, 98058
Joyce March
12023 S.E. 164th
Renton, Washington 98058

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marcuse, 98112
Edgar K. Marcuse, M.D.
2153 East Shelby Street
Seattle, Washington 98112

margon, 98105
Bruce and Carolyn Margon
3650 42nd Avenue N.E.
Seattle, Washington 98105

marks, 98195
Sally Marks
Campus Planning Office, FJ-05
University of Washington
Seattle, Washington 98195

marston,
Ms. Claire A. Marston
4250 N.E. 50th Street
Seattle, Washington 98105

martin, 98105
Seelye Martin
5217 N.E. 43rd
Seattle, Washington 98105

martin,
John B. Martin
4315 N.E. 43rd
Seattle, Washington 98105

mattox, 98199
Jeremy Mattox
2591 Perkins Lane W.
Seattle, Washington 98199

mcbride,
Anne McBride
4232 Eastern Avenue N.
Seattle, Washington 98103

mcclarty, 98103
Rita McClarty
3610 Wallingford N#1
Seattle, Washington 98103

mcconnell, 98072
Carole McConnell
18522 N.E. 186th
Woodinville, Washington 98072

mccormick, 98115
Dorothy McCormick
6639 58th Avenue N.E.
Seattle, Washington 98115

mccroskey
Robert D. McCroskey

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3329 W. Laurelhurst
Seattle, Washington 98105

mcfalls,
Cynthia McFalls
4204 N.E. 50th Street
Seattle, Washington 98105

mcgovern, 98105
Rita McGovern
4600 N.E. 40th
Seattle, Washington 98105

mcjouell
Shirley McJouell
3930 N.E. Belvoir
Seattle, Washington 98105

mcmahon,
Mrs. Joann Mcmahon
Clara E. Walker Orthopedic Guild
17923 Brittany Dr. S.W.
Seattle, Washington 98166

mcquary
Suzanne McQuary
4849 N.E. 42nd
Seattle, Washington 98105

means, 98112
Beth Means
Central Seattle Community Council Federation
509 10th E.
Seattle, Washington 98112

means, 98105
Mr. and Mrs. Robert H. Means
5038 48th N.E.
Seattle, Washington 98105

mendelman,
Paul M. Mendelman, M.D.
Children's Orthopedic Hospital
and Medical Center
4800 Sand Point Way N.E.
P. O. Box C5371
Seattle, Washington 98105

mendenhall, 98105
John Mendenhall
5033-44th N.E.
Seattle, Washington 98105

metro,
Bill Roach, Program Manager
METRO
Exchange Building 99-01-01 X

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metro ms 63,
Environmental Manager
METRO MS 63
821 Second Avenue
Seattle, Washington 98104

miller,
Leonard Miller
View Ridge Community Club, Inc.
P. O. Box 15218
Seattle, Washington 98115

mills,
Mrs. H. C. Mills
3921 47th Avenue N.E.
Seattle, Washington 98105

moice,
Robert A. Moice
Port Townsend Police Department
607 Water Street
Port Townsend, Washington 98368

monson, 98118
Roger Monson
4733 54th Avenue S.
Seattle, Washington 98118

moody,
Richard S. Moody
4720 47th Avenue N.E.
Seattle, Washington 98105

morrison,
Elizabeth L. Morrison
3643 42nd N.E.
Seattle, Washington 98105

morrow,
M. Morrow
3656 42nd Avenue N.E.
Seattle, Washington 98105

moseley, 98104-4537
David Moseley
Yesler Building 400 Yesler Way
Seattle, Washington 98104-4537

mullavey,
Mullavey, Prout, Grenley, Sonkin,
Foe and Lawless
2401 N.W. 65th, P. O. Box 70567
Seattle, Washington 98107

muller,
Mrs. Kathy Muller, et. al.
19518 Winesap Lane
Bothell, Washington 98102

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murchison, 98031
Mr. and Mrs. Wesley E. Murchison
11929 S.E. 222nd Place
Kent, Washington 98031

nadon, 98055
Susan M. Nadon
16924 161st Avenue S.E.
Renton, Washington 98055

neff,
John Neff, M.D.
4800 Sand Point Way N.E.
Box C-5371
Seattle, Washington 98105

nell, 98109
James L. Nell, President
Seattle Area Hospital Council
190 Queen Anne Avenue North
Seattle, Washington 98109

nelson, 98105
Charles R. Nelson
4921 N.E. 39th
Seattle, Washington 98105

nelson, 98011
Nancy Nelson
14002 80th Avenue N.E.
Bothell, Washington 98011

nelson, 98105
Ariel G. Nelson
4652 41st Avenue N.E.
Seattle, Washington 98105

nelson,
Bonnie and Bryce Nelson
4127 42nd N.E.
Seattle, Washington 98105

nemerever, 98115
David M. Nemerever
6016 57th Avenue N.E.
Seattle, Washington 98115

Neubert,
Mrs. Joseph W. Neubert
4714 41st Avenue N.E.
Seattle, Washington 98105

neurath,
Neurath
4101 55th N.E.
Seattle, Washington 98105

newman, 98105
Mrs. Helen Newman

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4252 N.E. 50th
Seattle, Washington 98105

nichols, 98105
D. B. Nichols
5126 N.E. 42nd Street
Seattle, Washington 98105

nicholson, 98105
Kay Nicholson
4205 N.E. 45th Street
Seattle, Washington 98105

nielsen,
Edith Nielsen
4848 N.E. 43rd
Seattle, Washington 98105

nightingale, 98027
Bob and Frances Nightingale
19631 S.E. 24th Way
Issaquah, Washington 98027

occupant,
Occupant
4545 Sand Point Way N.E.
Seattle, Washington 98105

occupant,
Occupant
4514 41st Avenue N.E.
Seattle, Washington 98103

occupant,
Occupant
10644 Maplewood Place S.W.
Seattle, Washington 98146

office of the governor
Office of the Governor
Legislative Building
Olympia, Washington 98504

office of the mayor
Office of the Mayor
01-12-01

oh,
Steve Oh
4559 51st Avenue N.E.
Seattle, Washington 98105

olejko, 98101-1688
Mitchell J. Olejko
2600 Century Square, 1501 4th Avenue
Seattle, Washington 98101-1688

olson, 98110
Melanie Olson

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13948 Sunrise Dr.
Bainbridge, Washington 98110

osborne, 98166
Florence Osborne
134 S.W. 202nd
Seattle, Washington 98166

ostauder, 98119
J. B. Ostauder
618 11th Avenue West
Kirkland, Washington 98119

pai, 98105
S. Kenneth Pai
4331 N.E. 45th Street
Seattle, Washington 98105

pai, 98105
Skenneth and Julie Pai
431 N.E. 45th Street
Seattle, Washington 98105

parks department
Parks Department
01-02-10

pendergrass, 98034
Jacqueline Pendergrass
13410 98th Avenue N.E.
Kirkland, Washington 98034

pensiero
Larry pensiero
4841 N.E. 44th
Seattle, Washington 98105

perlman
Michael D. Perlman
4500 N.E. 50th
Seattle, Washington 98105

peterson, 98105
K. Peterson
5007 44th N.E. Lwr. Apartment
Seattle, Washington 98105

peterson,
Dorothy Peterson
4300 N.E. 44th Street
Seattle, Washington 98105

petty, 98103
Marjan C. Petty
3720 Sunnyside Avenue, N.
Seattle, Washington 98103

philips,
Nancy J. Philips

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1788 Grevelia Street
South Pasadena, California 98103

phillips,
Jean Phillips
4728 41st N.E.
Seattle, Washington 98105

pinkers,
Dr. Lothar Pinkers
1201 116th N.E.
Bellevue, Washington 98004

pinkney, 98105
Helen R. Pinkney
3812 48th Avenue N.E.
Seattle, Washington 98105

planning and community affairs
Planning and Community Affairs
400 Capitol Center Building FN-41
Olympia, Washington 98504

platt, 98105
Judith Platt
4526 45th Avenue N.E.
Seattle, Washington 98105

plunkett, 98105
Mark and Janette Plunkett
4100 36th N.E.
Seattle, Washington 98105

police department,
Chief
Police Department
02-04-01

prinzin, 98270
Marie Davis and John Prinzin
4810 134th Place N.E.
Marysville, Washington 98270

psapca,
Mr. A. R. Dammkoehler
PSAPCA
P. O. Box 9863
Seattle, Washington 98119

pscog,
Ms. Barbara Hastings
PSCOG
216 First Avenue S.
Seattle, Washington 98104

public archaeology,
Jerry Jermann, Director
Public Archaeology, U of W

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213 Engineering Annex FM-12
Seattle, Washington 98195

puget sound health systems agency
Larry Thompson, Executive Director
Puget Sound Health Systems Agency
601 Valley Street
Seattle, Washington 98109

quinn, 98105
Barbara Quinn
5264 16th N.E.
Seattle, Washington 98105

ragsdale, 98122
Sally A. Ragsdale
701 17th Avenue #203
Seattle, Washington 98122

rasmussen
Karen Olson Rasmussen
Law Offices
Franklin and Watkins
Suite 2300 4th and Blanchard Building
2121 Fourth Avenue
Seattle, Washington 98121

read, 98052
Kerry Colleen Read
15125 N.E. 67th Place
Redmond, Washington 98052

reese, 98033
Marjorie F. Reese
5007 112th Avenue N.E.
Seattle, Washington 98033

resident, 98105
Resident
3804 48th N.E.
Seattle, Washington 98105

resident, 98105
Resident
3115 W. Laurelhurst
Seattle, Washington 98105

resident, 98105
Resident
4317 50th Avenue N.E.
Seattle, Washington 98105

reynolds,
Ann Reynolds
1020 W. Raye
Seattle, Washington 98119

rice, 98105
Damaris Rice

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3815 46th Avenue N.E.
Seattle, Washington 98105

richey, 98112
J. S. Richey
2020 E. Howe Street
Seattle, Washington 98112

richmond
John J. Richmond
Real Estate Manager
Seattle Public Schools
810 Dexter Avenue N.
Seattle, Washington 98109

rigby
David W. Rigby
Ravenna-Bryant Community Association
6559 Ravenna N.E.
Seattle, Washington 98115

rinabarger, 98031
Mr. and Mrs. M. V. Rinabarger
12812 Southeast 231st Way
Kent, Washington 98031

ritchie, 98504-8711
Barbara J. Ritchie
Department of Ecology
Environmental Review Section
Seattle, Washington 98504-8711

roberts, 98105
A. Wesley Roberts
4134 42nd N.E.
Seattle, Washington 98105

rohde, 98007
Mrs. Virginia C. Rohde
14208 N.E. 40th Place
Bellevue, Washington 98007

rombouts,
Ernestine J. Rombouts
4675 41st Avenue N.E.
Seattle, Washington 98105

rose, 98270
Mrs. J. W. Rose
5005 80th Street N.E.
Marysville, Washington 98270

rounds, 98930
Karen M. Rounds
207 Birch Avenue
Grandview, Washington 98930

rowley, 98105
Lucille Rowley

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5040 44th N.E.
Seattle, Washington 98105

rubenaker,
Brian Rubenaker
8040 35th Avenue N.E.
Seattle, Washington 98115

rude,
Danny and Linda Rude
22142 S.E. 237th
Maple Valley, Washington 98038

ruggles,
Mrs. Flora J. Ruggles
4545 Sand Point Way N.E.
Seattle, Washington 98105

sanders,
Claudia Sanders
4230 51st Avenue N.E.
Seattle, Washington 98105

santeford, 98270
Cristy Santeford
1920 3rd Street
Marysville, Washington 98270

sayles,
Myron Sayles
4027 N.E. 45th
Seattle, Washington 98105

scanlon, 98105
Patricia Scanlon, President
Laurelon Terrace Condominium
Homeowner's Association
4015 N.E. 46th
Seattle, Washington 98105

schell, 98105
Gregory C. Schell
4712 33rd N.E.
Seattle, Washington 98105

schimmelbusch, 98105
Hugo and Gisela Schimmelbusch
4702 45th Avenue N.E.
Seattle, Washington 98105

schneider, 98105
Jerry B. Schneider
5003 45th Avenue N.E.
Seattle, Washington 98105

schroeder, 98083
Dr. and Mrs. R. R. Schroeder
P. O. Box 344
Kirkland, Washington 98083

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schulze,
Ila M. Schulze
4303 50th Avenue N.E.
Seattle, Washington 98105

schuyler, 98105
Kim A. Schuyler
4851 N.E. 39th
Seattle, Washington 98105

schwabacher, 98112
Emilie Schwabacher
2209 39th Place East
Seattle, Washington 98112

scott, 98105
Sarah Scott
4339 N.E. 45th
Seattle, Washington 98105

scott, 98105
Haney Scott
4339 N.E. 45th
Seattle, Washington 98105

scott, 98105
Boy Scott
4339 N.E. 45th
Seattle, Washington 98105

scott, 98105
William Scott
4339 N.E. 45th
Seattle, Washington 98105

scott, 98195
Robert Haney Scott
University of Washington
Schools of Business Administration, DJ-10
Seattle, Washington 98195

scott, 98105
Joy Scott
4339 NE 45th Street
Seattle, Washington 98105

scott,
Mr. and Mrs. Scott
3915 49th Pl. N.E.
Seattle, Washington 98105

seattle area hospital co.
Seattle Area Hospital Company
190 Queen Anne Avenue N., 3rd floor
Seattle, Washington 98109

seattle central comm. col.,
Deborah Uno, Coordinator

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Foreign Student Services
Seattle Central Com. Col.
1701 Broadway
Seattle, Washington 98122

seattle p. i. real estate
Seattle P. I. Real Estate X
521 Wall Street
Seattle, Washington 98121

seattle times,
Seattle Times X
P. O. Box 70
Seattle, Washington 98111
Attention Ms. Polly Lane

seattle-king county hospital soc.
Seattle-King County Hospital Soc.
2161 E. Hamlin
Seattle, Washington 98102

sells, 98105
Lala G. Sells
4620 41st Avenue N.E.
Seattle, Washington 98105

sepa, gra, branch library,
SEPA Center
GRA Library X
Branch Library

shane,
Susan L. Shane, CRN
Forks Women Clinic
P. O. box 1022
Forks, Washington 98331

sharpe, 98104
Bea Sharpe
5013 Sandpoint Pl. N.E.
Seattle, Washington 98105

shawcroft, 98195
Helen M. Shawcroft
University Hospital, RC-34
1959 N.E. Pacific Street
Seattle, Washington 98195

shelton, 98577
Astrid Shelton
Pacific County Orthopedic Auxiliary
Rt. 3 Box 1066
Raymond, Washington 98577

sherrard,
Jerry Sherrard
4339 N.E. 44th
Seattle, Washington 98105

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sherrow
Betsy Lynn Sherrow
4715 47th N.E.
Seattle, Washington 98105

sherrow,
Douglas R. Sherrow
4004 N.E. 46th Street
Seattle, Washington 98105

sherrow,
Dale E. Sherrow, Jr.
3625 1st Avenue N.E.
Seattle, Washington 98108

short, 98270
Geraldine Short
5917 40th Street N.E.
Marysville, Washington 98270

simmermon, 98072
Sandra M. Simmermon
18228 N.E. 191st
Woodinville, Washington 98072

siqueland, 98109-3530
Herman S. Siqueland
1200 Westlake Avenue N. Suite 801
Seattle, Washington 98109-3530

siqueland,
Mrs. Sverre Siqueland
4702 41st Avenue N.E.
Seattle, Washington 98105

smith, 98105
Barbara H. Smith
5169 N.E. Laurelcrest Lane
Seattle, Washington 98105

smith, 98188
Joy Smith
4050 S. 160th
Seattle, Washington 98188

smith, 98103
Linda A. Smith
9014 Evanston North
Seattle, Washington 98103

smith, 98188
Eloryce Smith
2205S 28th S. #Lot35
Seattle, Washington 98188

smith,
Linda Smith
3608 42nd N.E.
Seattle, Washington 98105

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snohomish county fire, 98290
Snohomish County Fire District No. 4
1525 Avenue "D:, P. O. Box 820
Snohomish, Washington 98290

snyder, 98105
Jerry Snyder
5003 45th Avenue N.E.
Seattle, Washington 98105

spangler, 98105
Mrs. Maryann E. Spangler
401[illegible] N.E. 46th Street
Seattle, Washington 98105

spencer, 98105
Phyllis Spencer
4224 4th N.E.
Seattle, Washington 98105

spitzer,
Emma Spitzer
5018 Sand Pont Pl. N.E.
Seattle, Washington 98105

stern, 98108
Bernice Stern
Transportation Commission
8600 Perimeter Road
King County International Airport
Seattle, Washington 98108

stewart, 98258
Pamela Stewart
11829 7th Place S.E.
Lk. Stevens, Washington 98258

stimson, 98105
Dr. and Mrs. J. Stimson
4715 45th Avenue N.E.
Seattle, Washington 98105

strandjord, 98105
Thomas P. Strandjord, M.D.
5038 Sand Point Way N.E.
Seattle, Washington 98105

stratford, 98043
Marnetta Stratford
22307 52nd Avenue W.
Mountlake Terrace
Seattle, Washington 98043

strom, 98110
Mr. and Mrs. Leonard Strom
7245 N.E. West Port Mad. Rd.
Bainbridge, Washington 98110

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stubbs,
Susan P. Stubbs, RRA,
Med. Records Department, Director
C.O.H. P.O. Box C5371
Seattle, Washington 98105

sujor,
Edith Sujor
4671 41st N.E.
Seattle, Washington 98105

sullivan, 98104
Cynthia Sullivan
402 King County Courthouse
Seattle, Washington 98104

swanson, 98105
Dale Swanson
5036 45th Avenue
Seattle, Washington 98105

swanson, 98105
Dale Swanson
5036 45th Avenue N.E.
Seattle, Washington 98105

sweeney, 98105
Lee Bossung-Sweeney, B.S.N., R.N.C.
P. O. Box C5371
Seattle, Washington 98105

swenson,
Robert D. Swenson
3808 42nd Avenue N.E.
Seattle, Washington 98105

talley, 98339
Lisa Talley
101 Shotwell Rd.
Hadlock, Washington 98339

taylor,
Mrs. Wallace Taylor
4701 109th Pl. N.E.
Kirkland, Washington 98033

thompson, 98109
Larry A. Thompson, Executive Director
Puget Sound Health Systems Agency
601 Valley Street
Seattle, Washington 98109

thomson, 98125
Edith E. Thomson
14239 36th N.E.
Seattle, Washington 98125

timberlake,
Wayne J. Timberlake

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3335 43rd N.E.
Seattle, Washington 98105

tobin,
Ellen M. Tobin
4610 41st N.E.
Seattle, Washington 98105

tonkin,
Sally Tonkin
4833 N.E. 42nd Street
Seattle, Washington 98105

trask III, 98195
Tallman Trask III
306 Administration Building AH-05
University of Washington
Seattle, Washington 98195

trudgian, 98110
Mrs. William L. Trudgian
9600 Mandus Olson Road N.E.
Bainbridge Island, Washington 98110

trzcinski,
Charles R. & M Rea Trzcinski
6547 52nd N.E.
Seattle, Washington 98115

turner, 98101
Lois C. Turner
900 University No. 9K
Seattle, Washington 98101

turner,
Eugene Turner, M.D.
902 E. Caroline Street
Pt. Angeles, Washington 98362

u.s. army
Commander, 54th Medical Detachment
Attention Capt. Dan Madden
U.S. Army 54th M.A.S.T.
Fort Lewis, Washington 98433

university herald
Susan Berg
University Herald X
1225 N. 43rd
Seattle, Washington 98103

university of washington
University of Washington
University Hospital X
Seattle, Washington 98195

uno, 98122
Deborah J. Uno, Coordinator

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Foregin Student Services
Seattle Community College
1701 Broadway
Seattle, Washington 98122

us environmental protection, 20460
United States Environmental
Protection Agency
Washington DC 20460

valberg, 98058
Norma M. Valberg
1724 Olympia Avenue S.E.
Renton, Washington 98058

vanecek, 98105
Mary L. Vanecek
3524 W. Laurelhurst Dr. N.E.
Seattle, Washington 98105

vickery
Gordon F. Vickery
2621 Second Avenue Ste 1804
Seattle, Washington 98121

waak, 98155
Mrs. W. W. Waak
14527 28th N.E.
Seattle, Washington 98155

waddingham,
Rae F. Waddingham
4701 45th Avenue N.E.
Seattle, Washington 98105

wall, 98155
Vicky Wall
16238 16th Avenue N.E.
Seattle, Washington 98155

wallace,
Mrs. F. G. Wallace
4668 41st Avenue N.E.
Seattle, Washington 98105

waller, 98022
Lola Waller
25404 S.E. 389
Enunclaw, Washington 98022

washington natural gas
Washington Natural Gas
815 Mercer Street
P. O. Box 1869
Seattle, Washington 98111

washington state historic office
Director

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Washington State Historic Office X
111 W. 21st Avenue MS KL-11
Olympia, Washington 98504

washington state hospital assn.
Washington State Hospital Assn. X
190 Queen Anne Avenue N., 3rd Floor
Seattle, Washington 98109

washington state medical association
Washington State Medical Association X
2033 6th Avenue
Seattle, Washington 98101

water department
Superintendent
Water Department X
99-11-01

watkins, 98121
Joel Watkins, Jr.
Franklin & Watkins Law Offices
Suite 2300 Fourth & Blanchard
2121 Fourth Avenue
Seattle, Washington 98121

weckenburg, 98105
Marvel Weckenburg
4705 45th N.E.
Seattle, Washington 98105

weller, 98223
Carol A. Weller
534 Alcazar
Arlington, Washington 98223

westlund,
Warren and Pauline Westlund
5150 N.E. Latimer Place
Seattle, Washington 98105

wheatly,
Earl E. Wheatley, President
Mountlake Community Club
2008 E. Louisa Street
Seattle, Washington 98112

whitlam, 98504
Robert G. Whitlam
Office of Archaeology and Historic Preservation
111 West Twenty-First Avenue, KL-11
Olympia, Washington 98504

wickenburg,
Maruel Wickenburg
4705 45th N.E.
Seattle, Washington 98105

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wilkinson, 98112
Carol Wilkinson
1837 E. Shelby
Seattle, Washington 98112

williams,
Councilmember Jeanette Williams
City Council
01-11-01

wisner,
Steven Wisner, M.D.
Sutie G-22 1800 C. Street
Bellingham, Washington 98225

wood, 98105
Patricia Ann Wood
4036 N.E. 45th
Seattle, Washington 98105

woodson, 98034
Eillieen Woodson
10016 N.E. 122nd #N.C.
Kirkland, Washington 98034

woody,
Janet Woody
4520 N.E. 38th
Seattle, Washington 98105

wright, 98105
Mr. and Mrs. Fred M. Wright
3925 48th Avenue N.E.
Seattle, Washington 98105

zander,
Lois Jean Zander
4679 41st N.E.
Seattle, Washington 98105

Zimmer, 98042
Jim and Carolyn Zimmer
26210 200 Avenue S.E.
Seattle, Washington 98042

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ELIZABETH AMICK
4911 N E LAURELCREST LN
SEATTLE, WA 98105

GLENN BACHMAN
1509 QUEEN ANNE AVE N
SEATTLE, WA 98109

MARK BAERWALDT
5005 N E LAURELCREST LN
SEATTLE, WA 98105

WILLIAM BALLOU
5025 N E LAURELCREST LN
SEATTLE, WA 98105

C A BURSELL
4552 48TH AVENUE N E
SEATTLE, WA 98105

PAUL CAHILL
PACE NEED INC
1013 N E BOAT ST.
SEATTLE, WA 98105

BRUCE DAVIS
4525 51ST AVENUE N E
SEATTLE, WA 98105

PAULA DOUGLAS
4545 SANDPOINT WAY N E#802
SEATTLE, WA 98105

MARY GEHRI
3818 43RD AVENUE N E
SEATTLE, WA 98105

MARGARET GRAHAM
5143 N E LAURELCREST LN
SEATTLE, WA 98105

SIDNEY HALLAM
3606 N E 41ST STREET
SEATTLE, WA 98105

MARIAN FORD HINEA
4814 STANFORD AVE N E
SEATTLE
WA, 98105

LESLIE LLOYD
THE FERRIS CO.
10655 NE 4TH ST.
BELLEVUE, WA 98004

RICHARDS LOESCH
3326 43RD AVENUE N E
SEATTLE, WA 98105

CAROLYN MATEER
UW SUZZALLO LIBRARY
UNIVERSITY OF WASHINGTON
SEATTLE, WA 98195

LILLIAN MILLS
4545 SANDPOINT WAY N E#507
SEATTLE, WA 98105

SYLIVIA MOREN
1437 N W 186TH ST.
SEATTLE, WA 98177

DOUGLAS NICHOLS
5126 N E 42ND STREET
SEATTLE, WA 98105

LILLA O'GRADY
4553 49TH AVENUE N E
SEATTLE, WA 98105

OCCUPANT
5025 25TH AVENUE N E
SEATTLE, WA 98105

OLA MAE OLSON
4420 50TH AVENUE N E
SEATTLE, WA 98105

PHILIP PADELFORD
204 DENNY WAY
SEATTLE, WA 98109

MICHAEL PERLMAN
4500 N E 50TH STREET
SEATTLE, WA 98105

CLAIRE PETERSON
4819 F TERRACE DR N E
SEATTLE, WA 98105

HELEN RAGAN
114 ROANOKE E
SEATTLE, WA 98102

MARY ROBERTSON
5031 N E LAURELCREST LN
SEATTLE, WA 98105

DALE SHERROW
A/P INTERNATIONAL
3147 FAIRVIEW AVE E
SEATTLE, WA 98102

ELIZABETH SHINALH
4540 45TH AVENUE N E
SEATTLE, WA 98105

CLARK SORENSEN
4530 45TH AVENUE N E
SEATTLE, WA 98105

DORIS ULRICH
5017 N E LAURELCREST LN
SEATTLE, WA 98105

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MIMI WINSLOW
3926 47TH AVENUE N E
SEATTLE WA 98105

ELIZABETH AMICK
4911 N E LAURELCREST LN
SEATTLE, WA 98105

SIDNEY HALLAM
3606 N E 41ST STREET
SEATTLE, WA 98105

OLA MAE OLSON
4420 50TH AVENUE N E
SEATTLE, WA 98105

GLENN BACHMAN
1509 QUEEN ANNE AVE N
SEATTLE, WA 98109

MARIAN FORD HINEA
4814 STANFORD AVE N E
SEATTLE
WA, 98105

PHILIP PADELFORD
204 DENNY WAY
SEATTLE, WA 98109

MARK BAERWALDT
5005 N E LAURELCREST LN
SEATTLE, WA 98105

LESLIE LLOYD
THE FERRIS CO.
10655 NE 4TH ST.
BELLEVUE, WA 98004

MICHAEL PERLMAN
4500 N E 50TH STREET
SEATTLE, WA 98105

WILLIAM BALLOU
5025 N E LAURELCREST LN
SEATTLE, WA 98105

RICHARDS LOESCH
3326 43RD AVENUE N E
SEATTLE, WA 98105

CLAIRE PETERSON
4819 F TERRACE DR N E
SEATTLE, WA 98105

C A BURSELL
4552 48TH AVENUE N E
SEATTLE, WA 98105

CAROLYN MATEER
UW SUZZALLO LIBRARY
UNIVERSITY OF WASHINGTON
SEATTLE, WA 98195

HELEN RAGAN
114 ROANOKE E
SEATTLE, WA 98102

PAUL CAHILL
PACE NEED INC
1013 N E BOAT ST.
SEATTLE, WA 98105

LILLIAN MILLS
4545 SANDPOINT WAY N E#507
SEATTLE, WA 98105

MARY ROBERTSON
5031 N E LAURELCREST LN
SEATTLE, WA 98105

BRUCE DAVIS
4525 51ST AVENUE N E
SEATTLE, WA 98105

SYLIVIA MOREN
1437 N W 186TH ST.
SEATTLE, WA 98177

DALE SHERROW
A/P INTERNATIONAL
3147 FAIRVIEW AVE E
SEATTLE, WA 98102

PAULA DOUGLAS
4545 SANDPOINT WAY N E#802
SEATTLE, WA 98105

DOUGLAS NICHOLS
5126 N E 42ND STREET
SEATTLE, WA 98105

ELIZABETH SHINALH
4540 45TH AVENUE N E
SEATTLE, WA 98105

MARY GEHRI
3818 43RD AVENUE N E
SEATTLE, WA 98105

LILLA O'GRADY
4553 49TH AVENUE N E
SEATTLE, WA 98105

CLARK SORENSEN
4530 45TH AVENUE N E
SEATTLE, WA 98105

MARGARET GRAHAM
5143 N E LAURELCREST LN
SEATTLE, WA 98105

OCCUPANT
5025 25TH AVENUE N E
SEATTLE, WA 98105

DORIS ULRICH
5017 N E LAURELCREST LN
SEATTLE, WA 98105

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MIMI WINSLOW
3926 47TH AVENUE N E
SEATTLE W[illegible] 98105

LU Tech/Prmt Spec

LAND USE INTAKE WORKSHEET

Project #: 9106441 **Address:** 2501 NE 45th St

Kroll Page #: 24E **Date of Appl:** 12/13/91 **LU Tech/Prmt Spec:** DB

Description: Council Conditional Use Permit for future use of an existing surface helistop on U.W campus by Children's Hospital Medical Center. (Helistop to be used for medical emergencies.) Project includes the construction of approx. 65' diameter landing pad and apron improvement

DR 50-88, 51-88 SEPA Review? YES (NO)	DR 3-87 ENERGY? YES (NO)	DR 54-88 Large Sign? YES (NO)

LU Tech

COMP	SUB	DESCRIPTION
CE		To allow addition of CHMC flights to the
		UW's heliport at Graves Field. 69.012C
		(see D. McLerran's letter 1/30/91) CITATION: 23.~~76.090~~
		CITATION:
		CITATION:
		CITATION:

Entered into system [X] Checked white cards & history screens [ ]

Screener: CCP Date Screened: 12/23/91

Type of Notice: PL Notice Date: _____ End Comment: _____

Screened [✓] Entered [ ]

Rev. 871203 \vivi\luiw

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Department of Construction and Land Use (13-07-01)

LAND USE REFERRALS

TYPE OF APPROVALS

- ☐ Major Institution Master Plan
- ☐ Full Subdivision
- ☐ Planned Community Developments (PCD's)
- ☑ Council Conditional Use
- ☐ Public Projects
- ☐ Rezone
- ☐ Shoreline Permit
- ☐ Short Plat
- ☐ Street Use
- ☐ DR 3-87
- ☐ Other _____

ENVIRONMENTAL REVIEW REQUIRED: Yes ☐ No ☑

PCD's/Public Projects	Rezone/C.C. Use	M.I. Master Plan Full Subdivision	Short Plat	Shoreline Permit	Street Use	DR 3-87	Please review the attached application and send your response to DCLU, Land Use Section, within fourteen (14) days from the date referred. To: **AGENCIES REFERRED**	For Dept. Use Only Response Received:
							○ Engineering Department (13-04-01)	
●	●	●	●		●		○ Plan Review already routed	
					●		○ Street Use Division	
		●	●				○ Fire (04-44-04)	
	●	●	●				○ Water (13-10-01) Not needed per Ann Cop	
							○ City Light (05-00-01)	
		●	●				○ Property Management	
						●	○ Environmental Section	
		●					○ Parks and Recreation (01-02-10)	
		●			●		○ Health (10-06-01)	
●		●		●			○ Metro - Environmental Planning Exchange Building, 821 2nd Avenue, Seattle, Washington 98104-1598	
●	●	●					○ City Clerk (01-01-01) Margaret Carter	
			●				○ Zoning Plans Examiner	
							○ Sign Inspector	
				●			○ DNR Department of Natural Resources Aquatic Lands Division 1100 Olive Way, Suite 1450, Seattle, Washington 98101	
							○ Department of Community Development (14-08-01)	
				●			○ Shoreline Inspector	
		●	●				○ Permit Technician (Addressing/Legals)	

MUP or Council Application # 9106441 Date Referred: 12/31/91 1/14/92

Comments:

Use other side or attach additional sheets if necessary.

LUREFER.PM3 REV. 3/8/91 bje

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City of Seattle
Department of Construction and Land Use

Land Use Correction Sheet

Page No. 1 of _____

9106441
Project Number

Site Address: 2501 NE 45th St.

Mail Correction Sheet To:
Attention: Sig Brudevold
c/o Mills, John & Rigdon Architects
810 - 3rd Ave. # 754
Seattle, WA Zip: 98104

Comments/corrections from:
✓ Zoning
___ Land Use Review
___ Land Use Intake

Land Use File

PLAN STATUS:
___ Plans will continue routing
___ Project/plans are on hold, pending resolution of the corrections listed below.

Reviewed by: Roberta Baker
Date: 1/10/92

NOTE: If necessary, meetings with plans examiners to discuss corrections or other code matters may be made by **APPOINTMENT ONLY.** Call **684-8875** for Zoning and LU Review, **684-8850** for LU Intake between **10:30 am and 4:30 pm.** Itemized written response to corrections is helpful. Minor corrections may be made in ink on the original blueprints. Major corrections must be submitted on new prints. Please incorporate the new print sheets into each plan set and return the original replaced prints in separate sets. (These must be marked **VOID**). Return plans to the Plans Routing Center, Room 503, Municipal Building.

* Please dimension the new parking areas — stall width, stall depth & parking aisle. At least 1/3 (35%) of the new stalls need to be small (7'-6" x 15'-0") and at least 35% need to be large stalls (8'-6" x 19'-0"). The rest of the stalls can be small, medium or large — the parking aisle differs for each stall size.

Please dimension the site plan, and feel free to call me if you have any questions.

Please Note: If you fail to submit the information required in the corrections listed above, within 90 days from the date of this correction sheet, your application will be canceled. This means that you will have to make a new application if you wish to proceed with the project.

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#8405870 & 9106441
Page 1
Notice of Director's Recommendation on Council C.U.
and Report Sent 5/14/92 bg

SIG BRUDEVOLD
754 CENTRAL BUILDING
810 3RD AVENUE
SEATTLE WA 98104

MARK CLEMMENS
SED - PLANS REVIEW
13-04-01

MAMIE HILL
HEARING EXAMINERS OFFICE
15-13-01

Faith Dumsden * *Notice
DCLU

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MASTER USE AND CONSTRUCTION APPLICATION AND PERMIT

CITY OF SEATTLE
DEPARTMENT OF CONSTRUCTION AND LAND USE

PERMIT NUMBER:

PROJECT NUMBER: 9100441

KROLL: 24E

PROPERTY ADDRESS: 02501 NE 45TH ST ( )

LEGAL DESCRIPTION: 162504-0000, N 2,640' OF BLK 8, AND FOR BLK 7, LAKE WASH. SHOREL-NDS LYG N OF CLARK RD, AND FOR GOV LT 2 LYG E MONTLAKE & 25TH, IN SECT 16-25-04

CONSTRUCTION VALUE
NEW: 0

ALTER: 0

TOTAL: 0

DCLU:

RELATED FILES/PERMITS:
PERMIT REMARKS: CRA

PROJECT DESCRIPTION: Permission is hereby given to do the following according to the conditions stated hereon and on the attachments and according to the approved plans and specifications pertaining thereto, subject to compliance with the ordinances of the City of Seattle:

EST/CHNG USE OTHER — FUTURE IMPROVEMENTS TO LANDING PAT AND USE OF EXISTING HELISTOP

BLDG. IDENTIFIER: 0
NO. DWELLING UNITS
EXISTING: 0
NEW: 0
DEMOLISH: 0
TOTAL: 0

OCCY GROUP & CHAR: LAND USE ONLY
TYPE OF CONSTRUCTION: NA
ASSEMBLY OCCUPANT LOAD:
SPRINKLER SYSTEM LOCATION:
NUMBER OF STORIES, BASEMENTS:
USE PER LAND USE CODE: LAND USE ONLY

ZONING: M1037/65LR3
DEMOLITION LICENSE: NA

OCCUPANCY CERT. REQUIRED?
SPECIAL INSPECTIONS REQUIRED?
ENVIRON. SENSITIVE AREA? N
SHORELINE AREA? N
PROTECTED DISTRICT/LANDMARKS? N
GREENBELT? N

RECEIPT NUMBER	RECEIPT AMOUNT
B24268	110.00
223112	2,200.00

PERMIT SPECIALIST: DB
LAND USE TECHNICIAN: DB
BLDG CODE PLANS EXAM/ENGR:

DATE	CONSTRUCTION COMPONENT		FEE

DATE	MASTER USE COMPONENT	ACTION	FEE
911213	USE		2,200.00
911213	USE (ZONING)		.00

OWNER/LESSEE: CHILDRENS HOSPITAL FOR UW
CONTACT PERSON: SIG BRUDEVOLD **PHONE:** 6240419
ADDRESS: 754 CENTRAL BLDG, 810 3RD AV, SEATTLE **ZIP:** 98104
CONTRACTOR: **LIC. NO:**

DATE	STREET USE COMPONENT	ACTION	FEE

DIRECTOR OF CONSTRUCTION & LAND USE BY _____

DATE PERMIT ISSUED	CONSTRUCTION EXPIRATION DATE	LAND USE EXPIRATION DATE

OTHER	FEE

TOTAL PERMIT FEES: 2,200.00

NOTICE TO THE APPLICANT: The Department of Construction and Land Use cannot guarantee any specific time frame for project review. The applicant shall determine applicability of and compliance with all relevant codes. DCLU permit action is based upon information supplied by the applicant. The Department reserves the right to require additional information. Field revisions on issued permits may be required if errors or omissions are discovered.

Construction or substantial progress toward construction of a project for which a Master Use Permit or construction permit has been granted must be undertaken prior to the expiration date. Extension of the construction permit without penalty may be granted if application is made within the 30 days prior to the date of expiration. Additional fees will be assessed to reinstate an expired permit.

Not valid unless signed by the DIRECTOR OF THE DEPARTMENT OF CONSTRUCTION AND LAND USE. Starting construction without a building permit is punishable by fine and/or imprisonment. All work shall be done in accordance with the permit and approved plans. Call for inspection before placing any concrete or installing any piling on private property. Phone 684-8900.

I certify that I have read the above notice, and that to the best of my knowledge the information which I have provided is complete and accurate.

APPLICANT'S SIGNATURE _____ **DATE** 12/13/91 **APPLICANT'S RELATIONSHIP TO PROJECT:** A

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CITY OF SEATTLE
DEPARTMENT OF CONSTRUCTION AND LAND USE
710 2ND AVENUE SUITE 475
Inspection Phone 684-8900

POST THIS SIDE OUT

Permit No. _____ Project No. _____

_____
Property Address

TO THE CONTRACTOR/OWNER:

1. This card must be posted in a conspicuous place on the premises.
2. Call DCLU Inspection Division (684-8900) for all of the applicable inspections:
   a. pre-construction conference
   b. foundation (setbacks, reinforcing steel, soil bearing, foundation drainage)
   c. fireplace and chimney reinforcing steel
   d. concrete & masonry reinforcing steel
   e. glu-lams, wood trusses
   f. diaphragm nailing (walls, floors, roofs, including connections
   g. framing
   h. insulation
   i. stucco lath & gypsum board nailing
   j. mechanical HVAC
   k. final inspection

   Inspections will be made on the same working day if you call between 7:30 and 8:30 a.m. Inspections will be made on the next working day for calls received after 8:30 a.m. on our 24-hour recorder at 684-8900.

   Please clarify which inspections are required before proceeding with your project. If you have any questions, call the building inspector at 684-8950 between 7:30 and 9:00 a.m., or leave a message after 9:00 a.m.

   When special inspection is required, notify inspection agency specified on approved plan 24 hours in advance. If special inspection is required, you must receive approval from building inspector prior to the start of construction.
3. PROPERTY LINES MUST BE ESTABLISHED BY SURVEY STAKES PRIOR TO FOUNDATION INSPECTION.
4. This permit does not cover sewer, drainage and street use, plumbing, electrical, furnace, boiler, elevator, Fire Department, public right-of-way shoring, or sign permits. If any of these permits are required, you will need to apply for them separately from this permit. Additional permits may also be required for work covered by this permit.
5. The requirements for all permits related to this permit (including but not limited to plumbing, electrical, Master Use, drainage and street use permits) shall be completed prior to final inspection.
6. Premises must not be occupied until final inspection is made and approval granted by the Seattle Department of Construction and Land Use.
7. FINAL INSPECTION IS REQUIRED ON ALL PERMITS.

INSPECTION REPORTING

DCLU inspectors will provide a copy of all inspection reports to you. These reports should be clipped to your permit or kept where they can be conveniently referenced.

The following signature boxes are for inspectors other than DCLU building inspectors. These are included here for your convenience; if you get signatures from the other inspectors as shown below, it will speed up the approval of your construction project.

PRIOR TO FOUNDATION APPROVAL

When your permit requires special inspection for soil bearing capacity by a soils engineer, the building inspector will require verification of the soils engineer approval prior to the foundation pour. If the soils engineer does not leave a report at the site, their signature in this box is sufficient for the building inspector.

Soil Bearing (identify area)	Approved by	Date

PRIOR TO FINAL BUILDING APPROVAL

The following sign-offs may be necessary prior to the final approval of the building permit or a Certificate of Occupancy. To speed up your approval, we recommend that you get the inspectors to sign below when they have given final approval of their portions of the work. This will help you and the building inspector make sure that all approvals are received in a timely manner.

FIRE DEPT. approved by / date	ELECTRICAL approved by / date	MECHANICAL approved by / date
PLUMBING approved by / date	ELEVATOR approved by / date	ENGINEERING street use approved by / date
BOILER approved by / date	LANDSCAPING approved by / date	side sewer approved by / date
		drainage approved by / date

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LU Tech/Prmt Spec

LAND USE INTAKE WORKSHEET

Project #: 9106441 Address: 2501 NE 45th St

Kroll Page #: 24E Date of Appl: 12/13/91 (LU Tech)/Prmt Spec: DB

Description: Council Conditional Use Permit for future use of an existing surface helistop on U.W Campus by Children's Hospital Medical Center. (Helistop to be used for medical emergencies) Project includes the construction of approx. 65' diameter landing pad and apron improvement

DR 50-88, 51-88 SEPA Review? YES (NO)	DR 3-87 ENERGY? YES (NO)	DR 54-88 Large Sign? YES (NO)

LU Tech

COMP	SUB	DESCRIPTION
CE	___	to allow addition of CHMC flights to the
___	___	UW's heliport at Graves Field. 69.012C
___	___	(see D. McLerran's letter 1/30/91) CITATION: 23.~~40.091~~
___	___	
___	___	
___	___	CITATION:
___	___	
___	___	
___	___	CITATION:
___	___	
___	___	
___	___	CITATION:

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Screener: CLP Date Screened: 12/27/91

Type of Notice: PL Notice Date: _____ End Comment: _____

Screened [✓] Entered [ ]

Rev. 871203

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Children's
Hospital & Medical Center

4800 Sand Point Way N.E.
P.O. Box 05371
Seattle, Washington 98105
(206) 526-2001

Treuman Katz
President and
Chief Executive Officer

December 13, 1991

Dennis J. McLerran
Director
Department of Construction & Land Use
City of Seattle
400 Municipal Building
600 Fourth Avenue
Seattle, WA 98104

Re: Council Conditional Use Application (Helistop at Graves Field)

Dear Mr. McLerran:

In response to your January 30, 1991, letter to me and Tallman Trask III, Children's Hospital and Medical Center is submitting an application for a Council Conditional Use Permit for a helistop at Graves Field.

We are submitting this application as a way to implement the "preferred alternative" now proposed by CHMC. This alternative would provide for the majority of emergency helicopter flights to land at Graves Field and the remainder to land on Children's campus at the site proposed in our current Conditional Use application with the City. We believe that the preferred alternative will accomplish Children's objectives and mitigate adverse impacts on the community.

This application is submitted for a helistop at Graves Field to be operated in conjunction with the helistop on the main campus. The improved helistop at Graves Field is not intended to serve all emergency flights for patients destined to Children's.

I noted in your letter that you determined that the University of Washington's use of Graves Field as a helistop is considered grandfathered since this site has been used for many years by the UW. As you know, this site has also been used for many years for the landing of helicopters with patients destined for Children's Hospital. We also believe that use of the Graves Field site by helicopters with Children's patients is grandfathered. By submitting this application for Graves Field, Children's or patients bound for Children's do not intend to waive whatever rights we would have to continue landing at Graves Field (and the main campus) without any additional permits.

DEPARTMENT OF CONSTRUCTION AND LAND USE
DEC 13 1991

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We look forward to working with the City in the review of this application. We understand from your staff that the existing EIS for this project issued in April, 1991, will be used to support the review of this Council Conditional Use Permit application. We have, therefore, not submitted a new environmental checklist.

This proposal for a helistop at Graves Field has also been reviewed by the University of Washington and we have their permission to apply for a helistop at this location. We submit this application with the understanding that our application does not waive the University's right to use the existing helistop for its patients.

The helistop has been designed by the firm of Mills, John & Rigdon Architects; Mr. Sigmund A. Brudevold is the project manager. Suzanne Petersen, Director of Government Affairs, is the Children's Hospital contact person for this application (526-2530).

Thank you for your consideration of this request.

Sincerely yours,

Treuman Katz
President and CEO

phc

cc: Tallman Trask III, University of Washington
Suzanne Petersen, CHMC
Sigmund A. Brudevold, Mills, John & Rigdon Architects
John E. Keegan, Davis, Wright Tremaine

DEC 13 1991

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Seattle
Department of Construction and Land Use

W01305

January 30, 1991

Re: Helistop at Graves Field

Tallman Trask III
Executive Vice President
University of Washington
306 Administration Bldg., AH-05
Seattle, Washington 98195

Truman Katz
President and Chief Executive Officer
Children's Hospital and Medical Center
P.O. Box C5371
Seattle, Washington 98105

Dear Mr. Trask and Mr. Katz:

In an effort to resolve the outstanding issues regarding the possibility of permitting use of an existing helistop at Graves Field for both the University of Washington (UW) and Children's Hospital Medical Center (CHMC) helicopter landings, I have met with my staff several times and have consulted with the City's Law Department. We have developed a proposed solution which I hope will be satisfactory to all parties.

As you know, we are faced with a code issue which has hindered our ability to move forward on a permit decision for CHMC's proposed helistop. The preferred alternative now proposed by CHMC would have the majority of flights landing at Graves Field, which is within the UW's campus. The site has historically been used periodically by the University as a landing site for helicopters transporting injured persons. Although the new Major Institution Code does not require CHMC to include CHMC's use of Graves Field helistop in the CHMC master plan because the site is more than 1/2 mile from the hospital campus, the Major Institutions code does not explicitly provide that one institution may apply for such a new facility on another institution's campus. We understand that the UW does not want to apply for the CHMC facility because of the controversy which has been associated with the hospital's on-site proposal.

Regarding the UW's concerns that its helicopter flights not be subject to the permitting process, I believe that the UW use of the site should be considered grandfathered since this site has been used for many years as a helistop. No

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additional permitting of the UW's existing use at this location would be necessary. The Final GPDP and EIS includes discussion of the helistop, its continuous use by the UW and its intended future use by CHMC, referring to the pending parallel review process for CHMC's use of the site.

If the helistop at Graves Field is an existing use for the University of Washington, the Children's flights may be added in much the same way as other medical facilities at the University are available to Children's patients. Because the number of flights will increase substantially beyond the UW's historic use, we will require that the Children's use of the helistop be allowed only through the Conditional Use process. In the event the Council Conditional Use for Children's destined flights at Graves Field is not approved, no Children's landings would be allowed, but the grandfathered UW usage would not be affected. Prior to publishing a decision on the Children's flights, Children's must apply for a permit at Graves Field.

This solution relies on the cooperation of both institutions in arriving at a mutually beneficial result. CHMC would be able to apply for what it has identified as the preferred site for the majority of its proposed helicopter landings, and the UW use of the site would be recognized and grandfathered without formally going through the permit process. I trust that you will agree with this approach and work together with us to resolve this complex issue. I would like to move as quickly as possible for a decision on the Children's helicopter flights as the issue has lingered unresolved for an embarrassingly extended period.

I hope this proposed solution addresses the concerns of Children's Hospital and the University of Washington. If there are any questions, please contact me at 684-8899 or Senior Land Use Specialist John Doan at 684-8875.

Sincerely,

Dennis J. McLerran

DENNIS J. McLERRAN
Director

DJM:jdr

wp1\helistop

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LAND USE BILLING INFORMATION

Part I (Complete at application intake)

Project #: 9106441 Project Address: 2501 NE 45th St

Pre-Application Fee: _____ Computer Contact Fee: _____
Flat Fee: 1100.00 Valuation Fee: _____
Deposit for Hourly Fee: 1100 Receipt #: 223112

Hourly, additional component(s), or other fees:

___Single family access	___MDNS	___Research
___Council Cond. Use	___Master Plan	___Revision
___Design Departure	___PCD	___Overtime
___Design Review	___Rezone	___Notice Fee
___Greenbelt	___Shoreline Revision	___Renotice Fee
___EIS	___Subdivision	___Soils
___DNS	___Supplemental EIS/ Addendum	___Fee Ordinance Increase
		___Other _____

To be billed on IO:
Company Name: _____
Address: _____
_____
Agency Charge #'s: _____
Agent Signature: _____

Land Use Technician Signature: C. Phillips

Part II (Land Use Specialist complete before publishing decision/recommendation)

SEND BILL TO: _____
_____
_____

OTHER CHARGES:
Subject Fee Ordinance increases? (Y)_ (N)_
Were components/reviews added after intake? (Y) (N)
If yes, which components? _____
Was there additional notice required? (Y) (N) How many? _____

DCLU BILLABLE HOURS:
Timesheet hours on report: Date report run: _____
Total hours from report: _____
Billable hours from report: _____ (attach printout of report)
Hours not on report:
Timesheet date: _____ Hours: _____
Timesheet date: _____ Hours: _____
Total hours: _____
Billable hours: _____
Number hours estimated to complete: _____
Estimated billable hours: _____

Total billable hours (report+not on report+estimated): _____

SED BILLABLE HOURS (To be provided by SED, if any): _____

Land Use Specialist Signature: _____

(over)

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Part III (Zoning Plans Examiner completes before publishing decision/recommendation)

Updated Valuation: _____
Updated Fee based on valuation: _____
Difference between valuation fee paid and fee owed (+/-): _____
Terminal screens have been updated regarding valuation? ____Yes

Zoning Plans Examiner Signature _____

Part IV (Land Use Support Staff Supervisor completes before publishing decision/recommendation

FEE CALCULATION:

Fee Ordinance Increase:
New fee: _____
Less fees paid: _____
Amount owed: _____

Components Added:
Amount owed: _____

Additional Notice:
Amount owed: _____

Billable Hours:
Fee (@ $110.00/hour): _____
Less deposit paid: _____
Amount owed: _____

SED Hourly Fee:
Fee (@ $ .00/hour): _____
Less deposit paid: _____
Amount owed: _____

Total Fees Owed:

Total paid to date: _____
Total fees: _____
Total owed (+/-): _____

Is an IO Fee form necessary? ____YES ____NO If yes, is form prepared? _____

Date sent to accounting for bill preparation: _____

_____ Land Use Routing computer screen updated.

Date fee paid and project released for publication _____

Land Use Support Staff Supervisor Signature: _____

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REV 11/89

CITY OF SEATTLE

ZONING RECEIPT

DEPARTMENT OF CONSTRUCTION AND LAND USE RECEIPT

date 12-13 1991 payor Childrens Hospital

proj. address 2501 NE 45th St

written dollar amt. Twenty two hundred and no/00

phone no.

dollars $ 2200.00

project no. 91x441

amt. received $ 2200.00

change $ —

letter inv.#

check no. 54026

	fee	option	amount	fee	option	amount	
Z1	lot boundry/ short plats	Z15		street use (DCLU)	Z12		Z11
Z2	cert. of land use	Z16		pre-app. conf.	Z18		Z12
Z3	design review/ departure	Z17		EIS	Z07		Z17
Z4	rezone	Z01		legal bldg. letter	Z19		Z24
Z5	admin. cond. use	Z13		council conditional use	Z02		Z26
Z6	demolition	B07		temporary use/ special exception	Z03		Z27
Z7	variance	Z04		flood plain devel.	FLD		Z28
Z8	use/zoning plan check		2200 00				
Z9	shoreline subs. development	W01					
Z10	SEPA check (DNS)	A01					

TOTAL $ 2200 00

Z 23112

by db

Dept. of Construction and Land Use

NORTHWEST BUSINESS FORMS INC. SEATTLE, WASH. 271438-C1

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LU Tech/Prmt Spec

LAND USE INTAKE WORKSHEET

Project #: 9106441 **Address:** 2501 NE 45th St

Kroll Page #: 24E **Date of Appl:** 12/13/91 **(LU Tech)/Prmt Spec:** DB

Description: Council Conditional Use Permit for future use of an existing surface helistop on U.W Campus by Children's Hospital Medical Center. (Helistop to be used for medical emergencies) Project includes the construction of approx. 65' diameter landing pad and apron improvemi

DR 50-88, 51-88 SEPA Review? YES (NO)	DR 3-87 ENERGY? YES (NO)	DR 54-88 Large Sign? YES (NO)

LU Tech

COMP	SUB	DESCRIPTION
CE	___	to allow addition of CHMC flights to the
___	___	UW's heliport at Grews Field. 69.012C
___	___	(see D. McLerran's letter 1/30/91) CITATION: 23.~~76.082~~
___	___	
___	___	
___	___	CITATION:
___	___	
___	___	
___	___	CITATION:
___	___	
___	___	
___	___	CITATION:

Entered into system [X] Checked white cards & history screens [ ]

Screener: CCP Date Screened: 12/23/91

Type of Notice: PL Notice Date: _____ End Comment: _____

Screened [✓] Entered [ ]

Rev. 871203 \vivi\luiw

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MASTER USE AND CONSTRUCTION APPLICATION AND PERMIT

CITY OF SEATTLE
DEPARTMENT OF CONSTRUCTION AND LAND USE

CC-84-022

PERMIT NUMBER:

PROJECT NUMBER: 840587

KROLL:

PROPERTY ADDRESS: 04800 SAND POINT WY NE ( )

LEGAL DESCRIPTION:

CONSTRUCTION VALUE NEW:

RELATED FILES/PERMITS: CC-84-022

PERMIT REMARKS:

ALTEP:

PROJECT DESCRIPTION: Permission is hereby given to do the following according to the conditions stated hereon and on the attachments and according to the approved plans and specifications pertaining thereto, subject to compliance with the ordinances of the City of Seattle:

OTHER COUNCIL COND USE FOR HELISTOP

TOTAL:

DCLU:

BLDG. IDENTIFIER: 0

OCCY GROUP & CHAR:

NO. DWELLING UNITS

TYPE OF CONSTRUCTION:

EXISTING: 0

ASSEMBLY OCCUPANT LOAD:

NEW: 0

SPRINKLER SYSTEM LOCATION:

DEMOLISH: 0

NUMBER OF STORIES, BASEMENTS:

TOTAL: 0

USE PER LAND USE CODE:

ZONING: I-4/I-2/SF 5

DEMOLITION LICENSE: NA

	DATE	CONSTRUCTION COMPONENT	FEE

OCCUPANCY CERT. REQUIRED?

SPECIAL INSPECTIONS REQUIRED?

RECEIPT NUMBER Z09504

RECEIPT AMOUNT 640.00

ENVIRON. SENSITIVE AREA? N

SHORELINE AREA? N

PROTECTED DISTRICT/LANDMARKS? N

GREENBELT? N

PERMIT SPECIALIST:
LAND USE TECHNICIAN: KH
BLDG CODE PLANS EXAM/ENGR:

	DATE	MASTER USE COMPONENT	FEE
	841113	MISC LU FEE	640.00

CONTROLLER AND CITY CLE
RECEIVED JUL 21 AM 11:
FILED
CITY OF SEATTLE

OWNER/LESSEE: CHILDREN'S ORTHOPEDIC

CONTACT PERSON: DOROTHY TECTER

PHONE: 5262004

ADDRESS: 4800 SAND POINT WY NE

ZIP: 98105

	DATE	STREET USE COMPONENT	FEE

CONTRACTOR:

LIC. NO:

DIRECTOR OF CONSTRUCTION & LAND USE BY _____

			OTHER	FEE
			INVESTIGATION	.00
			REVISION	.00
			OVERTIME	.00
DATE PERMIT ISSUED	**CONSTRUCTION EXPIRATION DATE**	**LAND USE EXPIRATION DATE**	**TOTAL PERMIT FEES:**	640.00

NOTICE TO THE APPLICANT: The Department of Construction and Land Use cannot guarantee any specific time frame for project review. The applicant shall determine applicability of an compliance with all relevant codes. DCLU permit action is based upon information supplied by the applicant. The Department reserves the right to require additional information. Fiel revisions on issued permits may be required if errors or omissions are discovered.

Construction or substantial progress toward construction of a project for which a Master Use Permit or construction permit has been granted must be undertaken prior to the expiration date Extension of the construction permit without penalty may be granted if application is made within the 30 days prior to the date of expiration. Additional fees will be assessed to reinstate a expired permit.

Not valid unless signed by the DIRECTOR OF THE DEPARTMENT OF CONSTRUCTION AND LAND USE. Starting construction without a building permit is punishable by fine and/or imprisonmen All work shall be done in accordance with the permit and approved plans. Call for inspection before placing any concrete or installing any piling on private property. Phone 625-2301.

I certify that I have read the above notice, and that to the best of my knowledge, the information which I have provided is complete and accurate.

APPLICANT'S SIGNATURE _____ **DATE** _____

APPLICANT'S RELATIONSHIP TO PROJECT: G 01 0

Page of

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LAND USE REFERRALS

TYPE OF APPROVAL(S) REQUESTED:

☐ Rezone
☐ Full Subdivision
☐ Planned Developments (PD's)
☐ Short Plat/LBA
☒ Council Conditional Use
☐ Shoreline Permit
☐ Street Use
☐ Other _____

ENVIRONMENTAL REVIEW REQUIRED: Yes ☐ No ☐

Rezone	Full Subdivision/PD's	Short Plat/LBA	Shoreline Permit	Street Use	DR 3-87	Please review the attached application and send your response to DCLU, Land Use Section, within fourteen (14) days from the date referred. To: **AGENCIES REFERRED**	For Dept. Use Only Response Received:
						○ Engineering Department (01-09-01)	
●	●	●		●		○ Plan Review	
				●		○ Street Use Division	
	●	●				○ Fire (04-44-04)	
●	●	●				○ Water (99-11-01)	
						○ City Light (05-00-01)	
	●	●				○ Property Management	
					●	○ Environmental Section	
	●					○ Board of Public Works (14-02-03)	
	●					○ Parks and Recreation (01-02-10)	
	●			●		○ Health (10-06-01)	
	●		●			○ Metro (99-01-01) - Environmental Planning	
●	●					⊗ City Clerk (01-01-01) PD's do not go to Clerk	
		●				○ Zoning Plans Examiner	
						○ Sign Inspector	
			●			○ DNR Department of Natural Resources Aquatic Lands Division 1100 Olive Way, Suite 1450, Seattle, Washington 98101	
						○ Department of Community Development (14-08-01)	
						○ Shoreline Inspector	

FILED
CITY OF SEATTLE
1989 JUL 27 AM 11:58
COMPTROLLER AND CITY CLERK

RECEIVED
AUG 11 1989
DEPT OF CONSTRUCTION & LAND USE
LAND USE SECTION

MUP or Council Application # 8405870 Date Referred 7/18/89

Comments:

Use other side or attach additional sheets if necessary.

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Department of Construction and Land Use (DCLU)

LAND USE REFERRALS

TYPE OF APPROVAL(S) REQUESTED:

☒ Council Conditional Use

☐ Rezone
☐ Full Subdivision
☐ Planned Developments (PD's)
☐ Short Plat/LBA
☐ Shoreline Permit
☐ Street Use
☐ Other _____

ENVIRONMENTAL REVIEW REQUIRED: Yes ☐ No ☐

Rezone	Full Subdivision/PD's	Short Plat/LBA	Shoreline Permit	Street Use	DR 3-87	Please review the attached application and send your response to DCLU, Land Use Section, within fourteen (14) days from the date referred. To: **AGENCIES REFERRED**	For Dept. Use Only Response Received:
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	●	●				○ Property Management	
					●	○ Environmental Section	
	●					○ Board of Public Works (14-02-03)	
	●					○ Parks and Recreation (01-02-10)	
	●			●		○ Health (10-06-01)	
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MUP or Council Application # 8405870 Date Referred 7/18/89

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Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Charles Royer, Mayor

February 22, 1989

Re: 4800 Sand Point Way N.E.
(MUP #8405870)

Suzanne Peterson, Director
Governmental Relations
Children's Hospital and Medical Center
4800 Sand Point Way N.E.
P.O. Box C5371
Seattle, Washington 98105

Dear Ms. Peterson:

This is in regard to the permit application for a helistop on the Children's Hospital Campus.

At application for your permit, $272.50 was paid to cover the environmental review. The Permit Fee Ordinance establishes that the fee for an Environmental Impact Statement is a function of the project's construction value. The helistop proposal is unusual because it has no valuation for fee calculation purposes. The fee ordinance provides that special fees shall be assessed to recover city costs where the valuation or other methodology normally used (to determine costs) does not reflect actual costs. In conformance with this, we will be charging you the hourly fee of $71.00 per hour for the time spent on the EIS.

Because we are informing you of this at this late date, you will only be responsible for the environmental review costs incurred after January 1, 1989. Payment of these fees and those owing as a result of the Council Conditional Use will be due prior to our publication of a decision. The Conditional Use charges through 1988 are approximately $7,500.00.

This information is being provided to help you plan for the resolution of this issue. If you have any questions, please do not hesitate to call me at 684-8875.

Sincerely,

DENNIS McLERRAN
Director

By
JOHN T. DOAN
Land Use Specialist

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Summary Report of Safety Review
Proposed Kitchen Garden Helistop
Children's Hospital & Medical Center
Seattle, Washington

RECEIVED
MAY 05 1989

Introduction

This report is based on an analysis of current and proposed helistops serving the Children's Hospital & Medical Center to determine their suitability from a flight safety perspective. It is based on an extensive site visit and discussions with personnel involved in all aspects of the aeromedical operation at Children's.

Key Findings

The proposed Kitchen Garden helistop site offers numerous advantages in terms of safety and efficiency over the other sites under consideration (the existing Children's Hospital landing site and the Intramural Field site).

As currently designed, the Kitchen Garden site would provide increased safety over the landing area at the hospital's current site. It would allow for full compliance with the Federal Aviation Administration Advisory Circular #150/5390-2, which provides guidelines for helistop design, a claim that cannot be made for any of the other sites' configurations. It would provide:

> Greater clearances for the takeoff and landing area which would improve the ability of the pilot to locate and identify the touchdown area earlier in the approach sequence;
>
> Increased maneuverability for the helicopter to provide a greater range of approach and departure possibilities as well as fly-away capability in the event of an aborted approach to the hospital;
>
> A better and safer parking area; and
>
> An improved area of security which provides the pilot with the knowledge that the chance of unforeseen and unplanned events (arising from unauthorized access to aircraft) would be minimal.

The Kitchen Garden site also provides an improvement over every other site (except for the existing Children's Hospital site) in its proximity to the emergency room. (While emergency room proximity is not directly related to flight safety it does affect patient health. FAA Advisory Circular #150/5390-2 stresses the importance of proximity as a consideration in heliport design.) And when compared to the existing site, the Kitchen Garden

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proposal offers a significant improvement in safety, especially for night operations.

Additional Factors Analyzed

The review of the proposed Kitchen Garden site also addressed specific safety and related issues concerning:

Obstructions at or near the site

"Tight turns" that may be necessary in approaching the site

Execution of downwind landings

Safety and noise abatement

Protocols for coordinating the operations of two aircraft approaching the landing site without established communications

Means by which established flight paths can be monitored

Obstructions At or Near the Site

There are no existing obstructions associated with the design for the Kitchen Garden site that cannot be dealt with in a properly designed and constructed helistop. Items that should be addressed include:

Removal of trees, as well as bushes and shrubs at the immediate site to provide a clear area and to avoid penetration of the imaginary approach and departure surface. The exact number of plants to be removed will depend on the final elevation of the helicopter landing site.

Removal or topping of one or two trees located northeast of the site if alternate approach and departure paths will be used in that direction. This too is dependent on the elevation of the landing site.

Installation of obstruction marking or lighting for the boiler stacks on the north side of the hospital

Possible repositioning of one or two street lights located to the north of the site. This will depend on the exact elevation of the helistop and the flight path of the helicopter. This is dependent on the elevation of the landing site.

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None of these items are considered significant impediments to locating the helistop.

Safety Implications of Planned Approach Procedure

The so-called "tight turn" approach to the Kitchen Garden site described by Mr. Gene Hill, Chief Pilot for Hospital Air Transport, is a modified version of a normal approach procedure. It would require that normal care and precaution be exercised by the pilot.

(Normal procedures at an airport require the aircraft to enter a downwind leg at 1000 feet, parallel and opposite to the direction of landing. Once abeam the intended touchdown area a descent is initiated. The descent is continued through two 90 degree turns to arrive on a final approach course aligned with the runway.

The Kitchen Garden approach modifies this. The "downwind" leg is not parallel and opposite, but is slightly turned toward the final approach course. This more or less combines the "downwind" and crosswind" legs and requires a continuous turn of more than 90 degrees to align on the final course.

A helicopter provides greater flexibility than a fixed wing aircraft with respect to agility and maneuverability. This is especially apparent at slower air speeds. This difference means that what might be unsafe for a fixed wing aircraft would be perfectly safe and reasonable for a helicopter. Because of the greater maneuverability of a helicopter, a normal approach pattern is seldom used even at airports without noise abatement procedures. A modified approach procedure is used much more by helicopters than is a normal approach pattern.)

Implications of Downwind Landings

It is not possible to make a generalized statement about downwind landings other than they can be executed safely, depending on numerous variables. The two most important factors are wind speed and the amount of available power for the aircraft. The greater the wind speed, the more difficult the landing. Available aircraft power is a function of aircraft type, weight, altitude and temperature, among other components.

Given a choice, pilots normally will land into the wind. Second choice is a cross wind landing. The last choice is a downwind landing, which is used only if it can be determined by the pilot that there is an adequate margin of safety to execute the maneuver. The determination to make a downwind landing must made by the individual pilot at the controls using good judgment.

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Safety and Noise Abatement

Air safety and noise abatement procedures are not mutually exclusive.

The approach and departure procedures for Children's Hospital incorporate guidelines that minimize noise impact and risk to all areas along the route of flight. The procedures affect the route of flight, altitude and airspeed of Airlift Northwest helicopters.

The route of flight determined by the approach and departure procedures require the aircraft to operate, as far as practicable, over interstate highways, arterials and bodies of water. Safety is not compromised by this procedure and, in some respects, may be enhanced by providing pilots with easily recognizable routes into and out of the hospital.

The altitude restriction for the noise abatement procedure also does not compromise safety. A 1000 foot restriction keeps the aircraft within a height/velocity curve to accomplish a safe landing in case of an emergency power loss. This 1000 foot altitude requires a higher than normal rate of descent at the beginning of the descent approach until the aircraft starts a turn to final approach. This procedure steepens the final approach into Children's Hospital, but the entire sequence does not diminish safety margins.

The airspeed procedures described in the approach and departure plan are designed to maintain airspeed for a longer period of time to limit the time exposure of the noise of the aircraft. This procedure does not compromise safety.

The departure is the reverse of the approach except that an accelerated rate of climb is sustained in order to get to a higher altitude more quickly. As long as no aircraft design limitations are exceeded, this is a safe and acceptable practice.

Medical Pavilion and Construction Cranes

The specific layout at the Kitchen Garden site presents no unusual safety problems with respect to the medical pavilion and winds.

A medical pavilion building is proposed to be built more than 100 feet to the southeast of the proposed helistop takeoff and landing area. In addition to the building, cranes may be used during the construction stage.

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The building will be located a sufficient distance from the helistop to diminish the effects of disrupted wind flow. In high winds from the southeast a turbulent condition could be produced. However, it is difficult to determine exactly the degree of effect this would have on the site. A pilot could expect similar conditions anywhere he lands in proximity to a structure. It would require an unusual set of circumstances for building-induced wind conditions to affect safety significantly at this location. Specific conditions could conceivably make the helistop site unsuitable for landing aircraft. However, if these conditions existed it is also unlikely that Airlift Northwest aircraft would be flying.

The use of a construction crane at the proposed building site does not present a significant problem because the approach and departure paths do not penetrate the area where the crane will be located. To provide an extra margin of safety the hospital may wish to:

Notify in writing all potential users of the helistop site of the construction project's effective dates and provide a detailed map of the area.

Provide lighting for the crane.

Notify the Federal Aviation Administration of the construction activity's effective dates.

Protocols for Coordinating Two Aircraft Approaching the Site

Known and established methods of aircraft operation into and out of areas without controlling or advisory facilities can form the basis for safely coordinating two aircraft approaching the Kitchen Garden site.

This would require creation of communications protocols to allow aircraft to make their presence known, monitor each other's activities and exchange information affecting safety and operations. A system using visual flight rule reporting points and corridors provides known reference points, aircraft separation, noise abatement, smooth traffic flow and improved safety.

Flight Path Monitoring and Enforcement

Aircraft flight paths can be monitored by several different methods. One of the most accurate and cost effective systems is the development of visual flight rule reporting points and ground personnel to monitor an appropriate radio frequency. This procedure would be satisfactory for the Children's Hospital helistop operations.

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The flight paths and reporting points required for the flight coordination protocols above would also assist monitoring and enforcement of flight paths.

The project should be submitted to local Federal Aviation Administration authorities prior to implementation. Established flight paths with check points and protocols would be distributed to all potential helistop users. Traffic advisory and monitoring services could be provided from a base station located at the hospital. The service need be active only when flights are known to be in progress. A time and position log would be maintained for each aircraft report and kept on file by the hospital.

Similar methods of operation are used at controlled airports to control the flow of helicopter traffic. They allow ground personnel to maintain traffic separation and increase safety by performing a "listening watch".

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Comparative Safety Evaluations of Alternative Sites

In addition to the analysis of the proposed Kitchen Garden site, inspections were conducted at the existing site at Children's Hospital and at the intramural field. These sites were evaluated to identify any specific elements of concern and to determine the overall safety of each helistop.

The evaluations also reviewed the sites for compliance with the Federal Aviation Administration Guidelines on heliport design (Advisory Circular 150/5390-2).

The implications of noncompliance with the Advisory Circular can be far-reaching. The FAA can use deficiencies in a helistop to limit or restrict operations. In addition, demonstrated noncompliance can be used for enforcement or liability actions after an accident or incident.

The FAA is not always consistent with interpretation or enforcement of regulations and advisory circulars. It is, therefore, difficult to predict the regulatory consequences of noncompliance with the circular. However, due to the increased scrutiny of safety of aeromedical operations by the FAA, it is prudent to strive toward full compliance with the circular.

Existing Children's Hospital Landing Site

The existing helicopter site located near the entrance to Children's Hospital and Medical center fails to meet all of the FAA recommendations for heliport design. Specific areas of noncompliance include:

Takeoff and Landing Area

Location of the takeoff and landing area does not provide for the recommended minimum clearance from buildings, walls, vehicles and other objects that could be struck by the main or tail rotor. The size of the takeoff and landing area does not comply with the recommended minimum size. The surface of the takeoff and landing area does not conform to recommended surface design gradients, soil stabilization or pavement design.

Helipads and Helidecks

The size of the helipad does not conform with the recommended minimum size, and the existing site does not meet soil stabilization or pavement design recommendations.

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Approach and Departure Route

The site lacks the minimum one unobstructed approach and departure route required by the circular.

Heliport Lighting (night operations)

The site lacks perimeter lights to define the takeoff and landing area as well as floodlights to illuminate the operational area.

Fences

The site lacks fences or hedges to prevent unauthorized entry.

In addition to these items of noncompliance with the FAA circular, the site has other safety problems:

Construction of the Medical Pavilion will further limit the maneuvering area for helicopters.

There is nothing to identify the existing landing site. This creates difficulties for pilots who have not used the site during night approaches.

The final approach and departure corridors require flight either over or in close proximity to populated areas; provide a limited number of clear and unobstructed forced landing areas; do not allow routes which take advantage of various wind conditions; and limit fly away capability in the event of an aborted approach.

Boiler room stacks extending from the roof of the hospital on the emergency room side, which are in proximity to the landing site, are not lighted and, therefore, not easily seen, creating safety considerations for night landings.

The helipad does not have adequate drainage. Therefore, the turf is unstable when wet and may contribute to safety problems during helicopter operations.

Intramural Field Site

The following list identifies the specific areas of noncompliance of the Intramural Field Site with AC 150/5390-2.

Heliport Markings

Boundary and identification markings not provided.

Heliport Lighting

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Perimeter lights to define the takeoff and landing area for night operations are not provided.

Wind Direction Indicator

No method is provided to allow pilots to determine wind direction as per Advisory Circular recommendations.

Fences or Hedges

Fences or hedges to prevent unauthorized entry are not provided as per Advisory Circular recommendations.

Other safety problems were identified at the intramural field site:

Because property, air and zoning rights are outside the control of the hospital, there is no protection provided for the innermost portion of the approach and departure routes.

A bird nesting area is in close proximity to the landing site creating a potential hazard.

The site has a grass watering system that could be a hazardous obstruction.

A large pile of grass clippings and sand was found in close proximity to the aircraft landing site. This material could present a hazard to a landing aircraft. Due to lack of operational control over the landing site, this information would not be known to the pilot prior to landing.

Conflicting activities (golf driving range, baseball, etc) could create safety hazards for aircraft. Poor soil stabilization, lack of pavement support and the presence of a draining ditch constitute additional hazards.

There was no evident method for providing security against unauthorized entry while the site is in use.

Ground communication on or near the landing site is not provided for the aircraft.

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MAY 05 1989
DEPT OF TRANSPORTATION & LAND USE

ANALYSIS OF PROJECTED ROTARY-WING LANDINGS AT CHILDREN'S HOSPITAL MEDICAL CENTER 1990 - 1995

FINAL REPORT
APRIL 24, 1989

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EXECUTIVE SUMMARY

As part of the planning effort for the Environmental Impact Statement (EIS) required for construction of a helistop at Children's Hospital and Medical Center (CHMC), this study was commissioned by CHMC to: 1) review Airlift Northwest's current pediatric rotary-wing experience, and 2) project future pediatric rotary-wing volumes.

The January 1988 draft of the Final Environmental Impact Statement (FEIS) contains a Proposed Action as well as a Preferred Alternative. The Proposed Action involves the construction of a helistop available for landing all Airlift Northwest helicopters transporting critically ill and injured patients to CHMC. The Preferred Alternative, developed as a compromise proposal in the FEIS, allows only the most critical patients to land at a paved, secured helistop at the CHMC campus. The designation of patients who are most critically ill and require transport directly to CHMC's campus is currently, and will continue to be, determined on a case by case basis by the Airlift Northwest medical team on board the helicopter. All other critical pediatric patients would land either at Harborview, Intramural Field or Boeing Field and be transferred via ground ambulance to CHMC.

Specifically, this study defines and identifies three factors:

1) The geographic service area of Airlift Northwest's existing pediatric program;

2) The percentage of pediatric flights ultimately destined for CHMC (regardless of where they land) as well as the pediatric flights that actually land at CHMC; and

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3) A projection of future Airlift Northwest pediatric flight volumes and a calculation of the number of flights likely to land at CHMC through the year 1995 under both the Proposed Action and the Preferred Alternative.

All data used in the review and analysis of current and projected CHMC landings were provided by Airlift Northwest.

A population/use-rate based projection method was applied to the two scenarios, the Proposed Action and the Preferred Alternative, to develop estimates of likely utilization. Only one element in the methodology differentiates the two scenarios. In the scenario assuming the Preferred Alternative one additional step was required to define the number of patients actually landing at CHMC. This step involved the determination of the percentage of 1987 and 1988 pediatric flights actually landing at CHMC. A review of the combined, two year data identified the following:

1987-1988 Airlift Northwest Rotary Wing Landings
Ultimately Destined for CHMC
by Landing Site

CHMC landings	23.1%
Intramural landings	66.2%
Harborview landings	9.9%
Boeing Field landings	.5%
Other (Weather related)	.3%
Total	100.0%

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The actual calculation of projected pediatric Airlift Northwest landings at CHMC in the years 1990, 1992 and 1995 is premised on several assumptions. These assumptions assume four constants: a constant use rate, a constant percentage of missed flights, a constant percentage of Airlift Northwest pediatric flights landing at CHMC, and a constant out-of-area utilization through 1995. The projected utilization under each scenario is as follows:

Year	Proposed Action	Preferred Alternative
1990	190 landings	44 landings
1992	194 landings	45 landings
1995	200 landings	46 landings

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BACKGROUND/INTRODUCTION

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BACKGROUND/INTRODUCTION

Airlift Northwest is a non-profit emergency air ambulance service established in 1982 by an inter-hospital agreement among four member hospitals. The member hospitals are: Children's Hospital and Medical Center, Harborview Medical Center, Providence Medical Center and University Hospital. The service was established as a fixed wing service in response to a demonstrated need to serve rural hospitals in Eastern Washington, Southeast Alaska and Montana and to provide advanced medical care to those communities in the greater Western Washington area that did not have tertiary level capabilities. Two years later, in early 1985, in response to increasing requests for transport from Western Washington hospitals and emergency response programs, Airlift Northwest inaugurated a rotary wing service. The first helicopter landing by Airlift Northwest at CHMC occurred in August, 1985.

The first emergency landings by helicopter at CHMC occurred in the 1970's. By the early 1980's a need for a permanent helistop at the Hospital was becoming evident. In 1984, CHMC applied for a Master Use Permit to allow construction of a helistop at the hospital. As part of the application process the Department of Construction and Land Use determined that an Environmental Impact Statement would have to be prepared. The Draft EIS contained a "Proposed Action" to land all critically ill and injured pediatric patients directly at CHMC. A "Preferred Alternative",

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to land at the CHMC helistop only with the most critically ill patients-- less critical patients would be unloaded at Harborview, Boeing or Intramural Field and then transported by ground ambulance to CHMC, was developed as a compromise proposal and presented in the FEIS. As part of the EIS planning process, this study was commissioned by Children's Hospital dical Center to define and identify three (3) factors:

1) The geographic service area of Airlift Northwest's existing pediatric program;

2) The percentage of pediatric flights ultimately destined for CHMC (regardless of where they land) and the nature of pediatric flights that actually land at CHMC; and

3) A projection of future Airlift Northwest pediatric flight volumes and a calculation of the number of flights likely to land at CHMC through the year 1995 under both the Recommended Action and the Preferred Alternative.

This study is divided into three main sections. The first section, Description of Methodology and Assumptions, describes the sources and types of data used in this study. This section also details the specific methodology supporting the utilization estimates. The second section, Projections of Future Utilization, calculates the likely pediatric utilization of Airlift Northwest's rotary-wing program in the years 1990, 1992 and 1995 under both the Proposed Action and the Preferred Alternative. Findings and Conclusions, the final section provides an overview and analysis of the air-ambulance utilization projections.

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DESCRIPTION OF METHODOLOGY AND ASSUMPTIONS

DESCRIPTION OF METHODOLOGY AND ASSUMPTIONS

All data used in the review and analysis of current and projected CHMC landings were provided by Airlift Northwest.

A review of Airlift Northwest's 1987 and 1988 patient flight origin[1] was undertaken to identify the primary geographic area from which all rotary wing flights, and specifically pediatric flights were generated. Patient origins were originally defined by local community but reconciled for this study into County boundaries.[2] Reconciliation into County boundaries was needed to allow for future projections of pediatric rotary-wing air ambulance use.

The data analysis identified the primary geographic area for Airlift Northwest's rotary program as: bounded on the west by the Pacific Ocean; bounded on the north by the Canadian border; bounded on the south by Lewis County, and bound on the east by the Cascade Mountains.

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1 After review of flight data for the years 1985-1988, and after discussions with Airlift Northwest administration it was concluded that both 1985 and 1986 represented "start-up" years for the rotary-wing program. In contrast 1987 and 1988 experience was relatively constant between months, and likely reflected the experience of a mature operation. Consequently, because the averaging of 1987 and 1988 data represents the most comprehensive and best available information on rotary wing use, it was used in this evaluation. This analysis assumes that the actual 1987-1988 transport experience remains relatively constant through the year 1995.

2 In review of the flight data, it became apparent that not all areas of King County equally request the services of Airlift Northwest. As such, King County was divided into the five distinct planning areas utilized by the Puget Sound Health Systems Agency and by the Department of Social and Health Services in the planning of health care resources. These planning areas are Central King, North King, East King, Southeast King and Southwest King.

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Once the primary geographic area was identified, a further review of actual 1987 and 1988 utilization was undertaken by applying a widely accepted use-rate based projection method.[1] The specific steps in the methodology include the following:

1) A review and accounting of the 1987 and 1988 transports (adult and pediatric) generated from the specific Counties within the primary geographic area. Initially, it was necessary to evaluate all flights, not just pediatric, to allow for the inclusion of "missed flight" data. Airlift Northwest's missed flight data did not differentiate between adult and pediatric patients. [2]

2) Review and accounting of all 1987 and 1988 missed flights (adult and pediatric) and the reconciliation of these missed flights into the appropriate Counties.

3) The actual numbr of flights missed, by County, due to inclement weather was subtracted from "total missed flights" to ascertain the actual number of flights missed due to factors other than weather.

4) A calculation of missed flights as a percentage of total flights. It was assumed that the percentage of flights missed was consistent between the adult and pediatric populations.

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1 The 1987 Washington State Health Plan adopts use-rate based methods for projection of most hospital and acute medical services.

2 Missed flights are defined as those flights that are not responded to due mainly to either inclement weather or the non-availability of transport equipment.

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5) Adding the percentage of missed flights by primary geographic area to the actual 1987 and 1988 pediatric flight volumes to arrive at a total potential pediatric flight number.

6) Dividing the average 1987-1988 potential pediatric population (by primary geographic area region) by the average 1987-1988 pediatric population in each region to calculate the 1987-1988 "use rate" of each region. 1

Appendix 1 details the missed flight, total potential pediatric flights and county-specific use rate projections.

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1 The use rate is defined as the average number of transports the pediatric population generates during a given calendar year. The statistic is presented as transports per 1,000 pediatric (ages 0-14) population. While specific age data are not kept, according to Airlift Northwest staff, the majority of pediatric flights are for patients aged 0-14. CHMC recalculated the use rate assuming a pediatric population encompassing those age 0-19. The obvious conclusion was a lowering of the use rate; therefore this population and related use-rate was not employed in this analysis. Appendix 2 contains the calculations on the population 0-19.

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PROJECTIONS OF FUTURE UTILIZATION

PROJECTIONS OF FUTURE UTILIZATION

To project pediatric rotary-wing flight utilization in the years 1990, 1992 and 1995, the projected pediatric population for each planning area was identified. The source of the population data, for all areas except King County, is the Office of Financial Management.[1] Applying the projected population to the previously developed use rate provides an estimate of the projected population in each County likely to require pediatric air ambulance transport in the years 1990, 1992 and 1995. These projections are depicted in Appendix 3.

The January, 1988 FEIS contains a Proposed Action as well as a Preferred Alternative. The Proposed Action calls for the construction of a helistop to be used as a landing area for all helicopters transporting critically ill and injured patients to CHMC. The Preferred Alternative is characterized by the most critical patients landing at a paved, secured helistop on CHMC's campus. All other critical pediatric patients trans-

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[1] Since OFM data is county wide and does not sub-divide the areas, the following method was utilized to develop the population projections for the sub-areas of King County. A Puget Sound Health Systems Agency report entitled "Projections of the Population by Age, Northwest Washington Health Service Area, By Planning Area: 1990" identified the percentage of individuals age 0-14 within each sub-area of King County. These percentages were assumed to remain constant and applied to the King County population estimates published by the Office of Financial Management. The percentage of population 0-14 within each King County planning area was held constant as follows:

Central	11.0%
East	33.9%
North	13.4%
Southeast	29.9%
Southwest	11.8%

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ported by helicopter to CHMC would land either at Harborview, Intramural Field or Boeing Field. The Preferred Alternative represents a continuation of the actual 1987-1988 CHMC landing experience.

A population/use-rate based projection method was applied to the two scenarios, the Proposed Action scenario and the Preferred Alternative scenario, to develop estimates of likely utilization. Only one element in the methodology differentiates the two scenarios. In the scenario assuming the Preferred Alternative one additional step was required to define the number of patients actually landing at CHMC. This step involved the calculation of the percentage of 1987 and 1988 pediatric flights actually landing at CHMC. The specific formula for each scenario is described below.

Proposed Action

The formula for projecting the number of pediatric landings at CHMC, under the Proposed Action in the years 1990, 1992 and 1995, incorporates the number of projected landings and adds a factor for out-of-area use.

The out- of-area use factor was based on the actual 1987-1988 pediatric Airlift Northwest experience. In the two year period under revieeew, 2.23% of all pediatric flights destined for CHMC were generated from areas other than those defined in the primary geographic area analysis. This actual experience was assumed to remain constant. The formula for projecting landings at CHMC is as follows:

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Total Airlift Northwest rotary wing patients destined for CHMC

+

out-of-area factor

=

Total rotary wing landings at CHMC

Using the above methodology, the projection of landings at CHMC under the Proposed Action is as follows:

1990:	190
1992:	194
1995:	200

Preferred Alternative

One additional step is required to define the number of pediatric patients directly landing at CHMC under the Preferred Alternative. This step involves the calculation of the percentage of 1987-1988 pediatric flights actually landing at CHMC. A review of the actual data identifies the following:

CHMC landings	23.1%
Intramural landings	66.2%
Harborview landings	9.9%
Boeing Field landings	.5%
Other (Weather related)	.3%
Total	100.0%

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For projection purposes, the actual average 1987-1988 pediatric landing percentages, by site were assumed to remain constant. The formula for projecting the number of pediatric landings at CHMC, assuming the preferred alternative in the years 1990, 1992 and 1995 is as follows:

Total Airlift Northwest rotary wing patients destined for CHMC

x

CHMC Average 1987-1988 landing percentage (23.1%)

+

out-of-area factor

=

Total rotary wing landings at CHMC

Incorporating the above assumptions and formula, projections of pediatric rotary wing landings at CHMC are as follows:

1990	44 landings
1992	45 landings
1995	46 landings

Specific detail on the projected CHMC landings in the years 1990, 1992 and 1995, under both scenarios are included as Appendix 3.

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1 A review of actual Airlift Northwest data reveals a decrease in the percentage of pediatric landings at CHMC from 23.9% in 1987 to 22.2% in 1988, for an average of 23.1%. However, should this trend continue into 1989 and beyond, the result would be a decrease in the landings at CHMC.

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FINDINGS AND CONCLUSIONS

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FINDINGS AND CONCLUSIONS

The calculation of projected pediatric Airlift Northwest landings at CHMC in the years 1990, 1992 and 1995 is premised on several assumptions. The major assumptions assume four constants: a constant use rate, a constant percentage of missed flights, a constant percentage of Airlift Northwest pediatric flights landing at CHMC and a constant percentage of flights from out-of-area through the year 1995.

These projections make no assumptions regarding unknown variables which may increase or decrease demand for air ambulance services. For example, the reconfiguration of health care services, changes in technology, or changes in the health status of the population could have the impact of either increasing or decreasing utilization over time.

After conducting a literature search and reviewing all applicable studies, no generally accepted standards were identified that would allow for the incorporation, with confidence, of such variables into the calculation of use rates and subsequent landings. Therefore, it was concluded that the 1988 actual experience is the best indicator of future utilization and that any attempt to quantify the above unknown variables would reduce the reliability and validity of the projections.

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APPENDIX

AIRLIFT NORTHWEST
1987 - 1988 COMBINED ROTARY WING FLIGHT EXPERIENCE
ALL FLIGHTS

County/Area	Number of Flights	Total Missed Flights	Missed Flights Due to Factors Other than Weather	Total Potential Flights	% of Flights Missed
Clallam	310	16	9	319	2.82%
Grays Harbor	36	2	1	37	2.70%
Island	82	7	7	89	7.87%
Jefferson	136	2	2	138	1.45%
King					
Central King	0	0	0	0	0.00%
East King	156	21	18	174	10.34%
North King	11	0	0	11	0.00%
Southeast King	581	42	38	619	6.14%
Southwest King	130	13	11	141	7.80%
Kitsap	558	40	26	584	4.45%
Lewis	72	10	7	79	8.86%
Mason	22	3	3	25	12.00%
Pacific	28	5	2	30	6.67%
Pierce	61	2	2	63	3.17%
Skagit	43	1	0	43	0.00%
Snohomish	156	17	16	172	9.30%
Thurston	25	3	2	27	7.41%
Whatcom	39	4	1	40	2.50%
Other					
Boeing Field	8	0	0	8	0.00%
Chelan	7	0	0	7	0.00%
Cowlitz	9	1	1	10	10.00%
Kittitas	6	2	2	8	25.00%
Okanogan	3	0	0	3	0.00%
Yakima	5	0	0	5	0.00%
Unknown	2	5	4	6	66.67%
	2,486	196	152	2,638	5.76%

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AIRLIFT NORTHWEST
1987 - 1988 COMBINED ACTUAL ROTARY-WING FLIGHTS
DESTINED FOR CHILDREN'S HOSPITAL MEDICAL CENTER

Area	Number of Pediatric Flights	Percent Flights Missed	Total Potential Flights
Clallam	31	2.82%	32
Grays Harbor	8	2.70%	8
Island	29	7.87%	31
Jefferson	15	1.45%	15
King:			
Central King	0	0.00%	0
East King	17	10.34%	19
North King	0	0.00%	0
Southeast King	50	6.14%	53
Southwest King	24	7.80%	26
Kitsap	70	4.45%	73
Lewis	12	8.86%	13
Mason	2	12.00%	2
Pacific	0	6.67%	0
Pierce	2	3.17%	2
Skagit	10	0.00%	10
Snohomish	30	9.30%	33
Thurston	8	7.41%	9
Whatcom	26	2.50%	27
TOTALS	334		353
Out of Area	8		8
	342		361

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1987-88 USE RATE OF AIRLIFT NORTHWEST ROTARY-WING FLIGHTS DESTINED FOR CHILDREN'S HOSPITAL MEDICAL CENTER

AREA	1987-88 Combined Total Flights	Average Total Potential Flights 1987-88	Average Population 1987-88	1987-1988 USE RATE/ 1,000
Clallam	32	16	11,627	1.38
Grays Harbor	8	4	12,937	0.31
Island	31	16	11,855	1.31
Jefferson	15	8	3,440	2.18
King				
Central King	0	0	28,586	0.00
East King	19	10	88,097	0.11
North King	0	0	34,823	0.00
Southeast King	53	27	77,702	0.34
Southwest King	26	13	30,665	0.42
Kitsap	73	37	39,044	0.93
Lewis	13	7	13,213	0.49
Mason	2	1	7,528	0.13
Pacific	0	0	3,364	0.00
Pierce	2	1	120,190	0.01
Skagit	10	5	14,882	0.34
Snohomish	33	17	91,337	0.18
Thurston	9	5	33,580	0.13
Whatcom	27	14	25,209	0.54
	353	181	648,079	
Out of Area	8	4		
	361	185		

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APPENDIX 2

1987 - 1988 UTILIZATION OF AIRLIFT NORTHWEST
ROTARY-WING SERVICES
DESTINED FOR CHILDREN'S HOSPITAL MEDICAL CENTER

Area	Average Potential Utilization 1987-1988	Population Ages 0-19	Use Rate/ 1,000
Clallam	16	15,258	1.05
Grays Harbor	4	18,941	0.21
Island	16	15,722	1.02
Jefferson	8	4,459	1.79
King:			
Central King	0	39,179	0.00
East King	10	120,7 1	0.08
North King	0	47,727	0.00
Southeast King	27	106,494	0.25
Southwest King	13	42,028	0.31
Kitsap	37	51,169	0.72
Lewis	7	17,357	0.40
Mason	1	10,193	0.10
Pacific	0	4,435	0.00
Pierce	1	163,257	0.01
Skagit	5	19,662	0.25
Snohomish	17	120,600	0.14
Thurston	5	44,494	0.11
Whatcom	14	34,556	0.41
TOTALS	181	876,272	

24-Apr-89 AREA6 (1987-1988)

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1990 UTILIZATION OF AIRLIFT NORTHWEST
ROTARY-WING SERVICES
DESTINED FOR CHILDREN'S HOSPITAL MEDICAL CENTER

Area	Use Rate/ 1,000	Population 0 - 19	Utilization 1990
Clallam	1.05	15,433	16
Grays Harbor	0.21	18,813	4
Island	1.02	16,480	17
Jefferson	1.79	4,494	8
King:			
Central King	0.00	39,465	0
East King	0.08	121,625	10
North King	0.00	48,076	0
Southeast King	0.25	107,274	27
Southwest King	0.31	42,336	13
Kitsap	0.72	51,517	37
Lewis	0.40	17,178	7
Mason	0.10	10,425	1
Pacific	0.00	4,335	0
Pierce	0.01	164,039	2
Skagit	0.25	19,784	5
Snohomish	0.14	124,618	17
Thurston	0.11	45,591	5
Whatcom	0.41	34,931	14
TOTALS		886,414	183

24-Apr-89 AREA7 (1987-1988)

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APPENDIX 3

AIRLIFT NORTHWEST
1990 PROJECTED UTILIZATION OF FLIGHTS
DESTINED FOR CHILDREN'S HOSPITAL MEDICAL CENTER

Area	1987-1988 Use Rate/ 1,000	Population 1990	Utilization 1990
Clallam	1.38	12,099	17
Grays Harbor	0.31	14,695	5
Island	1.31	12,902	17
Jefferson	2.18	3,559	8
King:			
Central King	0.00	29,717	0
East King	0.11	91,581	10
North King	0.00	36,200	0
Southeast King	0.34	80,775	27
Southwest King	0.42	31,878	13
Kitsap	0.93	40,405	38
Lewis	0.49	13,390	7
Mason	0.13	7,962	1
Pacific	0.00	3,356	0
Pierce	0.01	124,439	1
Skagit	0.34	15,400	5
Snohomish	0.18	97,635	18
Thurston	0.13	35,538	5
Whatcom	0.54	26,316	14
TOTALS		677,847	186

24-Apr-89 AREA14(1987-1988)

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AIRLIFT NORTHWEST
1992 PROJECTED UTILIZATION OF FLIGHTS
DESTINED FOR CHILDREN'S HOSPITAL MEDICAL CENTER

Area	1987-1988 Use Rate/ 1,000	Population 1992	Utilization 1992
Clallam	1.38	12,332	17
Grays Harbor	0.31	14,752	5
Island	1.31	13,568	18
Jefferson	2.18	3,663	8
King:			
Central King	0.00	30,521	0
East King	0.11	94,059	10
North King	0.00	37,180	0
Southeast King	0.34	82,961	28
Southwest King	0.42	32,740	14
Kitsap	0.93	41,142	38
Lewis	0.49	13,471	7
Mason	0.13	8,294	1
Pacific	0.00	3,332	0
Pierce	0.01	127,152	1
Skagit	0.34	15,792	5
Snohomish	0.18	102,451	18
Thurston	0.13	37,388	5
Whatcom	0.54	27,018	15
TOTALS		697,816	190

24-Apr-89 AREA15 (1987-1988)

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AIRLIFT NORTHWEST
1995 PROJECTED UTILIZATION OF FLIGHTS
DESTINED FOR CHILDREN'S HOSPITAL MEDICAL CENTER

Area	1987-1988 Use Rate/ 1,000	Population 1995	Utilization 1995
Clallam	1.38	12,465	17
Grays Harbor	0.31	14,558	5
Island	1.31	14,401	19
Jefferson	2.18	3,758	8
King:			
Central King	0.00	31,195	0
East King	0.11	96,139	11
North King	0.00	38,001	0
Southeast King	0.34	84,795	29
Southwest King	0.42	33,464	14
Kitsap	0.93	43,368	40
Lewis	0.49	13,341	7
Mason	0.13	8,639	1
Pacific	0.00	3,232	0
Pierce	0.01	129,085	1
Skagit	0.34	16,100	5
Snohomish	0.18	108,271	19
Thurston	0.13	39,648	5
Whatcom	0.54	27,644	15
TOTALS		718,104	196

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CALCULATION OF ROTARY WING LANDINGS
AT CHILDREN'S HOSPITAL MEDICAL CENTER

RECOMMENDED ACTION

Formula

Total Airlift Northwest rotary wing patients destined for CHMC
+
out-of-area factor
=
Total rotary wing landings at CHMC

1990

186 + 2.23% = 190 landings

1992

190 + 2.23% = 194 landings

1995

196 + 2.23% = 200 landings

(1987-1988)
sept 1

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BEFORE THE HEARING EXAMINER

CITY OF SEATTLE

In the Matter of the Appeals of

CHILDREN'S HOSPITAL AND
MEDICAL CENTER AND
LAURELHURST COMMUNITY CLUB

FILES NOS. MUP-87-060(W) and
MUP-87-061(W)

ORDER CONTINUING HEARING

RECEIVED
DEC 7 1987
DEPT OF CONSTRUCTION AND LAND USE

from a decision by the Director, Department of Construction and Land Use, on a master use permit application

Appellant, Laurelhurst Community Club, by its attorney, Peter J. Eglick, moved, at the prehearing conference on these matters, for a continuance of the hearing scheduled in these appeals to be held December 14, 1987. The basis for the motion was the required consolidation of any appeal from an interpretation of the Land Use Code which was expected to be issued November 30, 1987. Appellant/applicant Children's Hospital and Medical Center, by its attorney, Mitchell J. Olejko, Davis Wright & Jones, filed a letter acquiescing in appellant's motion. The Director, Department of Construction and Land Use, by the City Attorney, Dennis McLerran, assistant, indicated by telephone no objection.

Therefore, based on agreement as to good cause for a continuance, the hearing is continued to Tuesday, February 16, 1988, at 9:00 a.m.

Entered this 4th day of December, 1987.

M. Margaret Klockars

M. Margaret Klockars
Deputy Hearing Examiner
400 Yesler Building, 5th Floor
Seattle, Washington 98104
Telephone: (206) 684-0521

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To: John Daar
for your files

City of Seattle
Charles Royer, *Mayor*

King County
Tim Hill, *Executive*

Seattle-King County Department of Public Health
Bud Nicola, M.D., M.H.S.A., *Director*

RECEIVED
MAR 27 1987
DEPT. OF CONST. & LAND USE

March 25, 1987

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Miller:

This letter responds to your request for an updated response to Beatrice Ryan's August 30, 1985 request for an opinion about the medical need for the Children's Hospital and Medical Center to establish a helistop on hospital grounds. I've enclosed a copy of Ms. Ryan's letter for your convenience.

As indicated to me by the Department of Construction and Land Use (DCLU), the City of Seattle's Land Use Code permits the establishment of a helistop at a major institution like Children's as a conditional use, if the City Council finds that:

a. The helistop is needed to save lives;
b. The helistop is located so as to minimize impacts upon surrounding residential property; and
c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

I was asked for my opinion on the question of medical need in my role as Director of the Seattle-King County Department of Public Health, as a licensed physician, and as Medical Program Director for Emergency Medical Services in King County, pursuant to State law. My response should be viewed as an informed opinion rather than an expert opinion, however, since I am not a pediatric or emergency medical specialist.

In order to review the facts of this issue, I have spoken with numerous physicians, administrators, community residents, and former patients. Because this is an informed opinion, and not a scientific survey, I did not employ formal bias control techniques or a standard question format. I have

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reviewed the medical literature on emergency medical services delivered by helicopter, viewed a simulated transport/helicopter landing at Graves Field and near the Children's proposed helistop site, examined helicopter and transport equipment, toured the Children's facility, and reviewed Airlift Northwest logs and individual patient charts. To obtain additional information, I also held a fact-finding public hearing October 24, 1985 in the City Council chambers from 6:00 to 9:00 p.m. The written testimony and tape recording of this hearing are available upon request.

Existing Pediatric Emergency Medical Services System in Seattle

Personal health care can, in general, be subdivided into three functional levels: a primary level, where the health care system is entered and basic service received and where all health services are mobilized and coordinated; a secondary level, represented by ambulatory services of a specialist nature and inpatient services provided in a community hospital-type facility; and the tertiary level, which includes the highly complex and sophisticated services available only at a "medical center" (Alberta Parker, "The Dimensions of Primary Care" in Primary Care: Where Medicine Falls, 1974, New York, John Wiley and Sons).

Although there is no formal classification system, by industry standards Children's is a tertiary care center. Based on a self-assessment questionnaire prepared by nearly all Washington hospitals, the State of Washington's Profile of Critical Care Hospital Facilities (Second Edition, January 1980) lists Children's as a level 3 facility for all services profiled (trauma, burns, cardiac, respiratory, neonatal, and head and spinal). Under the State's classification scheme, level 3 generally indicates in-house, 24-hour availability of a physician, supervision and 24-hour on-call availability of specialists, specialized facilities, capability to perform specialized surgery and special therapies, and availability of special transport teams. The State's level 3 corresponds with the generally accepted definition of tertiary care.

One of the purposes of the State's Profile of Critical Care Hospital Facilities is to provide assistance to physicians in selecting the most appropriate facility and corresponding treatment level for their patients. Physicians caring for critically ill patients in areas served only by secondary or community hospitals will refer those patients to tertiary care centers when their conditions require treatments that other hospitals cannot provide. Another source of assistance in making patient referrals is the referral "hotline" offered by the University of Washington (UW) Hospital. By calling this hotline, attending physicians can obtain help making diagnoses and planning treatment, including transport of their patients to more appropriate facilities for their presenting condition. In some cases, attending physicians will refer their patients based on professional associations with specialists affiliated with particular tertiary facilities.

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Pediatric and neonatal emergencies within Seattle which are hospitalized are generally admitted at one of the 19 neonatal intensive care (NICU) or 17 pediatric intensive care beds (PICU) at Children's or one of the 19 neonatal intensive care unit beds at the University of Washington Medical School Hospital. Other pediatric intensive care units in the Western Washington region are a 25-bed NICU at Tacoma General Hospital, a 6-bed PICU at the affiliated Mary Bridge Children's Hospital, and an NICU at Madigan Army Medical Center. Tacoma General and Mary Bridge have a wide range of pediatric specialties represented on their staff, and handle most neonatal and pediatric emergencies, generally referring only those patients requiring sophisticated pediatric surgery, such as cardiac surgery, to Children's or the UW Hospital. According to Dr. Robert Scherz, President of Medical Affairs at Mary Bridge, and Dr. John Coombs, Vice President of Medical Affairs at Tacoma General, most of the patients admitted to these hospitals come from South King, Pierce, Thurston, and Mason Counties. The only other pediatric or neonatal intensive care beds in the State are located in Spokane. Pediatricians and neonatologists from within the State and from surrounding states (Alaska, Montana, Idaho) generally use Children's and the UW as referral centers for the most seriously ill children and neonates requiring tertiary specialty care. Most highly sophisticated pediatric surgery in the region is done at Children's.

The University of Washington has a program which admits high-risk mothers so that low birthweight babies do not have to be transported between hospitals. This method of delivering high-risk mothers has been found to substantially reduce the morbidity and mortality associated with the delivery of low birthweight babies (Hickok, D. et al., "Decreased Mortality of Very Low Birthweight Infants After Maternal Transport," Department of Obstetrics and Gynecology, University of Washington School of Medicine, unpublished paper).

But even with an excellent maternal transport program, there will still be individual patients who deliver small birthweight babies at small community hospitals throughout the State, where the infant needs to be stabilized and transported to a tertiary care hospital. Children's is the hospital generally designated for the care of these infants. The University Hospital and Children's also refer patients to each other, when beds are full. The same pediatric medical staff, including interns and residents, delivers services at both hospitals. In addition to small birthweight babies who have undeveloped lungs and intestines and require intensive support for survival and growth, there are transfers from hospitals around the State to Children's for pediatric surgery or acute infection. Trauma patients generally go first to the region's trauma center, Harborview Medical Center, but may be transferred to Children's for follow-up after surgery and stabilization.

This referral pattern exists regardless of transportation mode.

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Helicopter Transport

The American Academy of Pediatrics (AAP) Committee on Hospital Care has published general guidelines on pediatric patient transport ("Guidelines for Air and Ground Transportation of Pediatric Patients," Pediatrics, 1986 Nov.; 78(5): 943-50). The AAP guidelines indicate that the factor of paramount importance in selecting mode of transport is "the optimal interhospital transport time indicated by the nature and severity of the patient's clinical condition...If a patient's medical condition is unstable, even a minimal shortening of transport time to the referring hospital by one mode of transportation rather than another may be lifesaving." The AAP guidelines also indicate that "referrals are made and accepted based upon the judgment of the referring physicians rather than upon a specific set of criteria."

The State Medical Society's EMS Committee is working on the delineation of medical necessity or medical reasonableness for medical transport and under Dr. Lothar Pinker's direction is hoping to have guidelines published into the Washington Administrative Code (WAC) in 1987. As proposed in the enclosed February 18, 1987 draft of the guidelines, the selection and utilization of an air ambulance service should be based on the level of medical care the patient's illness or injury requires during the transport, the urgency of transport, and on dispatch protocols adopted in each county. The proposed guidelines include general examples of critical cases and conditions, and require review of treatment protocols, assessment of field performance, and critique of air ambulance runs by an air ambulance medical director functioning through the delegation of statutory responsibility by the local Medical Program Director. As Medical Program Director for King County, I would be responsible for developing and supervising the review process.

There are several studies in the literature that assess the severity of illness and injury in pediatric air transport. In one study, Mayer and Wallie prospectively evaluated 636 patients transported over 79 months of service to a regional children's center. Of these patients, 57.5% were transported by helicopter. Eighty-one percent of patients were taken to surgery or admitted to the intensive care unit immediately on arrival at the regional children's hospital. Overall mortality was 9%; a trauma score was used to classify patients (Ann. Emerg. Med. 1984 Feb.; 13(2):108-11). At Johns Hopkins, Dr. Columbiani et al., reviewed 267 children over a one-year period; 46% of patients arriving directly from the injury scene were delivered by helicopter. Fourteen of seventeen deaths resulted from head injury; a more aggressive approach to the management of brain trauma was advocated (J. Pediatric Surg. 1985 Feb.;20(1):8-13).

Another study evaluating air transport in a rural EMS system looked at 569 patients with multisystemic injuries. The emergency helicopter service was rated, utilizing strict specific guidelines as either essential, helpful, or not a factor in the preservation of life. The helicopter was essential to 16.5% and helpful to 10.9% of patients. In spite of rapid evaluation and maximal intervention, 102 (17.9%) of the patients died. The group for which

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air transport was judged "not a factor" (54.7%) consisted of patients whose injuries would not have proven fatal had their transportation to the tertiary care center been delayed. Retrospective analysis of the data available to the tertiary care center at the time of the decision to transfer the patients by air revealed that it was not possible to differentiate those patients who did not benefit from the service from those for whom the service was judged essential or helpful (Am. Surg. 1984 Apr.; 3-1348:183-8).

Similarly, in a study in Michigan, Rhee et al., found that based on an objective Trauma Intervention Scoring System (TISS) which measures the intensity of medical care provided in a 24-hour period, 65% of patient transports by helicopter were thought to be medically necessary both at the time of the flight and later; 17% were thought to be appropriate using the information available at flight time, but were later found not to be; and 18% were found not to be necessary. These researchers concluded that TISS is a useful, objective measure of helicopter transport program performance and should be tested in other helicopter transport programs (Annals Em. Med. 1986 Jan; 15:1;79-82).

Baxt et al., looked at a group of 1,273 blunt trauma patients who were treated and transported from the site by seven different hospital-based rotorcraft aeromedical emergency care services and saw a 21% reduction in expected mortality ($p<.05$) in five of the seven services. There is some debate about methodologic errors in the study. An editorial in the same journal issue (Annals Em. Med. 1985 Sept.; 14:9;859-61) states that

> The effectiveness of aeromedical evacuation of battlefield casualties is well established; the transfer of this technology to the civilian setting is a logical event. Its effectiveness for civilian trauma care should be based on the following three principles; 1) early field resuscitation; 2) rapid transport; and 3) delivery to the hospital best suited to admit and treat the patient definitely and without delay. As Baxt and colleagues point out, helicopter emergency medical service (HEMS) patients may benefit from a highly integrated team effort at the receiving trauma center that is the direct or indirect result of a program but for which the helicopter (unless distance is a factor) is the least important component. This is a strong argument for the concept of regional trauma care that concentrates multiply injured patients in trauma centers organized to best care for them. The potential role of HEMS in making regional trauma care a reality should be explored by EMS systems.

My conclusions from the literature review are that there are medical conditions (especially trauma) where time of transport is critical regardless of mode of transportation, that specific clinical criteria may be helpful in selecting a helicopter versus ground ambulance transport but do not help in

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predicting patient outcome, and that the experience of other tertiary centers, while helpful in describing the seriousness of injury seen in the usual patient populations transported, does not clearly shed any statistical light on your question at issue, the Graves field site versus the hospital site a minimum of 10 minutes away (patient transfer and driving time). There is very little in the literature concerning the interhospital transport of non-trauma patients.

Current Data

Children's admits approximately 700 patients per month in 200 beds, including 36 intensive care beds. In Children's Fiscal Year 1986 (October 1 - September 30), 283 patients were admitted after air transport; 166 were fixed-wing transports and 117 were rotary-wing transports (115 Airlift Northwest, 1 MAST, and 1 KIRO). Of the 117 patients transported by rotary-wing, 32 landed at the emergency room entrance of the hospital. Nineteen of those 32 died; the remaining 13 had an average length-of-stay of 17.5 days, compared to the average 7.1 days for all admissions.

Review of the case files of the children flown directly to Children's indicates that with one possible exception, all presented life-threatening conditions that warranted transport right to the doors of the hospital. Review of 30 additional randomly selected cases flown by helicopter to Harborview for ground transport to Children's shows that all cases met the State's proposed criteria for use of air transport but were less severe than those flown directly to the hospital. Referring physicians and Children's appear to be sorting patients appropriately.

Recommendations

It is my professional opinion that there are hospital transfers to Children's where 10 minutes are critical to a severely ill infant or youngster, but the actual number of such cases is small. Decisions regarding air transport of these patients must rest on the judgment of the attending physician and consider distance, stable clinical condition during transport, severe injury or illness requiring tertiary center treatment (rather than secondary or community hospital level), and the possibility of decompensation (severe clinical deterioration) during transport. The most important part of the transport, in most cases, will be in getting a specially trained team out to community hospitals around the State. The key to any transportation of sick people is the stabilization of the patient, making sure that vital signs are stable and that the general physical condition is not deteriorating. One of the most important aspects in the case of the critically ill neonate is the

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transport of a specially trained medical team, the neonatologist/pediatrician and neonatal nurse, to the community hospital to stabilize a deteriorating baby. Once stable, a patient can be transported much more safely.

In most cases, Harborview or Graves Field would be adequate sites for most patients transported by helicopter to Children's; however, there will be a small number of cases where the ability to land at the hospital may be life-saving.

It is difficult to derive reliable projections of total numbers of patients who would be transported by helicopter to Children's. Given that a medical breakthrough, catastrophe, addition of competing helicopter service, increasing specialization, or some other situation might change their projection, Children's estimates that by 1990 the number of children transported by helicopter for admission to Children's in any given month may be 15 to 20. Based on actual experience in 1986, 4 to 5 of these patients may have a medical need for helicopter transport to the doors of the hospital.

The literature review indicated that there are no definitive predictive clinical indicators of prognosis; that is, any estimate of the number of transports to the doors of Children's would have to include an additional number of patients whose condition at time of referral was appropriate for air transport but who over time were determined not to have need of helicopter transport as essential. There also needs to be some flexibility for seasonal variation in disease.

Taking into account these factors, I would estimate six (6) critically ill pediatric patients per month as an upward bound for helicopter transports to the doors of Children's in the next decade.

I recommend that the emergency transport of patients by helicopter be a planned part of a complete EMS transportation system, with guidelines for use, rather than a hospital-by-hospital provided service. The proposed WAC guidelines for air ambulance use appear to support this approach. A consortium of hospitals providing helicopter services such as the one in Airlift Northwest is certainly a most sensible approach and will make it easier to establish a systematic approach to provision of these services. We are, however, just beginning to integrate helicopter transport into our EMS system. The proposed WAC guidelines are a first step in this direction. They condition licensure of air ambulance services on meeting standards for equipment, personnel, community need, and use, and place air ambulance services under the medical control of local medical program directors.

Based on my review of Children's case files, I conclude that the Children's helistop meets the City's land use permit requirement that it save lives. I also believe, given Children's experience to date and the prospect of State-mandated controls, that use of the helistop can be restricted to life-threatening emergencies.

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While it is beyond the scope of my expertise to comment on the City's requirement that the helistop be located so as to minimize impacts upon surrounding residential property, I strongly recommend that the City give careful consideration to the issue of helicopter safety. From a public health standpoint, the risk of an accident must be weighed against the medical benefit of helicopter transport.

I hope that these updated observations and recommendations will assist you in your permit deliberation; please let me know if any comments need further clarification. Again, my thanks to DCLU staff, to a wide variety of health professionals involved in delivery care, to the staff and administration at Children's, to the community residents of Laurelhurst, and to a number of other interested individuals who helped me to reach a better understanding of the emergency medical services delivered to infants and children in our community and the many factors which affect those services.

Sincerely,

Bud Nicola ms

Bud Nicola, M.D.
Director of Public Health

DN:jb
Enclosures

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Seattle
Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

August 30, 1985

RECEIVED
SEP 4 19[illegible]
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT OF PUBLIC HEALTH

Bud Nicola, Director
Health Department
7th Floor, Yesler Building

Dear Mr. Nicola:

I am writing to ask your help.

As you know, this Department has received an application from the Children's Orthopedic Hospital to establish a helipad on hospital grounds. The Land Use Code classifies the hospital as a Major Institution, and Major Institutions are permitted to establish helistops as a Council Conditional Use if the Council finds that:

a. The helistop is needed to save lives;
b. The helistop is located so as to minimize impacts upon surrounding residential property; and,
c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

We must make a recommendation to the City Council and our report must examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas as part of the analysis.

The question of medical need is beyond our area of expertise and this is where I am asking for your Department's assistance. In the past, helicopters have made emergency landings at the Graves athletic field and patients are then transported by ambulance to either Children's Orthopedic or to the University of Washington Medical Center. This request by Children's Orthopedic would mean those patients destined for Children's would instead land on hospital grounds with those destined for the University of Washington continuing to land at Graves field. The University of Washington may subsequently apply for a permit for a helistop on the grounds of the U. W. medical campus.

You have agreed to sponsor a public hearing and to give us your opinion on the question of medical need. The questions I would like your opinion on are:

1. What are existing emergency services in Seattle and how does the service fit into the existing services?
2. What emergency services does COH offer that are unique and unavailable elsewhere?
3. Is there a medical need for emergency helicopter service to serve the hospitals in this immediate area, (Children's and University of Washington primarily)? What, if any, would be the effect on the well-being of a patient transported by helicopter versus helicopter and ground transport as it is presently done? Are direct flights versus air/ground transports medically significant in terms of patient morbity and mortality?

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4. Is the current site at Graves athletic field adequate, or is there a medical need to locate such facilities on the hospital grounds? Or are there alternative sites? Would one such facility either at COH or U. W. be a preferred location?
5. What data are available regarding the number of emergencies that are likely to be generated by the population to be served by the helicopter services? How many landings per week will result?
6. If there is an established medical need, how would you define "occurrences involving life-threatening emergencies," as the use must be restricted to such occurrences? Are there other restrictions we should consider, based on existing medical care facilities capabilities?
7. How would you suggest we monitor the occurrences to ensure that the use is restricted to life-threatening emergencies should the use be permitted? Can we ensure that the service is used for emergency purposes only?

We have asked Children's Orthopedic Hospital for more information to support their application for the helistop (see attached). This information is necessary for your consideration of these questions. As soon as we receive it, we will send you a copy. As you know, we are happy to help with the scheduling and public notice of the hearing.

Thank you for your assistance. If you have questions, please call me at 625-2262 or Katy Chaney at 625-4274.

Sincerely,

Katy Chaney

For BEATRICE FARRAR RYAN
Interim Director

KC:vg

Attachment

cc: Truman Katz, Director, Children's Orthopedic Hospital

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THIS DRAFT INCLUDES CHANGES SUGGESTED AT THE 2-18-87 WSMA EMS STANDARDS COMMITTEE MEETING. Changes from the original draft are typed in this larger print so they can be easily identified.

WAC 248-17-020

DEFINITIONS. For the purpose of these regulations, the following words and phrases shall have the following meaning unless the context clearly indicates otherwise.

(1) "Department" means the state of Washington Department of Social and Health Services.

(2) "Emergency Medical Services Advisory Committee" means the committee appointed by the Governor, pursuant to RCW 18.73.040.

(3) "Air ambulance" means any privately or publicly owned aircraft specifically designed, constructed or modified which is intended to be used for and is equipped with the intent to be used for the transportation of individuals who are sick, injured, or otherwise incapacitated or helpless.

(4) "Air ambulance service" means a service that is currently certified under Federal Aviation Administration (FAA) rules, 14 CFR Part 135, (Air Taxi Operators and Commercial Operators of Small Aircraft) and is certified by the department as an air ambulance service and meets the minimum requirements for personnel and equipment as described elsewhere in this chapter.

(5) "Local EMS Medical Program Director" means a licensed physician authorized by the department to perform duties specified in RCW 18.71 and 18.73.

(6) "Medical control" means physician responsibility for supervision of EMT training programs, the establishment of field protocols, and the recommendation for certification and decertification of EMTs certified under this chapter.

(7) Medical control as defined above does not include first responders, except as provided in WAC ___-___ (the WAC covering First Responder defibrillation).

(8) "Basic life support" means out of hospital emergency care which includes some or all of the techniques and procedures taught in a state approved emergency medical technician basic training course.

(9) "Advanced life support" means an advanced level of out of hospital emergency care that includes basic life support functions plus some or all of the following techniques or procedures:

(a) Cardiac monitoring.

(b) Cardiac defibrillation.

(c) Telemetered electrocardiography.

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(d) Administration of specific medications, drugs, and solutions.

(e) Use of adjunctive medical devices.

(f) Trauma care.

(g) Airway management techniques.

(h) Other techniques and procedures authorized by medical control.

(10) Air Ambulance Support Personnel

(a) Air Ambulance Medical Director. A physician licensed by the State of Washington who is knowledgeable of potential medical complications which may arise because of aeromedical evacuations and who is engaged by the air ambulance service to oversee and assure that the appropriate aircraft, medical personnel and equipment are provided for patients transported by the air ambulance service. The air ambulance medical director and alternates function through delegation of responsibility of the local Medical Program Director in the county where the service is licensed.

(b) Registered Nurse. A person licensed and certified by the state of Washington to perform nursing functions pursuant to RCW 18.88.

(c) Paramedic. An emergency medical technician who has completed an advanced life support training program approved by the department, who is certified by the department as a mobile intensive care paramedic pursuant to RCW 18.71.

(d) Emergency Medical Technician. An individual who has completed a basic life support training program approved by the department, and who is certified by the department pursuant to RCW 18.73.

(e) Pilot. An individual certified by the Federal Aviation Administration and licensed with the state of Washington Department of Transportation pursuant to RCW 47.68. This individual must meet certain criteria set forth by the department.

(f) Patient. An individual who, as the result of illness or injury, needs immediate medical attention, whose physical or mental condition is such that he is in imminent danger of loss of life or significant health impairment, or who may be otherwise incapacitated or helpless as a result of a physical or mental condition.

(g) Communications System. A radio or landline network connected with a dispatch center which makes possible the alerting and coordination of personnel, equipment and facilities.

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WAC 248-17-135 Air ambulance services - Requirements for Licensure. The department is authorized to issue licenses to services conforming to these regulatory standards:

(1) No air ambulance service shall function as an air ambulance service in this state unless the agency holds a currently valid license to do so.

(2) An application for an original or renewal license shall be made to the department and shall contain as a minimum, but is not limited to, the following:

(a) Articles of incorporation and current business license, where applicable.

(b) The name and address of the owner of the air ambulance service or proposed ambulance service.

(c) The name under which the applicant is doing business or proposes to do business.

(d) The training and experience of the applicant in the transportation and care of patients.

(e) A description and general location of each aircraft to be used as an air ambulance, including the make, model, year of manufacture, registration number, or other distinguishing characteristics.

(f) The geographical area served.

(g) The air ambulance medical director for a geographic area who shall review treatment protocols, assess field performance and critique air ambulance runs with the local medical program director. The air ambulance medical director shall be designated in writing by the local medical program director.

(h) Agreement to abide by the review process designated by the department and/or the local medical program director as defined in WAC 248-15-020.

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(j) A current roster of medical personnel which includes level of certification or licensure.

(k) Agreement to provide reports to the department for each trip made, on forms or a data format specified by the department.

(l) They shall provide evidence of coordination with the local medical program directors in communities where the service intends to operate.

(3) The department shall review each application for licensure based upon type of service to be offered, equipment, trained personnel, and whether the public convenience and necessity requires the proposed service. Before issuing a license to a new service, the department shall inspect the vehicle, the ambulance equipment and the personnel roster.

(4) An ambulance service license will be issued for a period of three years from the date of issue and will remain valid for this period unless revised, modified, revoked or suspended by the department. Inspections shall be conducted to assure compliance. The vehicle license will be for a period of one year and updated annually.

(5) Grounds for denial, suspension or revocation of air ambulance license shall include, but are not limited to proof that the applicant and/or service

(a) Has been guilty of misrepresentation in obtaining the license.

(b) Has engaged or attempted to engage in service that is not authorized by the license.

(c) Has demonstrated incompetence or has otherwise been unable to provide adequate service.

(d) Has violated or aided and abetted in the violation of any provisions contained in RCW chapters 18.73 and 18.71.

(e) Has demonstrated unprofessional conduct in the course of providing services.

(f) Has failed to meet requirements in associated statute and rule.

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WAC 248-17-136 Air ambulance services - Personnel Requirements.

(1) Air ambulance medical director.

(a) Each air ambulance service must have at all times an air ambulance medical director (or his/her alternate) who is a licensed physician knowledgeable of the air medical requirements of patients. It is the responsibility of the air ambulance service applicant to provide in writing to the department the name of the medical director and approved alternate(s).

(b) The air ambulance medical director (and alternate) must have training in altitude physiology and be familiar with the emergency medical services communications system.

(c) The air ambulance medical director (or alternate) will:

(i) Be knowledgeable of the capabilities and limitations of the aircraft used by his service.

(ii) Be knowledgeable of each of the medical attendants' capabilities relative to meeting the patient's medical needs.

(iii) Be knowledgeable of potential medical complications which may arise because of aeromedical evacuation of patients being transported by the air ambulance.

(iv) Match during interfacility transports appropriate aircraft, medical personnel and medical equipment necessary in the care of patients' medical needs or any anticipated inflight complications.

(v) Be knowledgeable in the application, use, maintenance, removal and hazards of any routine or special medical equipment used in the transport of patients by the air ambulance service.

(vi) Assure current certification, training requirements, and education requirements are met by all medical attendants providing services for the air ambulance service.

(vii) Ensure that all medical attendants are adequately trained to perform inflight duties prior to functioning in an inflight capacity.

(viii) Ensure that each medical attendant meets the requirements necessary to provide given levels of medical care.

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(d) The air ambulance medical director is responsible to coordinate with local medical program director(s) in every county where service is provided.

(2) Air ambulance medical attendant.

(a) At least one medical attendant accompanying the patient shall be a person who:

(1) Has current Washington state certification or licensure as a Paramedic, Registered Nurse, or Physician.

(ii) Must have training and be familiar with altitude physiology, aircraft safety and Washington emergency medical systems communications, as determined by the department.

(iii) Must be knowledgeable in the application, operation, care, and removal of all medical equipment used in the care of the patient. The medical attendant(s) must have a knowledge of potential inflight complications and their treatment which may arise from the use of such devices.

(iv) Will be required to know and follow all policies and procedures of the air ambulance service's medical director.

(v) Must have available during transport a current copy of all written protocols authorized for use by the air ambulance medical director. Patient care shall be governed by these authorized written protocols.

(b) The air ambulance medical director may designate additional attendants with specialized skills to meet the specific needs of the patient.

(3) Pilot. In addition to being licensed with the state of Washington department of transportation pursuant to RCW 47.68, the pilot must:

(a) Possess commercial rotorcraft certification and a minimum of 2,000 rotorcraft flight hours as pilot in command.

(b) Be factory trained or equally prepared and have at least five (5) hours in the specific type of aircraft, before flying as pilot in command on patient missions.

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(c) Meet FAA requirements for medical certification, licensing and type of ratings for the flight(s).

(d) Have training and be familiar with altitude physiology and EMS communications

(e) The final decision to fly or not to fly will be made by the pilot.

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WAC 248-17-137 Air Ambulances - Required Equipment. All air ambulances shall carry at least the following medical equipment:

(1) Cardiac monitor/defibrillator with strip-chart recorder and battery back-up power. Monitor should be tested to insure that it does not produce electromagnetic interference with aircraft navigation and communication equipment.

(2) Litter or stretcher approved by FAA for type of aircraft with straps for securing patient to litter and litter to frame.

(3) Medical oxygen source (installed or portable). The minimum amount of oxygen carried should be sifficient to supply one patient for one hour at 10 LPM. Oxygen bottles should be secured to aircraft in an approved manner.

(4) Portable suction device with battery back-up power, tested and certified to function at all altitudes.

WAC 248-17-138 Air Ambulances - Selection and utilization. The selection and utilization of an air ambulance service shall be determined by the medical program director in the county of patient origin or the air ambulance medical director and the referring physician prior to response based upon the following:

(1) Level of medical care the patient's illness or injury requires during transport, or non-availability of local transport.

(2) The urgency of transport (immediate or not immediate). In special circumstances, because of urgency of transport, an action of providing less than minimal air ambulance transport care may occur.

(3) The dispatch protocols adopted by the medical program director of the county of origin.

(4) Any agency (requesting agency and transporting service) that dispatches a service that does not meet the minimum requirements is required to prepare and submit a written justification to the local medical program director and the state Emergency Medical Services Training and Licensing Section within 14 days of the action.

(5) Other aircraft not herein defined by this chapter shall not be used for transportation of patients who may require medical attention enroute, except that such transportation may be used when a disaster creates a situation that cannot be served by licensed ambulances.

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STATE OF WASHINGTON

RECOMMENDED
AIR AMBULANCE
PROTOCOLS

DRAFT

DEPARTMENT OF SOCIAL AND HEALTH SERVICES
EMERGENCY MEDICAL SERVICES

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AIR AMBULANCE PROTOCOLS

INTRODUCTION

Chapter 248-17, Washington Administrative Code (WAC), establishes minimum standards for licensing air ambulance services and aircraft.

The purpose of this document is to set forth air ambulance policies adopted by the State of Washington Department of Social and Health Services to promote and protect the health and safety of the people of this state.

Field use of an air ambulance shall only occur when there is reasonable cause to believe that the patient's death or increased morbidity will result if any means other than air ambulance is utilized.

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CRITERIA FOR USE OF PREHOSPITAL AIR AMBULANCES

I. To provide rapid delivery of a critical patient(s)* to an appropriate definitive care facility when ground transport times would be protracted (more than 15 - 20 minutes). For example:

Long distances
Terrain problems
Traffic congestion
Long field extraction times
Hazardous road conditions or other road obstruction

II. To provide rapid delivery of special critical care medical personnel to the scene otherwise staffed by non-critical care personnel, for example, paramedics/Rns/physicians assistants/EMTs - experts to assist in disaster or hazardous materials incidents.

III. To provide extrication from otherwise ground inaccessible sites and/or assist in search and rescue operations (mountains/islands).

IV. To provide integrated support in multiple patient incidents, e.g., most seriously injured patients - to deliver skilled personnel or needed supplies/equipment.

CRITERIA FOR NON-UTILIZATION OF AIR AMBULANCE

I. Obviously fatal injury (decapitation, rigormortis).

II. Cardiac arrest of any etiology.

III. If the ground ambulance is capable of arriving at the hospital with the Patient before the air ambulance can arrive at the scene of the accident or illness.

* CRITICAL CASES - EXAMPLES

A. Trauma

1. Physiologic Criteria

a. Trauma score 12 or less

b. Glascow Coma Scale 10 or less

2. Mechanism of Injury Criteria

a. Motor vehicle accident with:

Extrication time more than 20 minutes
Structural intrusion into victim's space by more than 1 foot

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a. Motor vehicle accident (continued):

Victim ejected from the vehicle
Associated death in the same vehicle
Pedestrian struck and thrown 15 feet or more
Child under 12 years struck by vehicle

b. Falls of 15 or more feet

c. Evidence of rapid deceleration

3. Anatomic Criteria

a. Penetrating injury anywhere from the head through the groin

b. Amputation above the ankle or the wrist with potential reimplantation

c. Critical burns or burns by inhalation injury, electrical burns, or other accompanying trauma

d. High voltage electrical injuries (more than 1,000 volts)

e. Spinal cord injuries

f. Toxic inhalation injuries

g. Three or more long bone fractures

h. Injuries of two or more body systems

4. Comorbid Factors

a. Age - 12 or less/60 or older

b. Underlying medical conditions, for example

5. Criticality Criteria

a. Deteriorating conditions which may include loss of consciousness, onset of shock and/or respiratory distress within 30 minutes of injury (define vs. remove)

B. Medical - requiring emergent (within 15 minutes) definitive care center intervention, for example

Rupturing aortic aneurysm

Severe hype or hyperthermia

Acute subarachnoid hemorrhage

c. Obstetric or neonatal - requiring emergent (within 15 minutes) definitive care center intervention

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CRITERIA FOR INTERHOSPITAL AIR AMBULANCE UTILIZATION

GENERAL

1. Requirement for critical care enroute, not otherwise available
2. Time critical injury or illness
3. Need to minimize time out of hospital
4. Alternate travel means unavailable or undesirable

SPECIAL CONDITIONS

1. Cardiac
   a. Acute coronary occlusion
   b. Cardiogenic shock
   c. Dysrhythmias, life threatening
   d. Pericardial tamponade
   e. CHF with decompensation
2. Respiratory
   a. Respiratory failure
   b. ARDS
   c. Ventilator dependency
   d. Severe asthma
   e. Epiglottitis
   f. Aspiration
3. Other Medical
   a. Renal failure (acute fluid overload or electrolyte imbalance) requiring dialysis
   b. CNS bleeds requiring airway and/or ventilator management
   c. Shock (hemorrhagic, DKA, septic, anaphylaxis)
   d. Coma requiring airway and/or ventilator management
   e. Overdose requiring airway and/or ventilator management or accompanied by shock, dysrhythmias
4. Trauma
   a. Multisystem trauma (Champion-Sacco Criteria)
   b. Trauma score $\leq$12
   c. Glasgow Coma Score $\leq$8
   d. Severe extremity injury (amputation, crush injury, unstable long bone fracture)
5. Other Surgical
   a. Acute vascular catastrophe
   b. Acute abdomen
6. OB
   a. Premature labor
   b. Pregnancy induced hypertension
   c. Poorly controlled D.M.
   d. Premature rupture of membranes
   e. Prolapsed cord
   f. Vaginal bleeding (including abruptio placenta, placenta previa)
   g. Fetal distress

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7. Neonatal
   a. Respiratory distress syndrome
   b. Prematurity
   c. Sepsis
   d. Congenital anomalies
   e. CHF
8. Pediatrics
   a. Respiratory distress
   b. Decreased level of consciousness
   c. Poisoning
   d. Severe infections (epiglottitis, meningitis, severe pneumonia)
   e. CHF

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(Copy of) Letter sent to names on attached list

✓

Seattle
Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

Re: Scoping of Environmental Impact Statement
MUP 8405870

Nancy Greenawalt
Children's Orthopedic Hospital
P. O. Box C5371
4800 Sand Point Way N.E.
Seattle, Washington 98105

Dear Ms. Greenawalt:

Based upon the Department's analysis and upon letters received during the scoping comment period, our scoping determination for the Environmental Impact Statement for your application for a helistop permit is as follows:

AREAS OF IMPACT

Noise
Vibrations
Safety
Cumulative land use impacts of emergency medical transport by helicopter in the Seattle-King County region
Alternatives
- alternative sites off-campus, including UW Graves Field (soccer field)
- shared usage of sites
- no action alternative

MITIGATION MEASURES

Possible mitigation measures discussed in the EIS shall include the following:
- flight paths
- number of flights
- usage and location of U. S. Army (M.A.S.T.) or other agency helicopter landings
- off-campus pick-up of medical teams
- liability insurance
- criteria for use of helicopters
- plan for monitoring use

Comment letters should be carefully reviewed by the consultants preparing the EIS. The letters contain concerns regarding background data, impacts, study methodology and possible mitigation measures, within the scope of the EIS just outlined.

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If you have questions on this scoping determination, please call me at 625-4509.

Sincerely,

BEATRICE FARRAR RYAN
Interim Director

By
JULIA GIBB
Land Use Specialist

JG:vg

cc: Glen Bachman, Shapiro and Associates

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Fred and Patricia Wright
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Barbara L. Erak
6807 54th Avenue N.E.
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Mrs. Phyllis L. Jackson
4307 N.E. 57th Street
Seattle, Washington 98105

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PUBLIC NOTICE
UNIVERSITY OF WASHINGTON

Pursuant to the provisions of WAC 197-11-510, and WAC 478-324-140, the University of Washington hereby provides public notice of the

RECEIVED
JUL 23 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

INTENT TO PREPARE A
SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)*
and
INITIATION OF THE SCOPING PROCESS

Project Name: University Hospital Helistop

Description: Use of the helistop on the roof of the new east wing addition to University Hospital for transporting emergency patients.

A Supplemental Environmental Impact Statement (SEIS) will be prepared on this project. The University has identified the following elements of the environment for discussion in the SEIS: risk of upset, noise, and light and glare. A copy of an environmental checklist, which provides additional information about the project, is attached.

Scoping: Agencies and members of the public are invited to comment on the scope of the SEIS, including reasonable alternatives, mitigation measures, probable significant adverse impacts, licenses or other approvals that may be required. Comments should be sent to Sally Marks, Campus Planning Office, FJ-05, University of Washington, Seattle, Washington 98195 (543-9071) by August 12, 1986.

Date: July 22, 1986 Signature: H. F. Vanneman

*Supplementing the University of Washington General Physical Development Plan

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UNIVERSITY OF WASHINGTON
ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project.

University Hospital Helistop

2. Name, address, and telephone number of applicant:

University of Washington
Seattle, Washington 98195

3. Name, address, telephone number of contact person.

Sally Marks, Environmental Planner
Campus Planning Office, FJ-05
University of Washington
Seattle, Washington 98195 (543-9071)

4. Date checklist prepared: July 9, 1986; Revised July 15, 1986

5. Agency requesting checklist: University of Washington

6. Proposed timing or schedule (including phasing, if applicable):

Helistop proposed to become operational within one month following issuance of conditional use permit.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

An EIS for construction and use of a helistop at Children's Orthopedic Hospital is currently being prepared. This helistop would be used to accommodate helicopters from Airlift Northwest which will transport critically ill or severely injured infants, children, and adolescents. This service would not duplicate the service proposed for University Hospital, which would focus on providing care to high-risk obstetrical patients, neo-natal patients, and, to a lesser extent, cardiac and other patients. More discussion will be included in the University Hospital Helistop EIS.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None are pending

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10. List any government approvals or permits that will be needed for your proposal, if known.

Approval from FAA
Conditional Use Permit from City of Seattle

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

It is proposed to transfer the landing site for helicopters transporting patients to and from University Hospital from the University's Intramural Activities (IMA) fields to the helistop on the roof of the East Wing Addition to University Hospital. The helistop is located on the roof of the sixth floor of the Northeast portion of the addition (Figure 1). This roof has been designed to accommodate helicopter landings; structural support and adequate clearance have been provided. No structural changes are required. This roof area is approximately 9,088 sq. ft. The helistop will be a circular area of approximately 3,300 sq. ft. (Figure 2). Exterior elevations of the wing with the helistop location can be found in Figure 3.

A circular yellow band 18 inches wide and approximately 62 ft. in diameter will be painted on the roof's concrete topping slab to mark the total landing and take off area. A white circular band 18 inches wide and approximately 45 ft. in diameter will be painted to mark the touchdown area. Inside the white band a circular area with a large white cross will be painted. Inside the cross a red "H" five ft. six inches across will be painted. The weight limit of the helistop will also be marked inside the touchdown area. (See Figure 4).

The helistop will be used for the landings of helicopters carrying critically ill patients requiring immediate care in the hospital's specialized facilities. It is anticipated that the types of patients transported will be primarily high risk obstetrical patients, infants requiring care in the hospital's neonatal intensive care unit, and severely ill cardiac patients. Of the 43 patients transported via the Airlift Northwest helicopter during the period July 1, 1985 through June 15, 1986, 19 were obstetrical patients, 8 were infants, 12 were cardiac patients, and 4 had other diseases/conditions. These flights are currently landing in the IMA fields; patients are then transferred to an ambulance and transported to the Hospital Emergency entrance via Montlake Blvd. NE and NE Pacific Street.

Most patients will be transported in the Airlift Northwest helicopter, an Augusta 109A MKII. This is one of the quietest helicopters on the market. It is a modern, fully enclosed helicopter with a four blade propeller and retractable landing gear. The helicopter has a cruise speed of 180 m.p.h. and a maximum speed of 194 m.p.h.

any quantifiable description (dBA, eq.?)

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need to know about MAST and other copters

Other helicopters bringing patients to the hospital will also land on the helistop. However, the helistop has a maximum weight limit of 6,000 lbs., so larger helicopters, such as those used by the MAST (Military Assistance to Safety and Traffic) system, will not be able to use the helistop. Any MASTflights that continue to come to University Hospital will land in the IMA Field and patients will be transferred by ambulance to the hosptial.

It is anticipated that in the future approximately 70-82 flights per year (or 6-7 per month) will land on the helistop. These landings will occur at any time during a 24-hour period. However, during the period July 1, 1985 through June 15, 1986, 72% of the 43 Airlift Northwest helicopter flights (31 flights) bringing patients to University Hospital landed (via the playfields and ambulance) between 8:00 a.m. and 8:00 p.m. Seven percent (3 flights) landed between midnight and 8:00 a.m. and 21% (9 flights) between 8:00 p.m. and midnight. It is anticipated that this pattern will continue. This would result in a maximum of 59 flights per year (5 per month) occurring between 8:00 a.m. and 8:00 p.m.; 17 flights per year (1.4 per month) occurring between 8:00 p.m. and midnight; and 6 flights per year (.50 per month) occurring between midnight and 8:00 a.m.

The preferred flight path for landings is from the east over Union Bay (Figure 5. The alternate approach will be from the northeast over the IMA Building and Edmundson Pavilion. — why?

12. Location of the proposal (street address or section, township, and range, if known). Provide a site plan, vicinity map, and topographic map, if reasonably available.

1959 NE Pacific Street, Seattle, WA 98195. See Figure 2 for a site plan for the hospital. See Figure 1 for vicinity map.

TO BE COMPLETED BY APPLICANT

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. Indicate general description of the site: Roof of hospital

b. What is the steepest slope on the site (approximate percent slope)?

N/A

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c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

N/A

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

N/A

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

N/A

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

N/A

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

The site is an existing roof top. Impervious surface is 100%. No construction is involved.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

N/A

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Additional emissions from helicopter flights would be minimal as helicopter transports to the University IMA fields and University Hospital already take place. Discontinuance of the ground ambulance transport of patients from the IMA fields to University Hospital would decrease emissions from motor vehicles. Airborne particulates and dust at the site will increase during take-offs and landings.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No

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c. Proposed measures to reduce or control emissions or other impacts to air, if any:

The helistop will be regularly swept and/or washed to minimize dust which could be disturbed during take-offs and landings.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Union Bay, Lake Washington Ship Canal, Portage Bay

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No

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b. Ground

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals ...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

A separate drainage system has been provided to drain the roof area where the helistop will be located. This system drains liquids (rain water, spilled fuel, other liquids) from the roof to separating holding tanks, located in the parking lot east of the hospital. The separating tanks would separate any fuel which might be spilled from water drained from the roof, and drain the water off into the University's storm drain system which drains into Lake Union. In the case of a fuel spill, it would be necessary to drain the separating tank to remove the fuel. The fuel would be disposed of by incineration or reprocessing.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Since no helicopters will be based at the site, no maintenance or refueling activities will occur there. No waste materials are expected to enter ground or surface water from this project.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Please see B.3.b.2 above

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4. Plants

a. Types of vegetation found on the site: None
___ deciduous tree: alder, maple, aspen, other
___ evergreen tree: fir, cedar, pine, other
___ shrubs
___ grass
___ pasture
___ crop or grain
___ wet soil: cattail, buttercup, bullrush, skunk cabbage, other
___ water plants: water lily, eelgrass, milfoil, other
___ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

N/A

c. List threatened or endangered species known to be on or near the site.

None

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

None

5. Animals

a. Indicate any birds and animals which have been observed on or near the site or are known to be on or near the site:
birds: songbirds, shorebirds have been observed near the site
mammals: grey squirrels have been observed near the site.
fish: salmon, trout, perch and bass are found in the Ship Canal, south of the site.

b. List any threatened or endangered species known to be on or near the site.

None

c. Is the site part of a migration route? If so, explain.

Some shorebirds probably fly over the site to and from nesting areas in the East Campus.

d. Proposed measures to preserve or enhance wildlife, if any:

The relocation of the helistop from the East Campus will reduce noise levels in the wildlife area.

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6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Electricity would be consumed to run the lights on the helistop at night. Petroleum is now consumed in the transportation of critically ill or injured patients via helicopter to the IMA fields and by ambulance to University Hospital. Petroleum would continue to be consumed for helicopter transport; petroleum consumption for ambulance transport would be eliminated.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

N/A

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

The possibility of a helicopter crash en route to the University Hospital or at the helistop is highly unlikely, but does exist. However, based on current statistics, the probability of a helicopter accident related to the service to the hospital would be approximately one every 261 years. The flight path for the helicopter has been chosen largely to avoid densely populated areas and avoid potential obstacles (Figure 5).

1) Describe special emergency services that might be required.

Procedures for action to be taken in the unlikely event of a helicopter crash at the helistop have been developed by University Hospital. A crash on other areas of University property would be handled by University Police, Environmental Health and Safety, and City of Seattle/King County civil emergency response groups. More information will be included in the EIS.

2) Proposed measures to reduce or control environmental health hazards, if any:

See 7.a.1) above

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b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic equipment, operation, other)?

None

2) What types and levels of noise would be created by or associated with the project on a short- or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

At the time of landing and take off, the helicopter will create a noise disturbance. The noise level of the Airlift Northwest helicopter at take-off (peak maximum performance) was measured at 84db at 150 yds and 74 db at 500 ft. above ground level. It is possible for landings to occur at all hours of the day and night. As stated in Section A11. of this checklist, it is anticipated that the majority of the flights will occur between 8:00 a.m. and 8:00 p.m.

Patient rooms are located as close as approximately 56 feet from the helistop (Figure 6). Additional information regarding existing noise levels and noise impacts, including the impact on patients and nearby communities of the noise from the helicopter landings and take offs, will be included in the Draft Environmental Impact Statement.

noise (dBA) contours around flight path(s).

3) Proposed measures to reduce or control noise impacts, if any:

The preferred landing pattern is from the east over Union Bay which avoids residential areas and the University campus population centers. Whenever possible, helicopters will approach the University over water. (See Figure 5). For the most part, relatively quiet helicopters will be used.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

The site is currently the roof of the East Wing Addition to University Hospital. Adjacent to the hospital are the remainder of the Health Sciences complex, parking, NE Pacific Street and Montlake Blvd. NE. The Montlake residential area is located within 1/4 mile of the site. The Laurelhurst community is located near the alternate flight paths.

b. Has the site been used for agriculture? If so, describe.

No

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c. Describe any structures on the site.

The rooftop where the landings will occur has no structures on it. To the immediate southwest of the landing pad is a portion of the hospital housing elevators and miscellaneous offices. A patient unit is attached to the southwest side of this elevator and office core. (See Figure 6)

d. Will any structures be demolished? If so, what?

No

e. What is the current zoning classification of the site? I-MP

f. What is the current comprehensive plan designation of the site?

The General Physical Development Plan classifies the site as hospital and clinics.

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No

i. Approximately how many people would reside or work in the completed project?

No personnel

j. Approximately how many people would the completed project displace?

None

k. Proposed measures to avoid or reduce displacement impacts, if any:

None

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The site is located in an area devoted to hospital and medical uses. The helistop is consistent with existing and projected uses of the site and the immediate surrounding area. The site is planned to continue as hospital use and the helistop will enable critically ill patients to reach the hospital more rapidly than is now possible.

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9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None

c. Proposed measures to reduce or control housing impacts, if any:

Not applicable

10 Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The helistop is approximately 62 feet above ground level at the second floor of the hospital (ground level at the east end of the hospital). The portion of the hospital immediately to the southwest of the helistop contains the elevator and is twelve feet higher than the rooftop. The area west of the elevator area rises to 29 feet above the rooftop. (See Figure 3) The helipad and the roof of the building are concrete.

b. What views in the immediate vicinity would be altered or obstructed?

None

c. Proposed measures to reduce or control aesthetic impacts, if any:

None

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

For landings during hours of darkness, the lights for the helistop will be used. There are four quartz lights mounted on the building immediately to the southwest of the rooftop landing area. The Airlift Northwest helicopter has

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standard clearance lights. The helicopter also has a three million candlepower searchlight which would be used only if the helistop lighting failed. The searchlight would be turned on about one minute prior to landing. This would be prior to reaching the approach corridor shown in Figure 5.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

c. What existing off-site sources of light or glare may affect your proposal?

None

d. Proposed measures to reduce or control light and glare impacts, if any:

The lighting for the helistop will be used only at times of take off and landing during hours of darkness, and is necessary for safety reasons. On-site lighting will be shielded to prevent overspill and effects on patient rooms or nearby community areas.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

The NN Courtyard, a courtyard adjacent to the Hospital cafeteria, the CDMRC patio, and the open space south of the Hospital along the Montlake cut provide passive recreation opportunities.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Under the present arrangement the IMA field must be cleared by the Campus Police before a helicopter can land. Moving the helicopter landing site to the roof of the hospital will decrease the number of times the IMA field must be cleared of sports participants in order to allow helicopters to land. This should improve the recreational opportunities in the IMA fields as well as the safety of sports participants at the time of landings.

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13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None on or next to the site.

c. Proposed measures to reduce or control impacts, if any:

Not applicable

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any:

University Hospital is served by the Montlake Boulevard NE on the east of the site, and NE Pacific Street on the north of the site. SR 520 also serves the site with access from SR 520 to the hospital via Montlake Boulevard NE. 15th Avenue NE also serves the west end of the UW Health Sciences Center. University Hospital is at the east end of the Health Sciences Center. Please see Figure 2.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

Yes. University Hospital is served by Metro routes 43, 46, 48, 65, 70, 75, 133, 167, 205, 244, and 252 along NE Pacific Street and for Montlake Boulevard NE.

c. How many parking spaces would the completed project have? How many would the project eliminate?

No parking spaces would be added or eliminated by the project.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

No

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e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The project will involve air transportation. Approximately 5 emergency patients per month will be transported via helicopter to the hospital, with landings on the rooftop helistop. The flight pattern is described in item A.11 of this checklist Figure 5. The helicopter used in these flights will not be based at University Hospital. Only patient transport will occur at the site. No maintenance or refueling will occur at the site.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

None. For each patient transport flight to or from the hospital helistop, a round trip of an ambulance will be eliminated. Vehicle trips by University Police also will be eliminated. If the helicopter does not land on the rooftop helistop, it will land in the IMA field and the patient will be transported from there to the hospital via ground ambulance.

g. Proposed measures to reduce or control transportation impacts, if any:

None for vehicular ground traffic. Please see item B.7.b.3 for noise mitigation measures.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No. currently fire protection services would be adequate. Special fire protection devices have been built into the structure. These include a deluge system with standpipes to which fire hoses can be attached. The City of Seattle Fire Marshall required that these systems be proved functional before an occupancy permit for the patient care units in the East Wing addition was granted in April 1986.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Campus police services would be reduced as a result of this project. The campus police now are called to clear the IMA field for safety reasons each time a helicopter lands there. This would not be the case with the rooftop landing site.

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16. Utilities

a. Utilities available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Electricity - Seattle City Light
Water - Seattle Water Department
Telephone - Pacific Northwest Bell

17. Final Action

Final action on the project is considered to be acceptance of the final environmental impact statement and approval of mitigating measures by the Board of Regents, and is scheduled for February 1987.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Helen M. Shawcroft

Date: July 23, 1986

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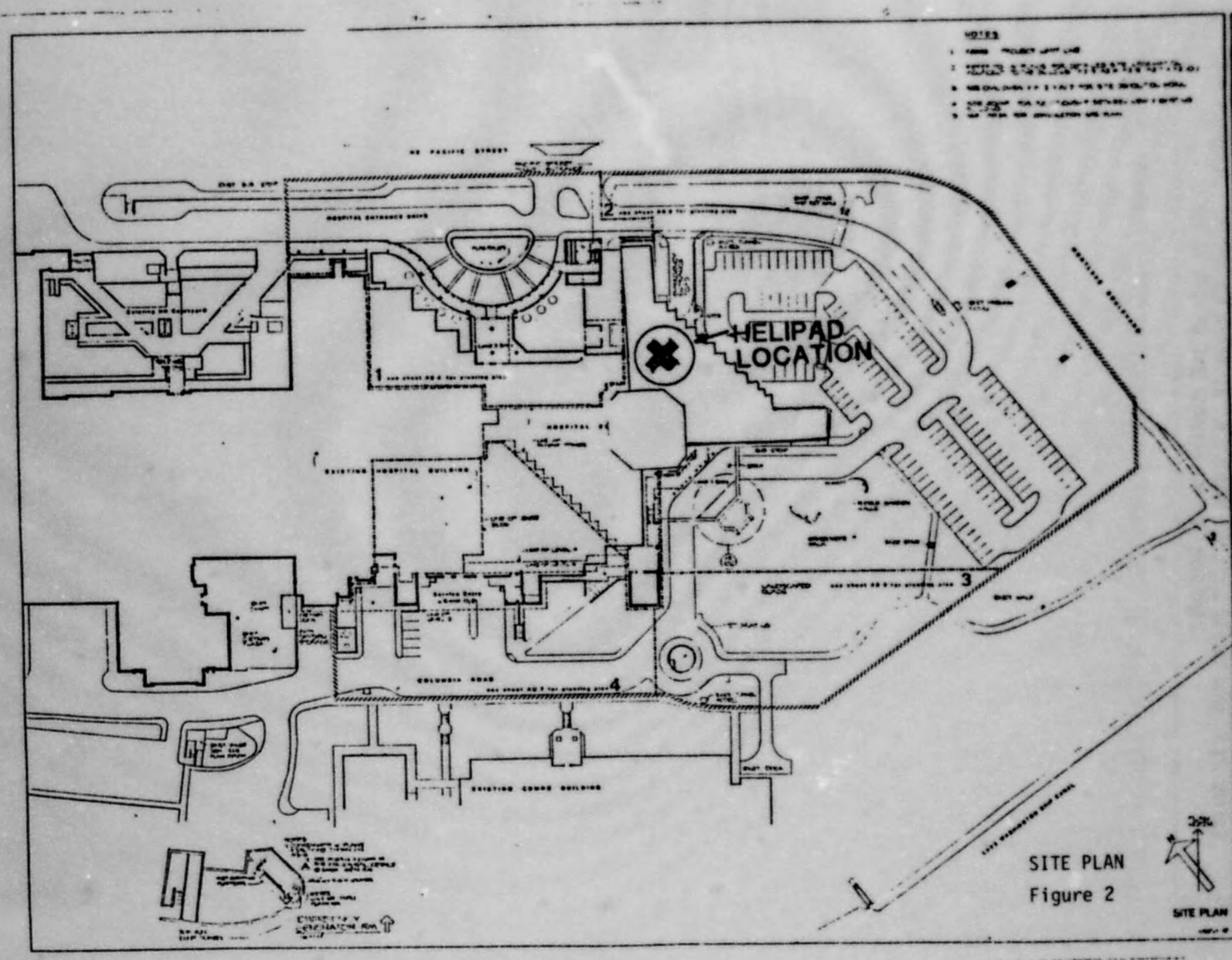
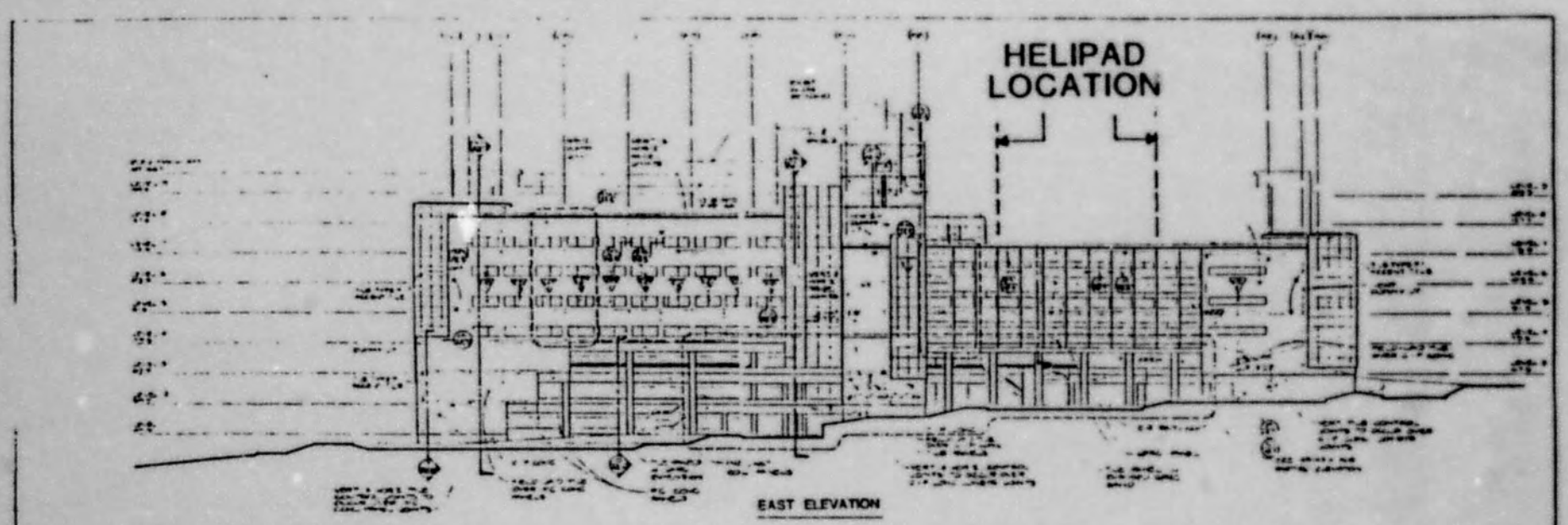
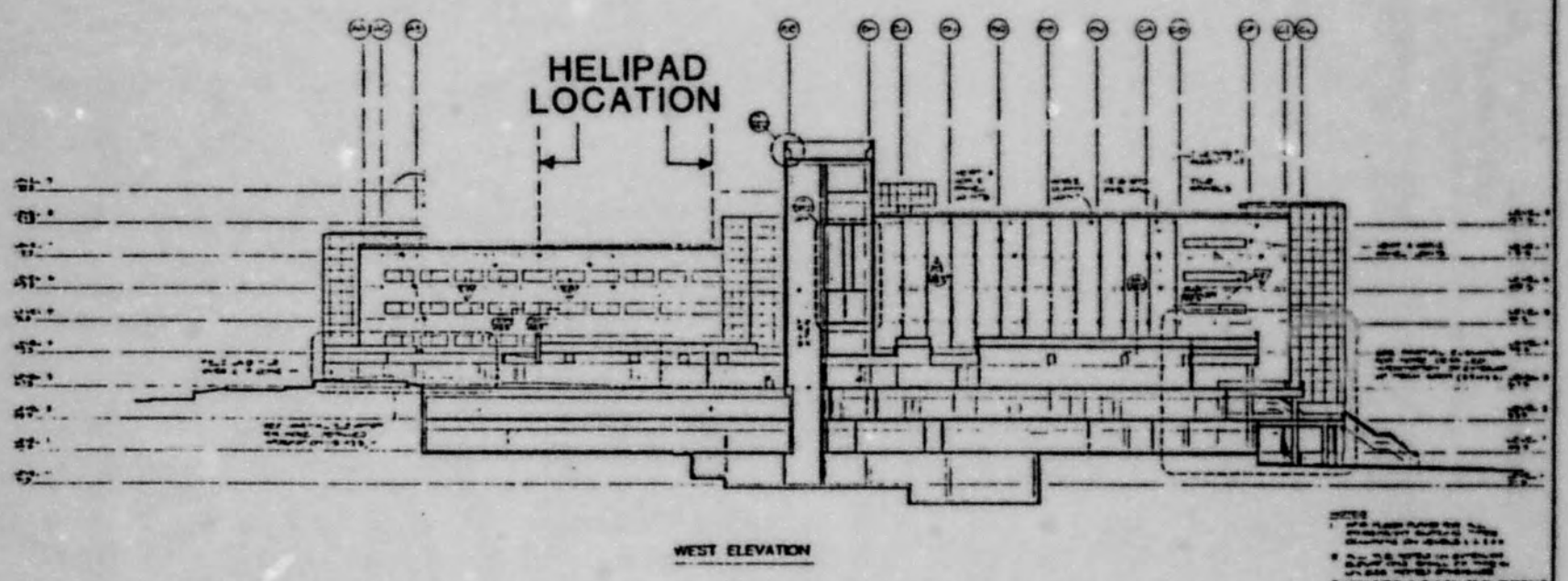
VICINITY MAP
Figure 1



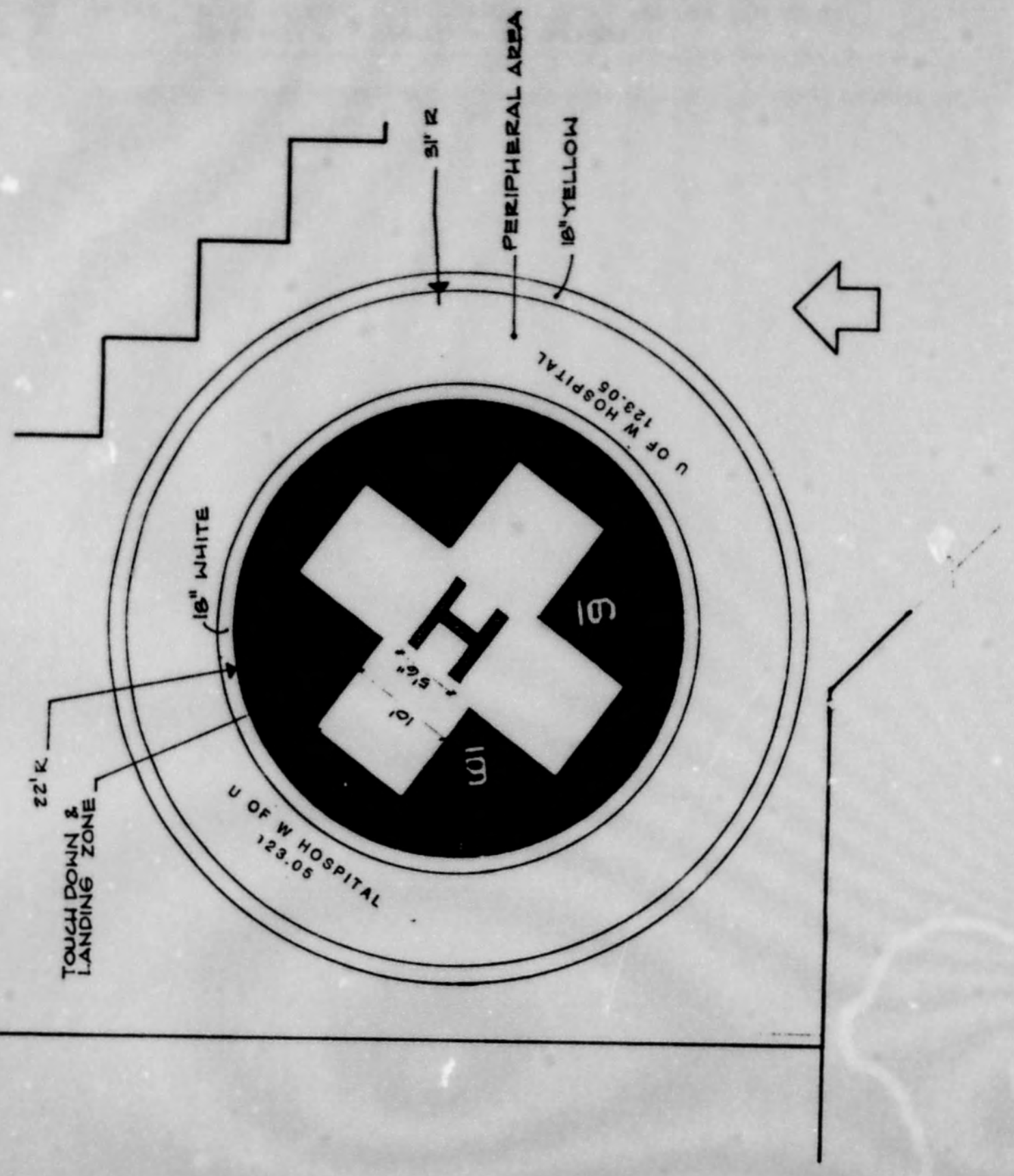
SITE PLAN
Figure 2



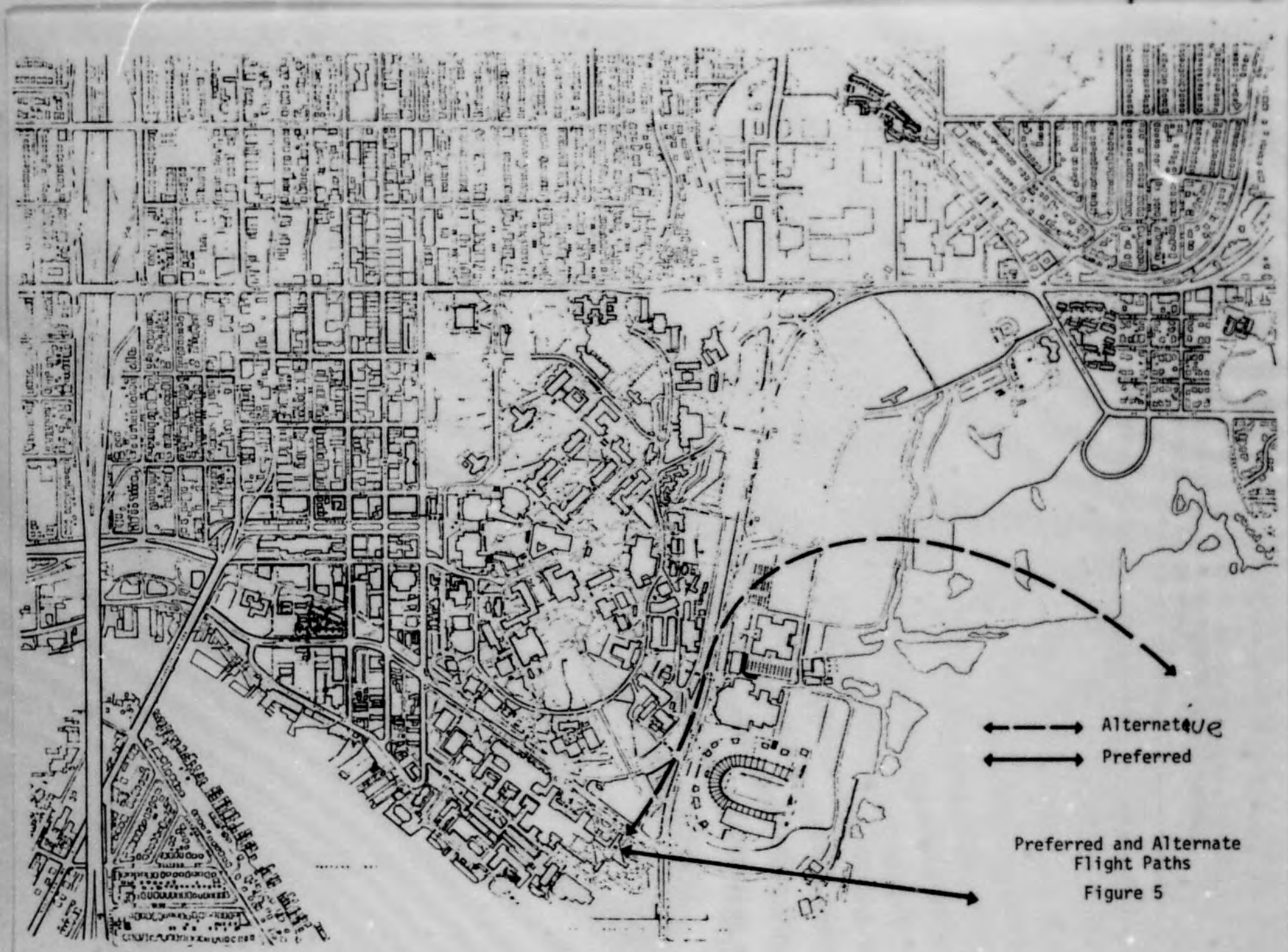


EXTERIOR ELEVATIONS

ELEVATIONS
Figure 3



Helistop Markings (Approximate)
Figure 4



Preferred and Alternate
Flight Paths

Figure 5

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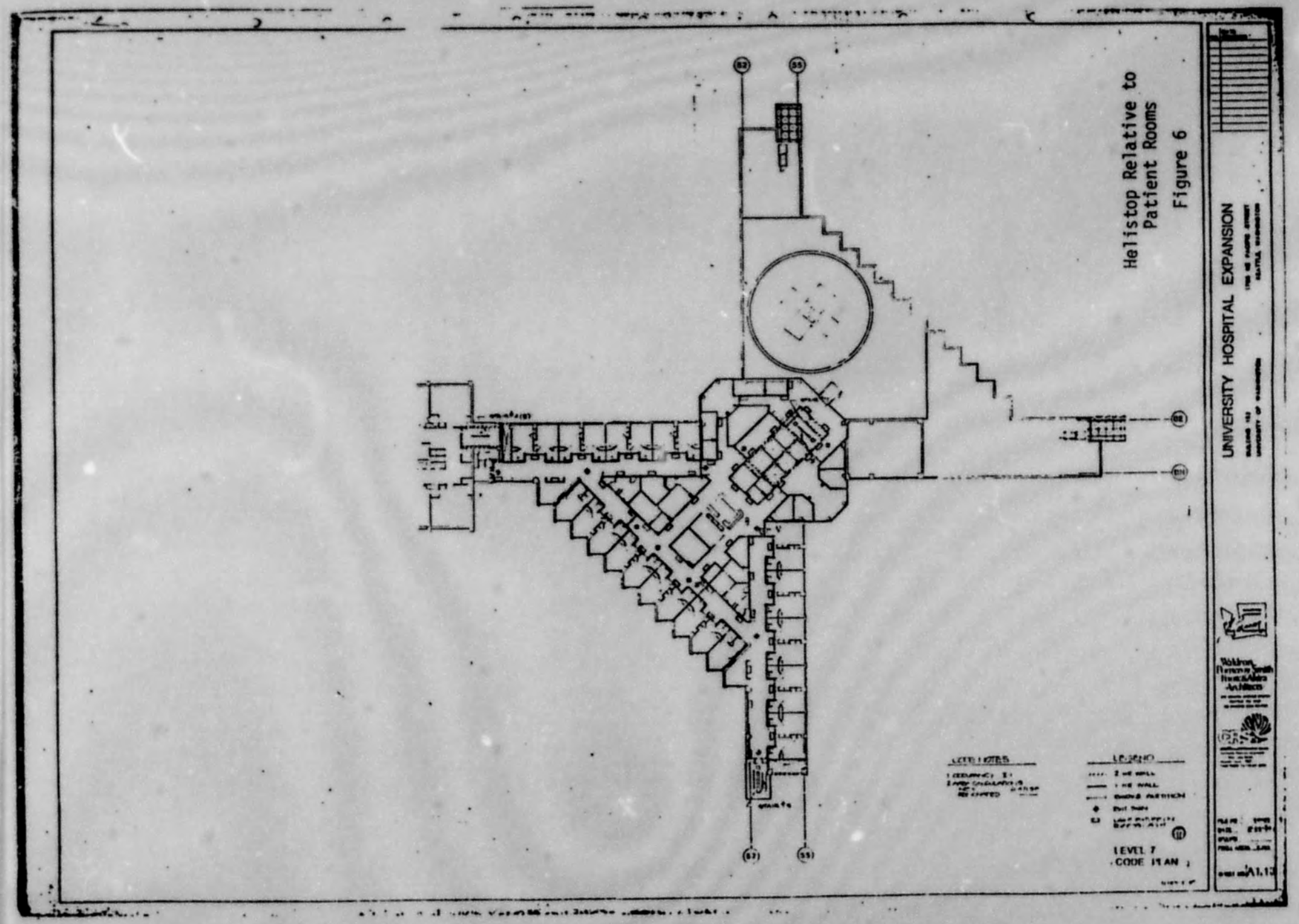

CITY OF SEATTLE
DEPARTMENT OF CONSTRUCTION & LAND USE
AFFIDAVIT OF NOTIFICATION

State of Washington)
County of King) ss.

The undersigned, being first duly sworn, on oath states:

That on this day, August 29, 1986, affiant caused to be deposited in the mails of the United States of America properly stamped and addressed notice directed to the applicant and to all property owners and all residents (addressed to "Occupant") of the property concerned and within Three Hundred (300) Feet of the boundaries of the property using for this purpose the property ownership records of the King County Treasurer and the addresses listed in the latest edition of Polk's Directory or its successor publication, and to news media and interested civic groups as provided by the Rules, advising of the time, place and purpose of a public hearing on the petition/proposal/application identified below.

Mary Rohn

The undersigned, being first duly sworn, on oath states: That on this day 8/28/86 affiant posted not less than four (4) placards in conspicuous public places within Three Hundred (300) Feet of the area concerned, stating the time, place and purpose of a public hearing on the petition/proposal/application identified below.

Vivi Pigott

Subscribed and sworn to this 29 day of August, 1986.

Marion Heiser
Notary Public in and for the State of Washington, residing at Seattle

Petition/Proposal/Application No. 8405870 for SEPA-Environmental Determination ~~& Council Conditional Use & DEIS~~

Petitioner/Initiator/Applicant Dorothy Tecter for Children's Orthopedic Hospital

Property Address/Location 4800 Sand Point Way N. E.

Date of Public Hearing September 23, 1986

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AIRLIFT NORTHWEST

325 9th Avenue
Seattle, Washington 98104
1-800-542-1646
(Inside Washington)
1-800-426-2430
(Outside Washington)
■ Children's Orthopedic Hospital and Medical Center 206-526-2131
■ Harborview Medical Center 206-223-8427
■ Providence Medical Center 206-326-5691
■ University Hospital 206-543-5300
■ Virginia Mason Hospital 206-624-1144

FOR JULIA GLEB
FROM Anita Francis
5003 45 NE
Seattle 98105

JUN 16 1986

RE: Children's Hosp. Helipad Applicatn.

Pg 17 - Seattle Jet - Harborview Contract

Pg 4 - mentions Hospital Addendum, which we don't have - should show how much each hospital will pay

Pg 37 - shows general charges/rates for service

April 15, 1986

Mr. Jerry Schneider
5004 45th Avenue N.E.
Seattle, WA 98105

Dear Mr. Schneider;

Please find attached a copy of the current, signed Inter-Hospital Agreement for Airlift Northwest per your request last week.

Sincerely yours,

Robb Childs
Associate Director for Operations
Airlift Northwest

RCjsm

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received a/o 24 April '86

P.4- Hosp Adl.
P9 DATED
P17- Seattle
Set- H'Wood
P23- Sig/ DABS
P37 rates

AIRLIFT NORTHWEST
INTER-HOSPITALS AGREEMENT

This Agreement is entered into by Children's Orthopedic Hospital and Medical Center, Harborview Medical Center, Providence Medical Center and University Hospital, hereinafter referred to individually as COHMC, HMC, PMC, and UH, or collectively as Participating Hospitals.

Recital

WHEREAS, there is a demonstrated need for facilities to appropriately and quickly transport patients with a serious medical need in an appropriately controlled environment to and from Seattle hospitals; and no such facilities are presently available; and

WHEREAS, COHMC, HMC, PMC, and UH wish to jointly share the risk of providing a patient air transportation program, which program shall be referred to as Airlift Northwest, hereinafter ("ALNW") and desire to set forth the terms and basic structure of this program in this Agreement; and

WHEREAS, ALNW has provided valuable services to the people of Washington, Alaska, Montana and Idaho since its inception in February of 1982; and

WHEREAS, Providence Medical Center was an originating hospital of ALNW, and since the establishment of ALNW, PMC has supported the operation by direct payments in an amount in excess of the use or benefit which PMC has received from the operation; and

WHEREAS, PMC desires to reduce its costs in connection with the ALNW program, and has contemplated withdrawal from the program; and

WHEREAS, COH, HMC and UH each acknowledge and agree that the ALNW operation is stronger with PMC's continued participation and the remaining participating hospitals wish to accommodate PMC in return for its continued participation in ALNW and,

WHEREAS, COH has not yet obtained the necessary local and state approvals for its proposed helipad but is seeking to establish said helipad as quickly as possible;

NOW, THEREFORE, in consideration of the mutual promises contained herein and for good and valuable consideration hereby acknowledged, the parties hereby agree to as follows:

I. Program Description

ALNW is being operated to serve a need for critical care aeromedical transport which is recognized by each Participating Hospital. There is no flight or other service which satisfactorily addresses the transportation needs of the acutely ill patient who would benefit from transportation to and from these regional Participating Hospitals. The continuation of ALNW by these Participating Hospitals is based on the belief that a low cost, effective transport system staffed by highly skilled professionals will best meet the needs of patients in the region.

5/6/85

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II. Program Direction

The Participating Hospitals shall maintain an Executive Committee with one representative from each Participating Hospital for the purpose of jointly operating ALNW. The Chief Administrative Officers of the Participating Hospitals or their designees with final decision-making authority, the Executive Director of the University of Washington Hospitals and the Executive/Medical Director of ALNW shall comprise the Executive Committee. When it is necessary for the Executive Committee to formally vote, the chief administrative officer or designee of HMC and the Executive/Medical Director of ALNW will jointly cast one vote and the Chief Administrative Officer of University Hospital and the Executive Director of the University of Washington Hospitals will jointly cast one vote.

The Executive Committee shall be responsible for the direction of ALNW and shall establish appropriate policies, procedures, rules and regulations to accomplish the mutually agreed-upon purposes of ALNW. Specific duties of the Executive Committee shall include but not be limited to the following:

1. Development of a statement of purpose.
2. Appointment of an Executive/Medical Director.
3. Approval of annual operating and capital budgets.
4. Approval of all contracts affecting participation in ALNW or the services provided by ALNW,
5. Policy development and program planning,
6. Review of periodic financial and statistical reports,
7. Development of Executive Committee rules and regulations.

The Executive Committee shall conduct business only when a majority of the Participating Hospitals are represented at a meeting called after at least seven days notice or with the agreement of all Participating Hospitals are represented at a meeting called after at least seven days notice or with the agreement of all Participating Hospitals. The consent of a majority of the members of the Executive Committee shall be required to approve motions, except that the consent of four members of the Executive Committee shall be required to approve the budget of ALNW or to approve any expenditure on behalf, or by reason of, ALNW which has not been budgeted previously. The Executive Committee shall reserve the right from time to time to delegate to committees and/or staff appropriate tasks to be performed for them.

A Steering Committee shall serve in an advisory capacity to the Executive Committee. The Steering Committee shall make recommendations regarding the operation of ALNW to the Executive Committee. The Steering Committee shall be composed of one nurse and one physician from each Participating Hospital, the Associate Director of Operations of ALNW, and the Chief Flight Nurse of ALNW. The Executive/Medical Director shall serve as the chairperson of the Steering Committee. The Steering Committee shall develop its own operating rules and subcommittee structure, which shall include a Quality Assurance Committee.

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III. Personnel

The Executive Committee shall appoint an Executive/Medical Director. The Executive/Medical Director shall recommend an individual to serve as the Associate Director of Operations of ALNW and an individual to serve as Chief Flight Nurse, and such appointments shall be subject to the approval of the Executive Committee. The Executive Committee shall evaluate the performance of the Executive/Medical Director annually.

1. Executive/Medical Director

   The Executive/Medical Director shall be a physician who will also serve as Medical Director of the program. The duties of the Medical Director shall include a) provision of the medical and administrative leadership, b) selection and training of medical staff, c) evaluation of medical staff performance, d) evaluation of staff. The Executive/Medical Director shall be paid a salary to carry out his responsibilities. The job description of the Executive/Medical Director is included as Exhibit I and incorporated by reference.

2. Associate Director of Operations

   The duties of the Associate Director shall include fiscal and administrative management, liaison with contracting flight service, and general program coordination. The job description of the Associate Director is included as Exhibit II and incorporated by reference herein. The Associate Director shall be paid a salary to carry out his responsibilities.

3. Chief Flight Nurse

   The duties of the Chief Flight Nurse shall include approval and training of flight nurses, performance evaluations and coordination of the aircraft retrofit. A job description is included as Exhibit III and incorporated by reference herein. The Chief Flight Nurse shall be paid a salary as prescribed by the Higher Education Personnel Board of the State of Washington which shall be adjusted from time to time as prescribed by the Higher Education Personnel Board.

IV. Medical Equipment

With the authorization of the Executive Committee, HMC shall purchase shared medical equipment and supplies for use in caring for patients being transferred. The cost of the equipment and supplies shall be shared according to the method described under Payment of Shared Fixed Costs and Variable Costs by the Participating Hospitals. Title to said equipment shall be shared equally by all Participating Hospitals and held by HMC on behalf of those Participating Hospitals. In the event that ALNW does not continue in operation after the expiration of this Agreement, the jointly owned equipment shall be sold at fair market value and the proceeds divided equally among the Participating Hospitals.

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V. Name and Logo

The Executive Committee shall take all steps necessary to preserve and protect the rights of the Participating Hospitals in and to the name ALNW and the selected logo. The name and logo shall be owned jointly by the Participating Hospitals and no individual Participating Hospital without authority from the Executive Committee shall have the right to use the name and logo for its own purposes, or to transfer the name and logo to a third party. The Participating Hospitals shall cooperate to prevent the unauthorized use of the name ALNW and the selected logo. The Participating Hospitals shall share all expenses incurred in securing any trademarks, tradenames, copyrights or other formal protection or federal or state registration of the name and logo, and subject to the approval of the Executive Committee in prosecuting any legal action to enforce their rights in and to the name and logo.

VI. Rights and Obligations

HMC shall be the primary contractor of ALNW with a flight service which provides aircraft and pilots to serve the needs of ALNW. The Executive Committee shall approve any contract and amendments to any contract in support of ALNW. COHMC, PMC, and UH agree that their rights and obligations in connection with the service provided by the contracting flight vendor shall be those of the Participating Hospitals, as described in the contract and between that vendor and HMC, a copy of which is labeled as Exhibit IV and incorporated by reference herein. From the effective date of this contract until February 15, 1986, PMC shall qualify as a Participating Hospital, with all attending rights and obligations. PMC's status beyond February 15, 1986 will be determined by the Executive Committee.

VII. Payment of Shared Fixed and Variable Costs

This section shall be approved as an addendum to the Inter-Hospital Agreement.

VIII. Sharing Revenues

Net revenues generated from charges made to non-participating hospitals for flights flown to those hospitals will be shared by COHMC, HMC, and UH on the same basis as described for expenses above. Net revenues in this case mean those revenues remaining after appropriate expenses, uncompensated services and contractual allowances are deducted from the charges to those non-participating hospitals.

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IX. Organization Review

It is agreed by all participating hospitals that the Executive Committee shall proceed immediately with a review of the organization and legal structure of ALNW. A part of the review shall include new methods for sharing the revenues and expenses of ALNW.

X. Hold Harmless and Indemnification

The parties hereto agree that each party shall defend, indemnify, and hold the other parties harmless from any liability, claim, loss or damage, including court costs, reasonable attorneys' fees and other reasonable costs of defense, arising out of the negligent acts or omissions of its respective employees and agents during their care and treatment of a transported patient: provided that such defense and indemnification shall not apply to the claim of a party's employees brought pursuant to RCW 51.24.030; provided further that for purposes of this paragraph, any non-employee physician, nurse or other health care provider accompanying a patient on a flight shall be the agents of the hospital that sent the health care providers on that flight regardless of which hospital receives the patient. The parties further agree that each party accepts sole responsibility for the qualification, selection and training of its employees and agents who constitute the health care team accompanying its patient and agrees to defend, indemnify and hold the other parties harmless from any liability, claim, loss or damage, including court costs, reasonable attorneys' fees and other reasonable costs of defense, arising out of the negligent selection, staffing or training of the health care team.

In addition, the parties agree that they will share equally in the payment of and costs associated with any liability, claim, loss or damage, including court costs, reasonable attorneys' fees and other reasonable costs of defense, arising out of the negligent acts or omissions of the Executive Committee, the Steering Committee, or the Medical/Executive Director, Associate Director of Operations, Chief Flight Nurse, or Flight Technician, when acting within the scope of their duties of administration and implementation of the ALNW patient transportation program, including but not limited to provision of medical supplies and medical equipment which are jointly purchased, maintenance of medical equipment by the Flight Technician, and determinations of whether any person will be offered air ambulance services and whether participation in ALNW or the services provided by ALNW through the contracting flight vendor will be extended to other hospitals. For purposes of this paragraph it is agreed that the payments and costs associated with the claim of a party's employee pursuant to RCW 51.24.030 shall not be shared by the hospital which is the employer of the claiming employee.

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XI. Access to Records

If Section 952 of the Omnibus Budget Reconciliation Act of 1980 (P.L. 96-499) and the regulations promulgated thereunder are determined to apply to this contract, then HMC agrees as follows:

A. Until the expiration of four years after the furnishing of services pursuant to this contract, HMC shall make available, upon written request to the Secretary of Health and Human Services or upon request to the Comptroller General of the United States, or any of their duly authorized representatives, the contract, and books, documents and records of HMC that are necessary to certify the nature and extent of costs incurred by the Participating Hospitals under this contract, and

B. If HMC carries out any of the duties of this contract through a subcontract, with a value or cost of $10,000 or more over a twelve-month period, with a related organization, such subcontract shall contain a clause to the effect that until the expiration of four years after the furnishing of such services pursuant to such subcontract, the related organization shall make available, upon request to the Secretary of Health and Human Services, or any request to the comptroller General of the United States, or any of their duly authorized representatives, the contract, and books, documents and records of such organization that are necessary to verify the nature and extent of such costs.

XII. Furnishing Services to Nonparticipating Hospitals

The Participating Hospitals shall have no obligation to provide or arrange for any flight services for patients to be flown to any hospital other than a Participating Hospital. ALNW may provide flight services when clinically indicated and when the service is not being used by a Participating Hospital upon the express request for such services by a representative of that nonparticipating hospital, and the express approval of that request by the Executive/Medical Director of ALNW or his or her designee. Such approval shall not be in any way automatic, but rather shall be solely within the discretion of the Executive/Medical Director, or his or her designee. The Executive Committee shall establish a schedule of commercially reasonable rates to charge a nonparticipating hospital which receives the services of ALNW and shall establish such rules and qualifications as it shall deem necessary. Such rates shall reflect the total cost of establishing and operating the service.

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XIII. Additional Participating Hospitals

The Executive Committee shall establish guidelines and procedures for extending to the nonparticipating hospitals the right to participate in ALNW. A nonparticipating hospital shall become a Participating Hospital only upon the approval of at least four members of the Executive Committee. In the event of such approval, this Agreement shall be amended to include such new Participating Hospital.

XIV. Licensure

The Participating Hospitals agree that both they and the flight service shall maintain for an air ambulance license as required by the State of Washington.

XV. Term and Termination

This agreement shall take effect on May 1, 1985. Unless otherwise terminated as provided below, this Agreement shall expire on May 1, 1990.

With the exception of PMC, all Participating Hospitals shall continue their participation until at least MAY 1, 1988. Following that time, a hospital may terminate its participation in ALNW at any time, with or without cause, providing that six months written notice to the other Participating Hospitals has been given.

In the event a Participating Hospital terminates its participation in ALNW, the withdrawing Participating Hospital shall forfeit all its rights and interests in and to (1) the medical equipment and supplies described above, and (2) the name and logo described above.

Upon termination of ALNW, any Participating Hospital planning to continue to operate a service which is substantially similar to ALNW shall offer to all other Participating Hospitals of ALNW an opportunity to join on a substantially equal basis their venture.

XVI. Assignment

Neither this Agreement nor any rights or obligations hereunder shall be transferred or assigned in whole or in part by any Participating Hospital without the prior written approval of the nonassigning Participating Hospitals. In no event, however, shall a Participating Hospital assign or transfer in whole or in part any of its rights or obligations under this Agreement to a nonparticipating hospital.

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XVII. Amendments

This Agreement may be amended provided such an amendment is reduced to writing and approved by all parties.

XVIII. Waivers

No waiver of any of the provisions of this Agreement shall be valid unless in writing, signed by the party against whom such waiver is sought to be enforced, nor shall failure to enforce any rights hereunder constitute a continuing waiver of the same or waiver of any other right hereunder.

XIX. Notices

All notices, requests, demands, instructions or other communication in connection with this Agreement shall be in writing and delivered in person or sent by certified or registered mail, return receipt requested, postage prepaid, and properly addressed as follows:

Mr. Treuman Katz, Executive Director
Children's Orthopedic Hospital and Medical Center
4800 Sand Point Way N.E.
Seattle, WA 98105

Mr. David W. Gitch, Administrator
Harborview Medical Center
325 Ninth Avenue
Seattle, WA 98104

Mr. Peter Bigelow, Administrator
Providence Medical Center
500 - 17th Avenue
Seattle, WA 98124

Ms. Irma Goertzen, Administrator
University Hospital
1959 N.E. Pacific Avenue
Seattle, WA 98195

or to any other such address as the party to receive the notice or communication shall designate by notice to the other party. Such notice shall be deemed to have been received five days from the date on which it is mailed by the sender or when personally delivered.

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XX. Governing Law

This Agreement shall be governed by, and construed in accordance with, the laws of the State of Washington.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

By _____
Treuman Katz
Executive Director

PROVIDENCE MEDICAL CENTER

By _____
Peter Bigelow
Hospital Administrator

HARBORVIEW MEDICAL CENTER

By _____
David W. Gitch
Hospital Administrator 6/27/85

UNIVERSITY HOSPITAL-UNIVERSITY OF WASHINGTON

By _____
Irma Goertzen
Hospital Administrator

By _____
J.F. Ryan
Vice President, Business and Finance

APPROVED AS TO FORM:

By _____
Steve Milam
Assistant Attorney General
University of Washington

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EXHIBIT I

AIRLIFT NORTHWEST

TITLE: EXECUTIVE/MEDICAL DIRECTOR

BASIC FUNCTIONS AND RESPONSIBILITIES

The Executive/Medical Director shall serve as the chief medical and administrative officer of the patient air transportation program. As such, he/she will represent the program in all matters related to its operation. The Executive/Medical Director will be responsible for the formulation, conduct and quality of patient care provided by the transport program and the operational management of that program.

CHARACTERISTIC DUTIES AND RESPONSIBILITIES

1. Participates as a full member of the Executive Committee of Airlift Northwest.
2. Provides appropriate leadership to the staff of the Participating Hospitals of Airlift Northwest.
3. Assures that the conduct of medical and nursing practice is consonant with the policies and objectives of Airlift Northwest and the Participating Hospitals.
4. Serves as the medical consultant to the Executive Committee on matters related to professional care provided by the staff of Airlift Northwest.
5. Consults and collaborates with other medical staff from Participating Hospitals regarding the operation of Airlift Northwest.
6. Assures that the policies of the Airlift Northwest program are effectively carried out.
7. Serves as Chairman of the Steering Committee.
8. Recommends appropriate program changes to the Executive Committee of Airlift Northwest.
9. Develops and manages an effective training program for all Participating Hospitals of Airlift Northwest.
10. Establishes and maintains a quality review program for Airlift Northwest.

ACCOUNTABILITY

The Executive/Medical Director is appointed by and accountable to the Executive Committee of the Participating Hospitals.

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QUALIFICATIONS

The Executive/Medical Director shall hold an M.D., be licensed to practice medicine in the State of Washington, have a faculty appointment at the University of Washington, School of Medicine, and have demonstrated competence in emergency medicine management, critical care management, and medical affairs administration.

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EXHIBIT II

AIRLIFT NORTHWEST

TITLE: ASSOCIATE DIRECTOR OF OPERATIONS

BASIC FUNCTIONS AND RESPONSIBILITIES:
The Associate Director of Airlift Northwest shall be charged with responsibility for the day-to-day administrative operations and management of Airlift Northwest. This responsibility includes providing staff support to the ALNW Executive Committee, supervision of staff as appropriate, budgeting, financial reporting, program planning, promotion and marketing of the program, referral relations, vendor relations, contract management, and assisting the chief flight nurse in completing performance evaluations of staff.

CHARACTERISTIC DUTIES AND RESPONSIBILITIES:

1. Coordinates the day-to-day administrative management of Airlift Northwest under the general direction of the Executive/Medical Director.

2. Prepares budgets and monitors budget performance for ALNW as on operating entity and assures the timely preparation of financial and statistical reports.

3. Develops and maintains a program planning and marketing system in support of Airlift Northwest as a joint venture of the participating hospitals.

4. Arranges for ALNW Executive Committee meetings, maintains committee records, provides staff support and makes reports as required or requested by the chairperson.

5. Assists in the development of policies and operating procedures for the program.

6. Negotiates contracts and monitors contract performance. Assists the contractor in its interactions with the participating hospitals as needed.

7. Serves as liaison with community groups, regulatory agencies, referral institutions, vendors and contractors.

8. Assists participating hospitals in the provision of the service and advises referring hospitals in establishment and maintenance of suitable landing sites for the helicopter and team support upon arrival.

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9. Assists the Chief Flight Nurse with staff performance evaluation and review.

10. Serves as a member of the Steering Committee of Airlift Northwest and provides staff support as needed.

11. Performs other duties as requested by the chairperson of the AlNW Executive Committee and the Executive/Medical Director.

ACCOUNTABILITY:
The Associate Director of Operations will be responsible for implementing the governance decisions of the AlNW Executive Committee and is accountable to the chairperson of the Executive Committee and the Executive/Medical Director for effectively administering the program in accordance with approved contracts, policies, budgets and operating plans.

QUALIFICATIONS:
The Associate Director for Operations shall have a Bachelor's degree in Business or the equivalent, and two years of experience in planning and/or management in a health care facility. Experience working with aeromedical programs is highly desirable. Excellent verbal and written communication skills and an ability to promote and market the program is essential.

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EXHIBIT III

AIRLIFT NORTHWEST

TITLE: CHIEF FLIGHT NURSE
Responsible to: Medical Director

Summary: The Chief Flight Nurse is a professional Nurse whose role is:

1) To facilitate all activities related to nursing care in the flight program at HMC.

2) To promote public relations

3) To act as an advisor to the flight nurses in affiliated hospitals.

He/she will demonstrate leadership in the following function.

Management and Leadership:

1) Responsible for daily and long range planning for staffing 24 hours/day/seven days/week.

2) Schedules assignments

3) In collaboration with the Medical Director interviews and hires new staff.

4) Develops departmental goals and objectives in consultation with the Medical Director.

5) Participates in the development of the budget; monitors cost and charges; investigates problem areas; recommends equipment and staffing needs.

6) Establishes standards of nursing care for flight nurse performance.

Clinical Responsibilities:

1) Is qualified to function as a flight nurse and keeps these skills current.

2) Plans orientation and educational experiences for all flight nurses.

3) Assists with the training of the flight nurses and support personnel.

4) Insures that compliancy to perform required technical skills is documented for flight nurses.

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Counseling and Evaluation:

1) Evaluates the performance of flight nurses using criteria drawn from job descriptions.

2) Counsels employees with special needs and/or problems.

3) Documents the evaluation and counseling process.

Flight Nurse Advisor Function for Affiliated Hospitals:

1) Maintains a public relations program with the nursing staff to insure a professional public image.

2) Acts as a liaison with other nurse coordinators in matters affecting the flight nurses' interaction with other units.

3) Acts as a liaison with the lead pilot in those matters affecting the flight nurses' interaction with the flight crew.

4) In conjunction with the lead pilot, develops an educational program to assure safe operating procedures and practices of the flight crew.

5) Participates in meetings as assigned or appropriate.

6) In conjunction with other nurse coordinators establish educational programs, evaluate flight nurse performance, and counsels employees with special needs and/or problems.

Qualifications:

1) Licensure and certification

Registered nurse in Washington State in addition to CCRN or CEN within one year after hire.

2) Education/experience

Minimum: Three years critical care experience (ICU/CCU/ER)

One year managerial experience preferred.

Flight nurse experience preferred

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3) Physically and emotionally healthy - vision and hearing within normal limits - must be able to lift and/or help lift and carry patients - must be able to work in any climate conditions.

4) Special Skills

a. Excellent public relations skills

b. Must be able to make independent decisions and perform special technical skills.

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EXHIBIT IV

AGREEMENT

This agreement is entered into by and between Seattle Jet Center, Inc., a Washington corporation, hereinafter referred to as "SJC", and Harborview Medical Center, hereinafter referred to as "HMC".

WITNESSETH:

WHEREAS, HMC and certain other Seattle-area hospitals wish to cooperate in making a patient air transport service available; and

WHEREAS, HMC wishes to have SJC perform certain air transportation services as an independent contractor to transfer patients to and from HMC and other hospitals designated by HMC, hereinafter referred to as participating hospitals; and

WHEREAS, SJC wishes to provide certain air transportation services and associated services for HMC and the participating hospitals;

NOW, THEREFORE, in consideration of the mutual promises contained herein and for the good and valuable consideration hereby acknowledged, the parties hereby agree as follows:

SECTION I
AIRCRAFT AND SPECIFICATIONS
AVAILABILITY AND USE REQUIREMENTS

A. SJC agrees to make a Piper Cheyenne III airplane continuously available for use by HMC and participating hospitals on a 24-hour-a-day, seven-day-a-week basis for departure from Boeing Field, Seattle, Washington for purposes of transporting patients, except as provided for herein.

B. SJC represents and warrants that the above airplane will be maintained and equipped to meet the requirements contained in Section II of HMC's Request for Proposals for an Air Transportation Service, hereinafter referred to as "RFP", with mutually agreed upon exceptions. A copy of the above-mentioned section of the RFP is attached as Exhibit I and incorporated by reference herein as if fully set forth. It is understood that all of the equipment specified in the above subsections for medical retrofit of the airplane is subject to approval by HMC, which approval shall not be unreasonably withheld.

C. SJC agrees to identify the dedicated aircraft to HMC's specifications and to maintain that scheme throughout the duration of this agreement. A copy of the specifications is attached as Exhibit II and incorporated by reference herein.

D. SJC agrees to have available or maintain access to a turbine aircraft that will accept a medical transport load for trips greater than 900 nautical miles round trip. Such aircraft shall have a means of securing medical equipment, supplies and patient stretchers or incubators to the aircraft frame.

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E. SJC further agrees to furnish additional aircraft equipped in the manner indicated in the paragraph above should there regularly be more requests for the use of the dedicated aircraft than can be reasonably accomodated by one dedicated aircraft. The use of an additional aircraft as described herein shall not result in an increase in the fixed monthly payment to SJC, but HMC will reimburse SJC for each incident of service according to the rates per nautical mile in Exhibit V, a copy of which is attached and incorporated by reference herein.

F. SJC agrees to make a helicopter as defined in Exhibit III continuously available for use by HMC and the participating hospitals on a 24 hour a day seven day a week basis, for departure from Boeing Field, Seattle, Washington, to pick up a medical team at HMC or other designated hospitals for purposes of transporting patients, except as provided for herein.

In the event that the dedicated helicopter is out of service for unscheduled maintenance for more than 8 hours or for scheduled maintenance more than 24 hours, SJC agrees to make its best effort to provide a backup helicopter capable of accepting a medical transport load.

G. SJC represents and warrants that the above helicopters will be maintained and equipped to meet the requirements contained in Section VIII of HMC's RFP, with mutually agreed upon exceptions. A copy of the above-mentioned section of the RFP is attached as Exhibit IV and incorporated by reference herein as if fully set forth. It is understood that all of the equipment specified in the above subsections for medical retrofit of the airplane is subject to approval by HMC, which approval shall not be unreasonably withheld.

H. SJC agrees to paint the dedicated helicopter to HMC's specifications and to maintain that paint scheme throughout the duration of this agreement. A copy of the specifications is attached as Exhibit II and incorporated by reference herein.

SECTION II
AIRCRAFT OPERATIONS

A. SJC represents and warrants that all fixed wing aircraft or helicopter and flights under this agreement will conform to all applicable rules, regulations and requirements of the Federal Aviation Administration (FAA) of the United States Government, Washington state laws and regulations, and any and all requirements of the insurance policy referred to in Section VII herein. SJC represents and warrants that it and its subcontractors hold a current FAR, Part 135 certificate and will maintain it or whatever successor certificate is required by the FAA during the term of this agreement. SJC agrees to notify HMC in writing within 24 hours of notice to SJC or any subcontractor of the suspension or termination of the certificate by the FAA. Upon suspension or termination of SJC's Part 135 certificate, SJC agrees to cease all flight operations immediately under this agreement until such certificate is restored.

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B. SJC shall have the sole right and obligation to determine whether or not a given flight requested by HMC or a participating hospital should be made and how such flight should be conducted from the standpoint of weather conditions or aircraft safety, provided that SJC shall inform the Transport Team of any flight conditions that SJC has knowledge of, including but not limited to turbulence, which could reasonably be expected to adversely affect the patient. HMC or the participating hospital shall have the sole right and obligation to determine which patients and health-care personnel should be carried on any flight and whether a patient is stable enough to be transported. SJC must transport all persons presented by the medical team, including patients with communicable diseases, unless they constitute a threat to flight safety.

SECTION III
ADMINISTRATION

A. SJC shall supply a phone number to HMC for the sole use of the on-call team, to be designated by HMC and the participating hospitals, in requesting an aircraft at any time 24 hours a day, and SJC shall assume all responsibilities for arranging for the aircraft and flight to the destination indicated.

B. When HMC or a participating hospital requests use of an a fixed wing aircraft pursuant to this Agreement, SJC agrees to have the aircraft ready to load a transport team and leave Boeing Field within one hour of the initial request therefore, provided that delays beyond one hour required by weather or by Air Traffic Control at Seattle shall not be attributable to SJC; provided further that in the event that the dedicated aircraft will not be used for any flight, SJC shall provide a back-up aircraft within a reasonable period of time after the request.

C. When requested by HMC, SJC shall provide or arrange for ground transportation for the Transport Team from HMC or the participating hospital to Boeing Field after the flight.

D. When HMC or a participating hospital requests use of the helicopter pursuant to this Agreement, SJC agrees to take off from Boeing Field within ten minutes of the initial request therefore, provided that delays beyond ten minutes required by weather or by Air Traffic Control at Seattle, shall not be attributable to SJC.

E. SJC shall make available an individual to attend Transport Team meetings at HMC on reasonable notice.

F. SJC shall develop and present a training program to the staffs of HMC and participating hospitals as necessary, which shall include familiarization with aircraft and medical retrofit systems and proper response to an aircraft emergency.

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G. SJC shall keep a flight log containing the following information: dates of service; destination; intermediate stops, if any; names of all persons on board during the flight; take-off and landing times; block speed; and unusual occurrences, as normally recorded in the flight log pursuant to FAA regulations. HMC shall have access to such log upon reasonable notice during business hours.

SECTION IV
RATES AND BILLINGS

A. Within three working days after the conclusion of each flight, SJC will submit an invoice to HMC containing the information in Section III, G and the name(s) of the patient(s), name of the referring and receiving hospital, aircraft used, and statement of charges. A report will also be rendered monthly to HMC by SJC by the 5th of each calendar month for the entire prior calendar month's service detailing incidents of service with reference made to the statement sent immediately after the incident of service. If the flight has been initiated by a participating hospital, SJC will look to that hospital for payment of the expenses for the incident of service (not the fixed monthly rate), provided that HMC will be responsible for that payment in the absence of payment by the participating hospital. Payment will be made by HMC or the participating hospital to SJC within thirty (30) days of the issuance of an invoice; if payment is not made by the payment deadline, HMC or the participating hospital will pay interest at the rate of one percent (1%) per month on the unpaid balance.

B. For fixed wing and helicopter services rendered by SJC during the first year of the contract, HMC will pay in advance on the first day of each month a fixed monthly rate identified in Exhibit V, regardless of the number of incidents of service during any month. In addition, for each incident of service, HMC or the participating hospital will pay at the rates listed in Exhibit V, plus any applicable federal or state tax, including but not limited to federal transportation tax, plus costs attributable to layovers at the destination. Layover costs do not include charges for any time or other costs for the pilot or crew because such costs have already been included in computing the fixed monthly rates to be paid pursuant to Exhibit V. SJC and HMC shall agree upon mileage between frequently-used transport sites and agree on the mechanism for establishing mileage to less frequently used transport sites.

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C. For services rendered by SJC during subsequent years of the contract period, the fixed monthly rate and rates per nautical mile shall be adjusted according to the formula described in Exhibit I.

D. SJC agrees to notify HMC of all price increases in fuel to them at Boeing Field during the term of this agreement by sending a copy of the fuel supplier's notice of price increase to HMC within seven days of SJC's receipt of the notice of price increase.

E. HMC or the participating hospital shall have the sole discretion to determine whether passengers besides the crew, transport team, and patients shall be carried on a particular flight, provided that SJC may overrule that decision if the extra weight would cause safety problems. SJC agrees to inform the transport team when carrying extra passengers will require additional stops for fuel, resulting in a longer flight. In the event that passengers besides the patient(s) are transported, SJC shall not be entitled to any additional compensation.

SECTION V
HOSPITAL RESPONSIBILITY

A. HMC agrees that it or the participating hospital shall have the sole responsibility for providing and paying all personnel utilized during any flight in the medical care and treatment of transported patients, with such personnel being the "Transport Team" referred to in this Agreement (SJC's flight crew and other employees are not part of the "Transport Team" as the term is used in this Agreement).

B. All use of medical equipment and supplies and all on-board medical care and treatment of persons transported on the aircraft pursuant to this Agreement shall be the sole responsibility of and undertaken only by members of the Transport Team furnished by HMC or the participating hospital.

SECTION VI
FACILITIES, MAINTENANCE AND PERSONNEL

A. Throughout the duration of this Agreement, SJC agrees to provide the facilities and services described in Section XV of the RFP, a copy of which section is attached as Exhibit VI and incorporated by reference herein.

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B. SJC agrees that the maintenance of aircraft used pursuant to this Agreement shall be performed and/or supervised by F.A.A.-licensed, factory-trained maintenance personnel or the equivalent with a minimum of five years maintenance experience.

C. SJC further agrees that the scheduling of maintenance of the dedicated fixed wing aircraft and helicopter shall be given priority over scheduling of maintenance of all other aircraft serviced or maintained by SJC. Maintenance will be done on a progressive schedule.

D. SJC agrees to arrange for maintenance on a timely basis of the medical equipment attached to and as part of the dedicated aircraft.

E. SJC shall clean and maintain the aircraft cabin interior after each flight in accordance with standards acceptable to HMC.

F. SJC shall furnish two pilots per fixed wing flight with a current F.A.A.-certified rating, type certificate, as applicable, who meet the experience and training guidelines contained in Exhibit VII.

G. SJC shall furnish one pilot per helicopter flight with a current FAA certified rating, type certificate, as applicable. All helicopter pilots shall meet the minimum requirements for experience and training contained in Exhibit VIII.

H. SJC shall perform routine maintenance on the aircraft as expeditiously as possible, and at times when the aircraft is least likely to be needed for emergency flight. The contractor shall pay all costs of service, maintenance and operation, including fuel, for all flights.

I. SJC shall demonstrate on a periodic basis that a fund no less than that recommended by the manufacturer is maintained to finance periodic large maintenance costs or that a suitable material support contract is maintained.

SECTION VII
INSURANCE

A. SJC and its subcontractor shall furnish and maintain during the term of this Agreement liability insurance coverage required by the Federal Aviation Administration and the Civil Aeronautics Board, as referred to in FAR, Part 135, Air Taxi Operations, but in no event shall such coverage be less than $20 million limit per single occurrence without a per seat limitation.

B. On or prior to the effective date of this Agreement, and on each subsequent anniversary date thereof, SJC and its subcontractor shall furnish to HMC a certificate of insurance evidencing the above-required coverage, and confirming the following:

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1. That Harborview Medical Center, University Hospital, Providence Medical Center of Seattle, Children's Orthopedic Hospital, Virginia Mason Hospital, and the Board of Regents of the University of Washington are included as additional insureds to the full extent of SJC and its subcontractor's aircraft liability insurance coverage.

2. That SJC and its subcontractor waive subrogation in favor of the above additional insureds as respects any physical damage to the aircraft and loss of use.

3. That the insurance provided is primary and non-contributory to any other insurance available to the above additional insureds.

4. That the insurance policies contain a standard "Severability of Interest" clause.

5. That HMC will be furnished 30 days written notice prior to cancellation of, or any material change in, the policies.

6. That the coverage and provisions specified in this section shall apply to all aircraft provided pursuant to Section I of this agreement."

C. SJC shall maintain hull insurance equal to the value of the dedicated fixed wing aircraft. SJC shall ensure that the helicopter provided by its subcontractors also has hull insurance for the full value of the helicopter.

"Section VIII
INDEPENDENT CONTRACTORS -- INDEMNITY

A. It is understood and agreed that SJC and its subcontractors and HMC and the participating hospitals are independent contractors. Thus, SJC and its directors, officers, employees, agents and subcontractors are not employees or agents of HMC and the participating hospitals, and HMC and the participating hospitals and their trustees, officers, employees and agents (including but not limited to the Transport Team) are not the employees or agents of SJC.

B. SJC agrees to defend, indemnify and hold HMC and any participating hospitals harmless from and against any suits, claims and other liabilities, including reasonable attorneys' fees, court costs and other related costs of defense, arising out of injuries to any persons or property damage caused by the negligent, grossly negligent and/or intentional acts or omissions of SJC, its directors, officers, employees, agents and subcontractors in the performance of this Agreement.

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C. HMC agrees to defend, indemnify and hold SJC and its subcontractors harmless from and against any suits, claims and other liabilities, including reasonable attorneys' fees, court costs and other related costs of defense, arising out of injuries to any persons or property damage caused by the negligent, grossly negligent and/or intentional acts or omissions of the Transport Team, HMC and/or of the other participating hospitals, their respective trustees, officers, employees and agents, in the performance of this Agreement.

D. SJC accepts responsibility for risk of loss of any equipment owned by HMC or the participating hospitals due to its own negligence while stored on SJC's premises or being used on SJC's aircraft. A list of equipment presently stored at SJC is attached as Exhibit IX and incorporated by reference herein as if fully set forth. This list will be updated periodically by HMC.

SECTION IX
OTHER

A. SJC shall not be in breach of this Agreement for failure to make a flight or for failure to provide the dedicated or backup aircraft or for failure to provide the dedicated or backup aircraft due to weather, earthquake, natural disasters and other acts of God as well as due to strikes, government actions, and disorders, riots, war-like action or other causes beyond its reasonable control, which includes but is not limited to reasonable maintenance and/or repair down-time or replacement time.

B. When written notice is required to be given pursuant to this Agreement, it is deemed given after receipt by or delivery to the respective parties at the following addresses, or such other address in the State of Washington which a party provides to the others in writing:

For SJC: Charles Culver
Seattle Jet Center, Inc.
Seattle Aviation Center
Boeing Field International
Seattle, Washington 98108

For HMC: The Administrator
Administration Office
Harborview Medical Center
325 Ninth Avenue
Seattle, Washington 98104

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C. SJC represents and warrants that it and its subcontractors is duly incorporated and in good standing in the State of Washington and hold all licenses and certificates necessary to perform the services required pursuant to this Agreement.

D. This Agreement is binding upon all successors and assigns of the parties, provided that any assignment by SJC of its rights and obligations under this Agreement may be made only with the express written approval of HMC.

E. If Section 952 of the Omnibus Budget Reconciliation Act of 1980 (P.L. 96-499) and the regulations promulgated thereunder are determined to apply to this contract, then SJC agrees that until the expiration of four years after the furnishing of service pursuant to this contract, SJC shall make available, upon written request to the Secretary of Health and Human Services, or upon request to the Comptroller General of the United States, or any of their duly authorized representatives, the contract, and books, documents and records of SJC that are necessary to certify the nature and extent of costs incurred by HMC or the participating hospitals under this contract. If SJC carries out any of the duties of this contract through a subcontract, with a value or cost of $10,000 or more over a twelve-month period, with a related organization, such subcontract shall contain a clause to the effect that until the expiration of four years after the furnishing of such services pursuant to such subcontract, the related organization shall make available, upon written request to the Secretary of Health and Human Services, or upon request to the Comptroller General of the United States, or any of their duly authorized representatives, the subcontract, and books, documents and records of such organization that are necessary to verify the nature and extent of such costs.

F. It is the understanding of HMC that helicopter services are to be provided by SJC through a sub-contract with Hospital Air Transport, a subsidiary of Aircraft at Your Call. Any change in the subcontractor providing helicopter services requires the advance written approval of HMC.

G. HMC's investigation of the safety record of SJC and its subcontractors shall not be deemed a waiver of the contractor's responsibility for assuring adequate safety measures.

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H. SJC expressely acknowledges that HMC and the participating hospitals are dependent on the receipt of significant operating revenues to continue the portion of the agreement pertaining to provision of helicopter services. In the event that HMC determines in its sole judgment that it is not financially feasible to continue the helicopter services until the expiration date of this agreement, then HMC may terminate the portion of this Agreement pertaining to helicopter services at no penalty upon 70 days' notice to SJC, provided that HMC may not enter into another contract for helicopter services within six months of the date of termination of these services.

I. HMC shall have the right to terminate this Agreement in part or in whole upon giving SJC written notice of SJC's failure to substantially perform any of the terms and conditions hereof, provided however, that with respect to such breach SJC shall have 30 days from receipt of such written notice to remedy or cure any such default or breach on SJC's part. If the default or breach is cured within that 30 day period, this Agreement shall not terminate because of such default or breach.

SECTION X
CAPTIONS AND CONSTRUCTION OF AGREEMENT

The captions of this Agreement are for convenience only and do not amplify or limit the terms and provisions of this Agreement. This Agreement has been jointly drafted by the parties following negotiations between them. It shall be construed according to the fair intent of the language as a whole and not for or against either party.

SECTION XI
TERM

This contract shall be in effect from the date of signature until May 1, 1990.

SECTION XII
INTEGRATION

This written Agreement contains the entire understanding of the parties in connection with the subject matter, and it supercedes and replaces all prior negotiations, agreements or representations, whether oral or written. Any amendments to this agreement must be in writing and signed by the parties.

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IN WITNESS WHEREOF, the parties have executed this Agreement this 28th day of June, 1985 to be effective as of the 1st day of May, 1985.

HARBORVIEW MEDICAL CENTER

By David W. Gitch 6/27/85
David W. Gitch
Administrator

Date _____

SEATTLE JET CENTER

Charles Culver

(Name)
(Title) Vice President

Date 6-26-85

APPROVED AS TO FORM:

By Steve Milam
Steve Milam
Assistant Attorney General

Date 7/29/85

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EXHIBIT I

FIXED WING SPECIFICATIONS

I. GENERAL

1. This section of the Request for Proposals (RFP) outlines the specifications for the fixed wing Patient Air Transport Services to be provided by a selected Air Charter Service Contractor (herein called "Contractor") to Harborview Medical Center (hereinafter called HMC).

2. The Contractor shall supply on an "as needed" basis a pressurized fixed wing multi-turbine engine aircraft. The aircraft will be made available on a 24 hour a day, 7 day-a-week basis. For trips of greater than 600 nautical miles HMC may request the use of a turbo jet/turbo fan type aircraft.

II. AIRCRAFT EQUIPMENT AND PERFORMANCE

All aircraft furnished under this agreement shall be of the multi-engine turbine powered type equipped for operating under IFR conditions. In addition to the items below the following characteristics are important: loading and unloading, acceptance of the medical retrofit package, the amount of maintenance or down time, internal noise levels, speed, and general internal cabin configurations. Specifically, the aircraft must meet the following minimum standards (All equipment is subject to approval by HMC):

A. Ability to maintain a 5,000 foot cabin pressure during all operations.

B. Engines that are of turboprop or turbo fan/turbo jet type.

C. Ability to operate out of a 3,000 foot unprepared strip at sea level on a standard day at 1,000 pound pay load.

D. A cruise speed of not less than 200 nautical miles per hour.

E. A cruising range of at least 900 nautical miles plus IFR PART 135 reserves with a 1,000 pound load.

F. All equipment required for FAA, PART 135, day or night, all weather, including known icing conditions, IFR operations.

G. A cabin configuration that allows the easy installation and removal of a patient transport incubator or stretcher. The patient should not have to be tilted greater than 20 degrees when loaded into the aircraft.

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H. The cabin must be large enough to allow unrestricted access to at least two adult patients or transport incubators while in flight by at least two transport team members as well as adequate room for medical supplies and equipment.

I. A means of securely anchoring the transport incubator or stretcher, air-oxygen bottle, ventilators, etc. to the air frame.

J. A method of providing for air and oxygen to the patient care portion of the aircraft with one air and one O_2 outlet for each patient. Outlets must be standard hospital type. The system must be capable of supplying 50 psi (hospital standard) of air and 100% oxygen for approximately five hours of transport ventilators (15 liters per minute). The contractor will be responsible for providing full air and oxygen tanks for the aircraft at the start of each transport. The air and oxygen installation must also have provisions for an air/O_2 blender/regulator as an integral part of the retrofit.

K. A 115 volt, 60Hx A/C sine wave power source with a standard three-prong double receptacle for each patient capable of operation with either engine inoperative and of enough integrity to operate sophisticated solid-state circuitry and servo motors. The system must have a minimum load capacity of 2,200 watts and have a minimum of three outlets per patient.

L. A means of aircraft-to-hospital communication.

M. An adequate light source to provide proper patient care within the aircraft (100 foot candles on the incubator or stretcher). Lighting must be of the non-fluorescent type with dimming capabilities.

N. Suction available in the cabin. The suction unit must be able to supply 40 cm Hg of vacuum to each outlet. There must be one outlet per patient.

O. I.V. holders available for each patient.

P. The heating system must have the capability of maintaining the cabin temperature at about 75°F during all phases of operation.

Q. The aircraft provided shall be equipped and configured with the avionics and non-avionic equipment needed to satisfy the demands of the program.

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R. The Contractor shall provide for each aircraft life jackets and a survival package containing items agreed upon by the contractor and the hospital.

S. The Contractor shall provide adequate storage space for specialized equipment near the aircraft.

T. It will be the Contractor's responsibility to maintain in good working order all Contractor-provided equipment.

U. Equipment for overwater operations.

V. Cargo-door configurations.

III. IDENTIFYING THE AIRCRAFT

It will be the responsibility of the Contractor to identify each aircraft with colors, decals or markings that satisfy HMC's requirements and to maintain that scheme throughout the duration of the contract. The bidder should propose a method of identifying the aircraft in his/her response to the RFP.

IV. AIRCRAFT OPERATIONS

A. All aircraft and flights under this contract shall conform to all rules, regulations, and requirements of the Federal Aviation Administration (FAA) of the United States Government. The Contractor shall maintain a current FAA, PART 135, Certificate.

B. The Contractor shall have the sole right to determine whether or not a given flight requested by HMC or a participating hospital should be made from the standpoint of safety of operating the aircraft.

C. Harborview Medical Center or a participating hospital may designate as passengers or medical team members anyone it chooses. The contractor must transport all persons presented by the medical team, including patients with communicable diseases, unless they constitute a threat to flight safety.

D. When HMC or a participating hospital orders an aircraft, the Contractor must be able to have an aircraft ready to load the transport team and the incubator or the stretcher, and fly within 30 minutes of the initial order.

E. The Contractor shall submit flight request protocols detailing what actions the Contractor proposes to take when a flight is requested.

F. The Contractor will be responsible for providing full oxygen tanks for the aircraft prior to departure. Medical oxygen will be provided by HMC.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

EXHIBIT II

The dedicated airplane shall have the following identification scheme:

1. HMC's Flight Program name and logo as specified (dimensions) by HMC.

2. Identification that the aircraft is operated by SJC.

The dedicated helicopter shall have the following paint scheme:

1. HMC's flight program name and logo as specified (dimensions) by HMC.

2/26/85

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EXHIBIT III

DESCRIPTION OF AIRCRAFT
ACCESSORIES AND EQUIPMENT

The Aircraft described in this agreement includes the following accessories and equipment:

Agusta 109A Basic Helicopter, plus the following options:

Interior-EMS see Exhibit A.1

Exterior-Overall Color,
Major Stripe,
Accent Color,

Dual Controls
Rotor Brake
Flight Director and Autotrim
Tedico Zappers
Shoulder Harness, w/Inertia Reel (Pilot and Copilot)
Windshield Wipers (Pilot and Copilot)
Cabin Fire Extinquisher
Radio Altimeter and Landing Gear Caution System
Copilot Flight Instruments
Copilot Nav. Instruments
FAA Single Pilot IFR Package
Includes:
Automatic Flight Control System
Radio/Instrument front-provisions
Radio/Instrument back-provisions
Heavy Duty Battery (22 A/H)
Alternating Current Kit
Pilot Nav. Instrument
First VHF 20A Collins
Second VHF 20A Collins
ADF AD 60 Collins
First VOR-VIR 31A Collins with Marker
Beacon and Glideslope
Transponder TDR 90 Collins
DME 40 Collins
Intercommunications Systems (ICS) AG06
Second VOR-VIR 31A Collins
Encoder Altimeter
Sperry 444 RMI R.H.
Attitude Indicator Stand-By

Bleedair Heater
Freon Airconditioner
Sound Proofing - Silent

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Basic EMS Interior Specifications for the Agusta 109A Mark II

a. Seat Covering
   1. Aft forward facing seat to be covered in Blue Vinyl
   2. Pilot & Copilot Seats - Corporate styling to be covered in Blue Fabric
b. Medical Pouches
c. Curtain between pilot and aft cabin
d. 4-IV Hooks
e. Vinyl Floor Covering - Color Blue - cockpit, cabin and baggage compartment
f. Drains in Floor in Aft Cabin (2)
g. Sidewalls to be plastic - not covered
h. Window trim to match sidewalls
i. Headliner to be plastic - not covered
j. 115 Volt Outlet with Inverter
k. Air and Vac Pumps with Control Panel in side windows
l. Flood Lights (2)
m. High Intensity Lamp
n. Second Litter aft bulkhead mounts
o. Lighting Cabin, Standard Type
p. Seat Belts for all passengers to match vinyl
q. Brush Aluminum air outlets, lighting outlets, seat buckles, and door handle
r. Storage Pockets for aircraft papers
s. Storage Pockets for pilot door - vinyl
t. Enlarged cockpit and cabin air vent outlets

All materials are to be selected from current stock. Special ordering of materials may result in a surcharge and delays.

All additional equipment as specified in Exhibit IV and incorporated herein by reference, will be supplied by HAT as required.

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EXHIBIT IV

HELICOPTER SPECIFICATIONS

VII. GENERAL

1. This section of the RFP outlines the specifications for the helicopter patient air transport services to be provided by a selected Air Charter Service Contractor ("Contractor") to Harborview Medical Center ("HMC").

2. The Contractor shall supply on an "as needed" basis a twin engine helicopter. The helicopter will be made available on a 24 hour a day, 7 day-a-week basis.

VIII. HELICOPTER EQUIPMENT AND PERFORMANCE SPECIFICATIONS

All helicopters furnished under this agreement shall be twin engine aircraft equipped for operations in IFR conditions. In addition to the items below, the following characteristics are important: loading and unloading, acceptance of the medical retrofit package, the amount of maintenance or down time, internal and external noise levels, speed and general internal cabin configurations. Specifically, the aircraft must meet the following minimum standards (All equipment is subject to approval by HMC):

A. A cruising speed of not less than 100 miles per hour.

B. A cruising range of not less than 300 miles plus appropriate reserves.

C. All equipment required for FAA, Part 135, day or night, VFR and IFR operations.

D. A cabin configuration that allows the easy installation and removal of patient transport incubators or stretchers. The patient should not have to be tilted greater than 20 degrees when loaded into the aircraft.

E. Capability of operating within the hospital service area while carrying:

1. a two-member transport team

2. two adult patients or two transport incubators

3. equipment and supplies with an approximate total maximum load of 700 pounds for all the foregoing, excluding over water equipment.

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The hospital service area referred to herein is the area within the following geographic boundaries:

To the north, the Canadian border; to the west, the Pacific Ocean; to the east, the Cascade mountain range; to the south, the Washington-Oregon border.

It is not anticipated that the aircraft will be used to fly over the Cascade range. However, there will be a considerable amount of transport over large bodies of water. Therefore, the appropriate FAA over-water transportation regulation equipment should be included in the bid and specifically detailed. The geographic area described roughly provides a 100 mile distance to the north of Seattle, 90 miles to the west, 150 miles to the south and 70 miles to the east.

F. Means of securely anchoring an isolette or stretcher, air, oxygen bottles and ventilators to the air frame.

G. A method of providing air and oxygen to the patient care portion of the aircraft. Outlets must be of standard hospital type. This system must be capable of supplying 50 PSI hospital standard of air and 100% oxygen for approximately 3 hours of operation of transport ventilators. The air and oxygen installation must also have provisions for an air/O_2 blender/regulator as an integral part of the retrofit. The contractor will be responsible for providing full air oxygen tanks for the aircraft at each departure.

H. A 115 volt, 60mx A/C sine wave power source with a standard three-prong double receptacle for each patient capable of operation with either engine inoperative and of enough integrity to operate sophisticated solid-state circuitry and servo motors. The system must have a minimum load capacity of 2,200 watts and have a minimum of three outlets per patient.

I. A means of aircraft-to-hospital communication. This must be a first-person communication between the transport team and either the referring or receiving hospital personnel.

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J. An adequate light source to provide proper patient care within the aircraft (100 foot candles on the incubator or stretcher). Lighting must be of the non-flourescent type with dimming capabilities.

K. Suction available in the cabin. The suction units must be able to provide 40 CM HG of vacuum to each outlet. There must be one outlet per patient.

L. IV holders available overhead.

M. The contractor must provide for each aircraft life jackets and a survival package containing items agreed upon by the contractor and HMC.

N. The heating system must have the capability of maintaining the cabin temperature at about 75° during all phases of operation.

O. The helicopter provided shall be equipped and configured with the avionics and non-avionic equipment needed to satisfy the demands of the program.

P. It will be the Contractor's responsibility to maintain in good working order all contract provided equipment.

IX. IDENTIFYING THE AIRCRAFT

It will be the responsibility of the Contractor to identify each aircraft with colors, decals or marking that satisfy HMC's requirements and to maintain that scheme through the duration of the contract. The Bidder should propose a method of identifying the aircraft in his/her response to the RFP.

X. FLIGHT OPERATIONS

A. All aircraft that fly under this contract shall conform to all rules, regulations and requirements of the Federal Aviation Administration (FAA) of the United States Government. The Contractor shall maintain a current FAR Part 135 certificate.

B. The Contractor shall have the sole right to determine whether or not a given flight requested by HMC should be made from the standpoint of safety of operating the aircraft.

C. HMC may designate as passengers or medical team members anyone it chooses. The Contractor must transport all persons proposed by the medical team, including patients with communicable diseases, unless they constitute a threat to flight safety.

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EXHIBIT V

RATE STRUCTURE

Fixed Wing -

For the period from the effective date of this contract through June 30, 1986, rates shall be as follows:

	Fixed Monthly Cost	Cost Per Mile
Cheyenne III (dedicated)	$15,000	$2.59
Cheyenne III (backup)	0	$2.59
Cheyenne II (backup)	0	$2.40
(Jet)	0	$3.15

Helicopter -

For the period from the effective date of this contract through April 30, 1986, rates shall be as follows: For services rendered by SJC and its helicopter subcontractor HMC shall pay $2,000.00 (two thousand dollars) for each flight hour spent in transport, except that all public relations and training flights will be paid at a rate of $350 per flight hour. If the total number of flight hours during the twelve month period, May 1, 1985, through April 30, 1986, reaches 336 hours, then all additional flights will be charged at a rate of $800 per hour.

For the period from May 1, 1986 through June 30, 1986, rates shall be as follows:

For services rendered by SJC and its helicopter subcontractor HMC shall pay a fixed monthly rate of $30,000.00 (thirty thousand dollars) in advance on the first of each month, and in addition shall pay $800.00 (eight hundred dollars) for each flight hour spent in transport up to and including an accumulated average total of 360 hours per contract year and thereafter at the rate of $550.00 (five hundred, fifty dollars) per flight hours spent in transport, except that all public relations and training flights will be paid at a rate of $350 per flight hour.

Hours will be measured with a flight hour meter and shall include only hours spent in transport, measured from the amount of lift off to the moment of landing.

On July 1, 1986, rates shall be increased for the period July 1, 1986 through June 30, 1987, as follows: For each one per cent (1%) increase in the United States Department of Labor's consumer price index (CPI) for the United States city average for all urban consumers for all items except fuel, May 1986 vs. May 1985, the monthly rate and the rate per mile for the fixed wing aircraft will

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be increased by seventy-two hundredths (0.72%) of one percent (0.7%) and the monthly rate and the hourly rate for the helicopter shall be increased by nine-tenths of one percent (0.9%).

On July 1, 1987, July 1, 1988, and July 1, 1989, rates shall be increased according to the same formula described above.

Effective July 1, 1986, HMC or the participating hospital will pay, in addition to the rate per nautical mile identified above, an additional amount calculated as follows:

Fixed Wing:

An amount equal to 2/5 ¢ (two-fifths cent) per nautical mile (nm) for each 1¢ (one cent) increase per gallon in the cost of fuel to SJC at Boeing Field, Seattle, since the effective date of this agreement. Expressed as a formula, it would be:

Additional payment = $0.004 x nm x cents/gallon increase.

For example, assuming a flight of 1000 nm and a price increase of 30c/gallon, the additional payment under this formula would be:

$0.004 x 1000 x 30 = $120 additional payment.

This additional payment shall be computed in increments of 5¢ (five cents). Thus when the cost of fuel to SJC reaches 5¢ (five cents) above the price at the time this contract is signed, the price per mile of transport will increase 2¢ (two cents). When the price of fuel reaches 10¢ (ten cents) above the initial price, the cost per mile of transport will be 4¢ (four cents) above the base price agreed upon in Exhibit V. And so on.

Helicopter:

An amount equal to $2.75 per flight hour for each 5¢ (five cents) increase per gallon in the cost of fuel at Boeing Field, Seattle, since the effective date of this agreement.

Any decrease in fuel prices will result in a decrease in the rate per mile and per hour of transport according to the same principles described in the above paragraphs.

SJC shall provide HMC with verification of its current price per gallon for fuel and shall submit documentation of any change in price.

5/8/85

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EXHIBIT VI

XV. FACILITIES

THE CONTRACTOR SHALL PROVIDE:

A. Hangar facilities at Seattle's Boeing Field.

B. On site capabilities for routine (progressive) maintenance.

C. On field fuel 24 hours a day/7 days a week.

D. Priority handling of flight operations and maintenance of the aircraft over other operations and maintenance conducted by the Contractor.

E. Ambulance access to the aircraft.

F. On field or vendor controlled off-field maintenance facility for:

1. Routine air frame

2. Power plant including hot section and/or engine exchange.

3. Avionics

XVI. SAFETY

A. For HMC and the participating hospitals, safety is of the utmost importance and is our number one priority. The safety record of the Contractor will be investigated and will play an important role in the selection. The safe operation of the aircraft shall be reviewed as a function of aircraft maintenance, pilot training and experience, and operational protocols and other safety factors as may be appropriate.

B. Bidders must submit their safety records, including the records of the firm, the aircraft proposed for use and the pilots proposed for the service.

XVII. LIABILITY

A. The Contractor must agree to defend, indemnify and hold HMC and any participating hospitals harmless from and against any suits, claims and other liabilities, including reasonable attorneys' fees, court costs and related costs of defense, arising out of injuries to any persons or property damage caused by the acts or omissions of the Contractor, its directors, officers, employees and agents in the performance of the agreement entered into with HMC.

B. The Contractor must agree to accept responsibility for risk of loss of any equipment owned by HMC or the participating hospitals while stored on the Contractor's premises or being used on the Contractor's aircraft.

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EXHIBIT VII

SEATTLE JET CENTER

SJC

PILOT HIRING POLICY

Seattle Jet Center currently uses the following experience guidelines in selecting pilots for employment. These guidelines far exceed FAR Part 135 requirements and meet or exceed our company insurance requirements.

Pilot-in-Command (Captain)		Second-in-Command (Co-Pilot)	
Total P.I.C. time	3500	Total P.I.C. time	2000
Multi-engine-P.I.C.	1000	Multi-Engine-P.I.C.	250
Turbine - P.I.C.	500	Turbine experience preferred	
Cheyenne experience preferred		ATP Preferred	
ATP Required			

SEATTLE JET CENTER GUIDELINES

Initial Training - All Pilots

2 day ground school conducted in-house for each type of aircraft operated.

3 hours of simulator instrument proficiency training with emphasis on S.E. Alaska approaches.

2 hours of aircraft training followed by a minimum of 20 hours of enroute training for captains and 10 hours of enroute training for co-pilots.

18 hours FAR Part 135 ground school.

Recurrent Training - All Pilots

1 day refresher ground school on aircraft systems and equipment every 12 months.

1 day FAR Part 135 Recurrent ground school every 12 months.

3 hours per crew of simulator training on a quarterly basis.

2 hours per crew of aircraft training every 12 months.

One pilot will attend factory school yearly and conduct a refresher ground school upon return.

Boeing Field
7001 Perimeter Rd. S.
Seattle, WA 98108

Telephone
(206) 763-8182

24-Hour Fuel-Charter
ARINC 129.8

40

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EXHIBIT VIII

HAT Training/Experience Requirements

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EXHIBIT IX

Equipment List

AIRLIFT NORTHWEST EQUIPMENT AT SEATTLE JET CENTER

1	Servo 900C
1	Servo 900B
3	Rid Humidifiers
2	Spirometers
4	Lifepaks
12	Lifepak batteries
1	Battery support system
10	M Cylinder Regulators
4	D Cylinders
14	Regulators
7	Stretchers
1	Basket Stretcher
4	Backboards
2	"Yellow Man" backboards
4	Laerdal portable suction units
3	Doppler
1	Doppler
2	Isolettes
3	Isolette batteries
1	Tektronix monitor
1	Healthdyne Ventilator
2	O_2 Analyzers
7	Holter pumps
2	Pacemakers
3	MAST Trousers
	Traction equipment
	Vacuum splints
35	Equipment bags @ $100/bag
15	Sphygmomanometers

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JAG

Seattle Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

klp

MASTER USE PERMIT

September 1, 1986

DRAFT ENVIRONMENTAL IMPACT STATEMENT - PUBLIC HEARING

Seattle's Department of Construction and Land Use has issued a Draft Environmental Impact Statement (EIS) for the proposed:

Project Description

4800 SAND POINT WY NE ZONE I-4/I-2/SF 5 PROJ #8405870/KROLL 16W TO CONSTRUCT AN EMERGENCY HELISTOP FACILITY ACCESSORY TO AN EXISTING HOSPITAL/ MEDICAL CENTER (CHILDREN'S HOSPITAL & Medical Center).

The following Master Use Permit components are part of this application
SEPA ENVIRONMENTAL DETERMINATION
COUNCIL CONDITIONAL USE
TO ALLOW A HELISTOP WITHIN A MAJOR INSTITUTION ZONE.

Further Information Available:
A copy of the Draft EIS is available for public review at the downtown Seattle Public Library, 1000 Fourth Avenue the Governmental Research Assistance Library, Seattle Municipal Building, and the branch library in the neighborhood in which the project is located.

Additional information and a limited number of copies of the draft EIS are available through the Master Use Information and Notification Center, Room 408, Seattle Municipal Building (625-5200).

Opportunity For Public Involvement

A public hearing to gather comments on the environmental impacts of the proposal will be held on
SEPTEMBER 23, 1986 at LAURELHURST ELEM SCHOOL 06:00PM.
4530 46th Ave. N.E.
In addition, written comments may be submitted through OCTOBER 02, 1986

Comments should be addressed to: Director, Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.
If you wish to receive notice of the decision(s) on this project or to receive notice of the availability of the Final EIS (which responds to comments made at the public hearing or on the Draft EIS), please return the completed form below to: Seattle Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.

****

APPLICATION 8405870

____ I wish to receive notice of the decision.

____ I wish to receive notice of the availability of the Final EIS.

Name _____ Address _____

_____ ZIP _____

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City of Seattle
Charles Royer, *Mayor*

King County
Tim Hill, *Executive*

Seattle-King County Department of Public Health
Bud Nicola, M.D., M.H.S.A., *Director*

RECEIVED
OCT 2 1986
DEPT. OF CONST. & LAND USE

October 1, 1986

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Re: Draft Environmental Impact Statement
for Children's Hospital Helistop

Dear Ms. Miller:

The Noise Section of the Draft Environmental Impact Statement (DEIS) is adequate and well done, however, I do have concerns about the adequacy of the DEIS in other areas that may relate to noise concerns. Specifically, one of the alternative Helistop locations is the proposed University of Washington Helistop noted on page 39 where it indicates that there is an already-constructed Helistop on the roof of an expansion wing. I visited the University of Washington and examined the so-called Helistop there. This area would be, for several reasons, very inappropriate to be used as a Helistop. First, the Helistop would cause an extremely disruptive noise impact for the patients at the University Hospital. Secondly, the safety of the proposed Helistop is in question. This is mainly because of the additional structure to the south of the proposed Helistop which would prevent any aborted landing attempts and also, if the winds were coming out of the south, cause downdrafts which would make it very difficult to land the aircraft at the proposed Helistop. This and other safety considerations have been discussed with helicopter pilots and they concur that the area would not be an ideal Helistop. When inspecting this site I also noted that there is a very substantial steel rail around the area which could pose another very significant safety problem for approaching and departing aircraft.

One of the few logical Helistop areas near the University Hospital would be the roof of an existing garage just north of the proposed University Helistop. Using the roof of this garage which has been stressed to handle the weight of the newer, heavier helicopters, one could take patients from the arriving helicopter, transport them either to the University through the existing system of elevators and tunnels or transport them to Children's Hospital via ground transport. I will have a complete analysis of the proposed University Helistop at a later date, however, several things such as the strength of the existing roof and its capability of holding the newer, heavier aircraft, is in question at this time, and I feel that using it as an alternative would be unwise.

Environmental Health Division Room 1510 Public Safety Building Seattle, Washington 98104 (206) 587-2722

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There are other anomalies in this DEIS, one of which is Table 5. It indicates that there were no rotary-winged aircraft transports to Childr s Hospital between the years of 1981 through 1984. It was my understanding that Graves Field had been used prior to 1984 for transporting patients to Children's Hospital, and if this is not the case it should be made more clear than Table 5 indicates. Other areas of concern include the reference to the Washington Administrative Code 248-18-285, indicating that a helicopter cannot be prohibited from landing without violating that code. The applicable federal law should also be referenced. In addition, approach and departure routes other than those indicated should be noted since, during certain weather conditions, the indicated approach and departure routes may not be the safest. Different approach and departure routes would also bear on the noise impact suffered by the community.

In conclusion, I feel that the DEIS as it now stands should have a supplement that would be more detailed to satisfy the various noise concerns that would be caused by other procedures such as landing at the University of Washington, landing at Graves Field, and alternate approach and departure routes.

Sincerely,

Curt Horner

Curt Horner, Coordinator
Noise Program

CH:mw

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(this notice is automated)

NOTICE OF DECISION: DECLARATION OF SIGNIFICANCE/SCOPING

CC84-022

(Area) NE Application # 8405870 Zone: I-2/SF5000 Kroll: 16W

The Director of the Department of Construction and Land Use has reviewed the application described below and has issued a declaration of significance (DS) on this project. The public is invited to identify specific significant environmental impacts and issues which should be addressed in the environmental impact statement (EIS).

(Project description/address)

Children's Orthopedic Hospital and Medical Center

4800 Sand Point Way NE

Applicant proposes to construct an emergency helistop facility accessory to an existing hospital/medical center.

Comments on the scope of the Environmental Impact Statement are to be sent to the following address [illegible] by February 3, 1986.

Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

The Declaration of Significance is a part of the file on this matter and is available for public review at Room 400, Seattle Municipal Building.

MU31/1,10

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LARGE SIGN INSTALLATION CERTIFICATION

Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Attention: Land Use Information Center

On 16 January 1985 (date) an early project notice large sign was installed for the Proposed Land Use Action located at COHMC 4800 Sandpoint Way NE 98105 (address) and identified by application # CC 84-022. I hereby testify that the sign installed fully complies with the large sign layout specifications and installation standards of Director's Rule # 22-82, and that the sign will be maintained until the Final Decision or Permit is issued or denied, whichever comes first.

Dorothy J. Deuter
Applicant's Signature

DATE 17 Jan 1985

SL:kao
5/25/82

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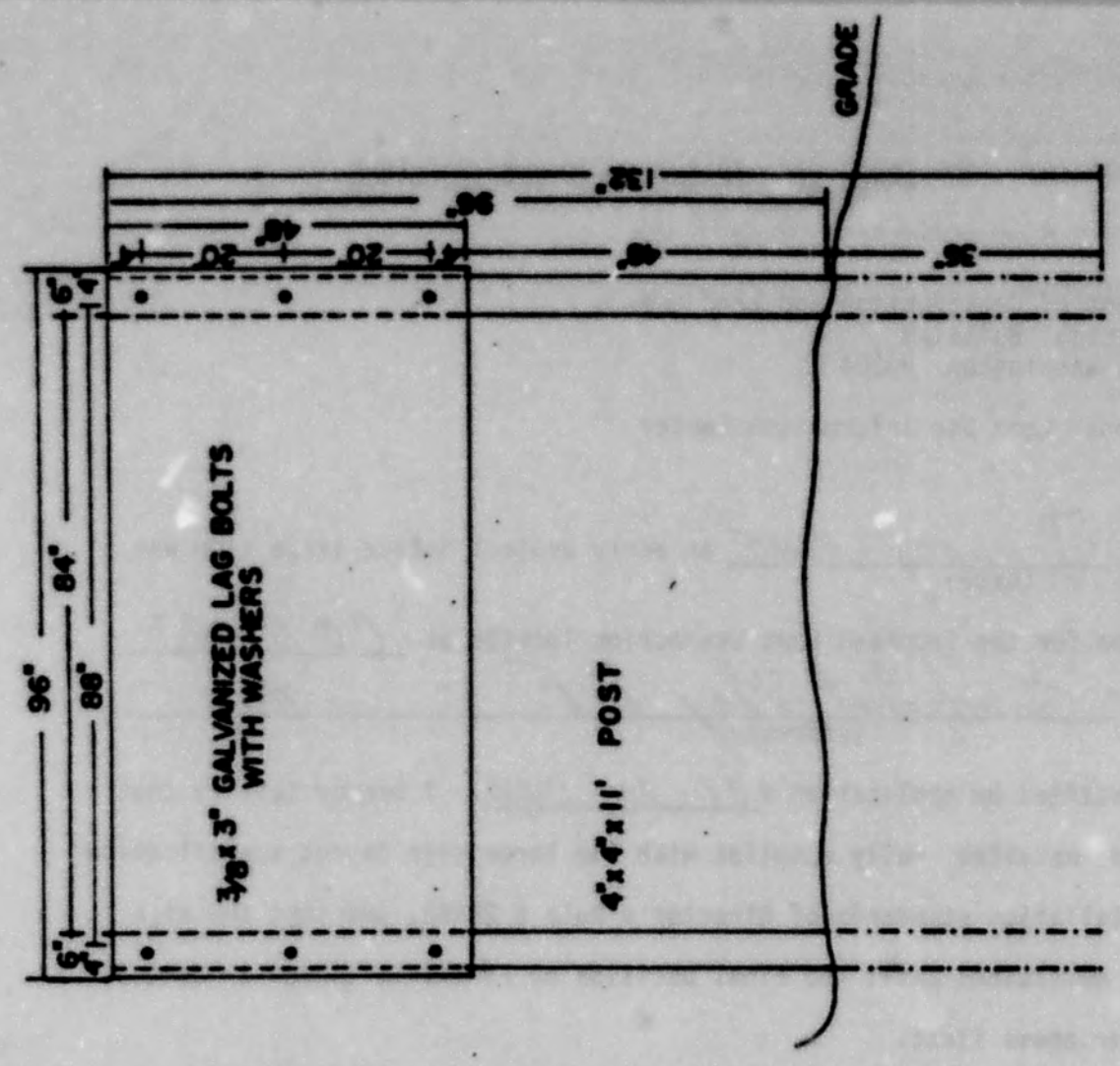

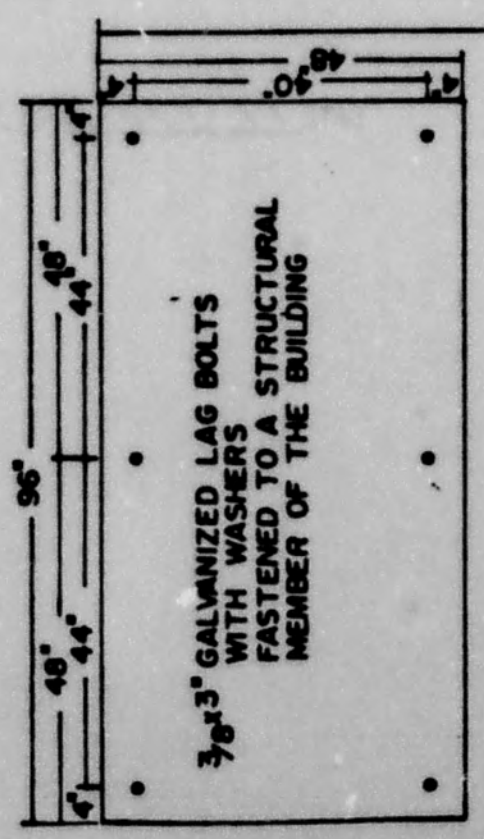

Attachment "B"

CITY OF SEATTLE—DEPARTMENT OF CONSTRUCTION AND LAND USE

LAND USE CORRECTION SHEET

At Children's Orthopedic Hospital
4800 Sand Point Way NE
84-5670 Project Number — Date of Application

☐ Zoning/Land Use Code
☒ Land Use Review
☐ OTHER

Mail Corr. Sheet to:
Dorothy Teeter & Steve Scheibe
Address: C/O H
4800 Sand Point Way NE
Seattle Wa Zip 98105

Checked by: Hasmi Ip Date 11-14-85
Phone 625-2781

NOTE: Your plans have been reviewed for compliance with the Land Use/Zoning code and ALL SETS OF PLANS HAVE BEEN PLACED ON HOLD pending the resolution of the corrections listed below. It has been determined that the corrections necessary are significant and to avoid duplicate reviews, no sets of plans will be routed for further plans examination until zoning/land use corrections are made. Meetings with Zoning Plans Examiners or Land Use Specialists to discuss the corrections may be made BY APPOINTMENT ONLY. Call the phone number listed above to schedule an appointment.

To avoid delays of your project, you may pick up your plans for corrections at room 408 Municipal Building. It is the responsibility of the applicant to make all corrections in INK or with replacement sheets, (no pencil corrections will be accepted) and return the plans for further processing.

With reference to the Environmental Study submitted by Shapiro & Associates for COH, please provide these additional info:

1. Fig. 3 referred in the study is not found in the binder. What is it?
2. (P. 25) Explain the existg "therapeutic" use of the kitchen garden, & any change of its use affected by the proposed helipad.
3. Compare noise impact of the helicopter [redacted] with that of the existg ambulance services (land transport from the UW field), what differences, if any [redacted] will there be?

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Seattle Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

klp

MASTER USE PERMIT

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In addition, written comments may be submitted through OCTOBER 02, 1986

Comments should be addressed to: Director, Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.
If you wish to receive notice of the decision(s) on this project or to receive notice of the availability of the Final EIS (which responds to comments made at the public hearing or on the Draft EIS), please return the completed form below to: Seattle Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.

****

APPLICATION 8405870

____ I wish to receive notice of the decision.

____ I wish to receive notice of the availability of the Final EIS.

Name _____ Address _____

_____ ZIP _____

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

CITY OF SEATTLE
DEPARTMENT OF CONSTRUCTION & LAND USE
AFFIDAVIT OF NOTIFICATION

State of Washington)
County of King) ss.

The undersigned, being first duly sworn, on oath states:

That on this day, August 29, 1986, affiant caused to be deposited in the mails of the United States of America properly stamped and addressed notice directed to the applicant and to all property owners and all residents (addressed to "Occupant") of the property concerned and within Three Hundred (300) Feet of the boundaries of the property using for this purpose the property ownership records of the King County Treasurer and the addresses listed in the latest edition of Polk's Directory or its successor publication, and to news media and interested civic groups as provided by the Rules, advising of the time, place and purpose of a public hearing on the petition/proposal/application identified below.

Mary Rohn

The undersigned, being first duly sworn, on oath states: That on this day 8/28/86 affiant posted not less than four (4) placards in conspicuous public places within Three Hundred (300) Feet of the area concerned, stating the time, place and purpose of a public hearing on the petition/proposal/application identified below.

Vivi Pigott

Subscribed and sworn to this 29 day of August, 1986.

Marion Heiser
Notary Public in and for the State of Washington, residing at Seattle

Petition/Proposal/Application No. 8405870 for SEPA-Environmental Determination ~~& Council Conditional Use & DEIS~~

Petitioner/Initiator/Applicant Dorothy Tecter for Children's Orthopedic Hospital

Property Address/Location 4800 Sand Point Way N. E.

Date of Public Hearing September 23, 1986

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

LARGE SIGN INSTALLATION CERTIFICATION

Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Attention: Land Use Information Center

RECEIVED
JAN 22 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

On 16 January 1985 (date) an early project notice large sign was installed for the Proposed Land Use Action located at COH MC 4800 Sandpoint Way NE 98105 (address) and identified by application # CC 84-022. I hereby testify that the sign installed fully complies with the large sign layout specifications and installation standards of Director's Rule # 22-82, and that the sign will be maintained until the Final Decision or Permit is issued or denied, whichever comes first.

Dorothy J. Sutter
Applicant's Signature

DATE 17 Jan 1985

SEPA -
comment ends 1/30/85

SL:kao
5/25/82

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8405070
Related Permits & Files

Related Controller Files and Council Bills

CC 84-22
Council Land Use Application Number

Application made: 11-13, 1984

Receipt Number | Amount
209504 | 640
209732 | 272.50

COUNCIL LAND USE APPLICATION
CITY OF SEATTLE
Department of Construction and Land Use

I2-SF5000
Kroll Map Page 16W Zoning I4-SF5000

Property Address 4800 SAND POINT WAY NE

Legal Description: Lot SEE ATTACHED
Block
Addition

Lot Size IRREGULAR Alley Width NA
Street Width 100, 60, 60

Approvals Requested	Action/ Referral	Fee
Council Land Use Components		
__ Rezone		
✓ Conditional Use		640.00
__ Subdivision		
__ Planned Unit Development		
__ Public Project		
__ City Facility		
__ Master Plan		
__ Code Amendment		
Master Use Components		
__ Use		
__ Variance		
__ Admin. Cond. Use		
__ Special Exception		
✓ SEPA Review		272.50
__ Other		
TOTAL LAND USE FEES:		

G=Granted; C=Granted with Conditions; D=Denied

Other Council Approvals Required This Permit
__ Skybridge
__ Street Vacation

Description of Proposal: to construct an emergency helistop facility accessory to an existing hospital/medical center

Project Value 50,000

Land Use Tech. KH
Land Use Spec.

	Yes	No
Environ. Sensitive Area?	__	✓
Shoreline Area?	__	✓
Protected Dist. or Landmarks Approval?	__	✓

Existing Use: HOSPITAL/CLINIC OFFICE/GARAGE
Requested Use: ACCESSORY HELISTOP
Authorized Use:

Owner's Name Children's Orthopedic Hosp
Contact Person Dorothy Teeter
Address 4800 Sand Point Way NE
PO Box C6371 UNIVERSITY STATION, SEATTLE 98105
Phone 526-2004
Dorothy F. Teeter — Director of Planning
Applicant's Signature — Relationship to Project CB4/C

MISC. NOTES - DEPT. USE ONLY:

Director of Department of Construction and Land Use By:

Application Approved _____, 19__
Date of Expiration _____, 19__

CAUTION:
Construction or substantial progress toward construction of a project for which a Council Land Use Master Use Permit or construction permit has been granted must be undertaken prior to the expiration date.

Not valid unless signed by the DIRECTOR OF THE DEPARTMENT OF CONSTRUCTION AND LAND USE. Starting construction without a building permit is punishable by fine and/or imprisonment. All work shall be done in accordance with this permit and approved plans.

LU25/LU1

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TC/25

CITY OF SEATTLE

ZONING RECEIPT

DEPARTMENT OF CONSTRUCTION AND LAND USE RECEIPT

date 11-13 1984 payor Children's Ortho

bldg. address Hospital

owner 4800 Sand Pt Way NE dollars $640.00

permit no. CC 84-22 amt. received $ W-45171

er inv. # check no. 46171

	fee	org.	account	task	option	proj.	amount
Z1	lot boundary/ short plats	2138	34182		S01		
Z2	cert. of land use	2138	34182		S02		
Z3	design terms/depart:	2138	34182		S03		
Z4	rezone	2138	34182		Z01		
Z5	council cond. use	2138	34182		Z02		640.00
Z6	cond. use & special exceptions	2138	34182		Z03		
Z7	variance	2138	34182		Z04		
Z8	use/ zoning plan check	2155	32211				
Z9	SMA	2138	32290		W01		
Z10	SEPA check	2138	34182		A01		
	hrly:						

$640.00

Please examine voucher and report errors at once

By _____
Dept of Construction and Land Use

Z 09504

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

THE CHILDREN'S ORTHOPEDIC HOSPITAL
AND MEDICAL CENTER
4800 SAND POINT WAY N.E.
P.O. BOX C5371, UNIV. STA.
SEATTLE, WASHINGTON 98105

19-3
1250

W-45171

TO THE RAINIER NATIONAL BANK
SECOND & SPRING OFFICE
SEATTLE, WASHINGTON

PAY The sum of 640 dol's 00 cts

CHECK DATE	AMOUNT
11/12/84	$640.00

THE CHILDREN'S ORTHOPEDIC HOSPITAL
AND MEDICAL CENTER
WORKING FUND

Barbara E. Pringle TREASURER

ASSOCIATE ADMINISTRATOR FINANCE

TO THE ORDER OF
City of Seattle
Dept. of Construction & Land Use
400 Municipal Bldg.
Seattle, WA 98104

⑈045171⑈ ⑆125000037⑆ 29204088 80⑈

(HI) — For 6th Ave

LAND USE - APPLICATION ACTIVITY RECORD
City of Seattle
Department of Construction and Land Use

490

Note: Complete all blanks on this form. If no information is provided by applicant/ contact person or LU staff to complete the blank, then indicate by "NA."

Project Address: Children Orthopedic Hospital LU Staff Mozeika
4800 Sandpoint Way NE Date 10-15-84

Applicant/Contact Person Dorothy Teeter Phone 526-2004

PROPOSAL DESCRIPTION: Plans: ✓Yes __No __Detailed? Zone: Institution (Ia) Kroll: 16W
Shoreline: N/A
Environmentally Sens.: N/A

SUMMARY OF DISCUSSION:

Potential MUP/Other Components	Code Section
MI	23.48.05 →
Council Conditional Uses for Heli stops	

Need to fill out a new environmental checklist (check if needed SEPA)
Need to discuss alternative sites for location of Helipad.

	Element	Fee
	Use	•
	Variance	300/640
	Admin. Cond. Use	300/640
	Special Exception	300/640
	Shoreline Development	•
	Shoreline Variance	•
	Shoreline Cond. Use	•
	Short Subdivison	640/*
	Lot Boundary Adj.	256
✓	SEPA Review	•
	Large Sign ?	NA
	Curb Cut Driveway	•
	Add. On-Street Parking	•
	Street Landscaping	•
	Struc. Bldg. Overhang	224/*
	Areaway	224/*
	Sidewalk Cafe	224/*
	MPD	•
	Greenbelt	•
✓	Council Cond. Use	640
	Rezone	640/*
	Text Amend.	•
	Major Institution	1,280/*
	PUD	1,280/*
	Subdivision	1,280/*
	Design Departure	320/*
	Other	•

* Variable Fee

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(this notice is automated)

noTICE OF DECISION: DECLARATION OF SIGNIFICANCE/SCOPING

CC84-022

(Area) NE Application # 8405870 Zone: I-2/SF5000 Kroll: 16W

The Director of the Department of Construction and Land Use has reviewed the application described below and has issued a declaration of significance (DS) on this project. The public is invited to identify specific significant environmental impacts and issues which should be addressed in the environmental impact statement (EIS).

(Project description/address)

Children's Orthopedic Hospital and Medical Center

4800 Sand Point Way NE

Applicant proposes to construct an emergency helistop facility accessory to an existing hospital/medical center.

Comments on the scope of the Environmental Impact Statement are to be sent to the following address ~~by (date)~~ by February 3, 1986.

Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

The Declaration of Significance is a part of the file on this matter and is available for public review at Room 406, Seattle Municipal Building.

MU31/f.10

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Authorized to apply: Yes ✓ No ___

Applicant notified of pending Land Use Policy/Code changes: N/A

The information given on this form is a preliminary, qualified assessment based on information provided by the applicant/contact person. Further screening at application, application review or at plans check may disclose additional requirements, reviews or permits. Additional fees may be required pursuant to the Permit Fee Ordinance.

Applicants are required to obtain application information from the 5th Floor Application Information Center. The applicant must complete certain forms before an application will be accepted. To make application, an appointment must be made by calling 625-2310.

This pre-application conference record is valid for six months or until the Zoning or Land Use Code are revised, whichever is sooner.

Applicant/Contact Signature

LU Staff Signature

This completed form must be presented to the Permit Application Center when an application is made for this proposal. No application will be accepted without this form.

cc: _____

_____

LU21/pa3

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Seattle
Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

Re: Scoping of Environmental Impact Statement
MUP 8405870

Nancy Greenawalt
Children's Orthopedic Hospital
P. O. Box C5371
4800 Sand Point Way N.E.
Seattle, Washington 98105

Dear Ms. Greenawalt:

Based upon the Department's analysis and upon letters received during the scoping comment period, our scoping determination for the Environmental Impact Statement for your application for a helistop permit is as follows:

AREAS OF IMPACT

Noise
Vibrations
Safety
Cumulative land use impacts of emergency medical transport by helicopter in the Seattle-King County region
Alternatives
- alternative sites off-campus, including UW Graves Field (soccer field)
- shared usage of sites
- no action alternative

MITIGATION MEASURES

Possible mitigation measures discussed in the EIS shall include the following:
- flight paths
- number of flights
- usage and location of U. S. Army (M.A.S.T.) or other agency helicopter landings
- off-campus pick-up of medical teams
- liability insurance
- criteria for use of helicopters
- plan for monitoring use

Comment letters should be carefully reviewed by the consultants preparing the EIS. The letters contain concerns regarding background data, impacts, study methodology and possible mitigation measures, within the scope of the EIS just outlined.

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If you have questions on this scoping determination, please call me at 625-4509.

Sincerely,

BEATRICE FARRAR RYAN
Interim Director

By
JULIA GIBC
Land Use Specialist

JG:vg

cc: Glen Bachman, Shapiro and Associates

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EXTRA COPY

Children's Hospital and Medical Center Helistop

Draft Environmental Impact Statement

September 1986

City of Seattle
Department of Construction & Land Use

The intent and purpose of this Draft Environmental Impact Statement is to satisfy the procedural requirements of the State Environmental Policy Act (RCW 43.21c), City Ordinance 111866, as amended. This document is not an authorization for an action, nor does it constitute a decision or a recommendation for an action; in its final form it will accompany recommended actions and will be considered in making the final decision on the proposal.

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DRAFT
ENVIRONMENTAL IMPACT STATEMENT
FOR CONSTRUCTION
OF A HELISTOP
AT CHILDREN'S HOSPITAL AND MEDICAL CENTER

City of Seattle
Department of Construction and Land Use

Prepared in Compliance with

The State Environmental Policy Act of 1984
Chapter 43.21C, Revised Code of Washington

SEPA Rules, Effective April 4, 1984
Chapter 197-11, Washington Administrative Code

City of Seattle Ordinance 111866

Date of Issue: September 2, 1986

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FACT SHEET

Title and Description	The proposed action is for approval of a Council Conditional Use Permit to allow development of a he'istop outside the Emergency Room entrance of Children's Hospital and Medical Center (Children's). Implementation of the Proposed Action would allow 15-20 critically ill children to be brought by helicopter to Children's each month without exposing the child to the risk of life-threatening delays or transfers associated with ground transport. Alternatives to the Proposed Action include the construction of a helistop at University of Washington's Intramural Field, or sharing a helistop with University Hospital, both of which involve ground transport of critically ill patients to Children's, a Limited Landings at Children's Alternative involving no construction of the Proposed Action or alternatives and landing of helicopters at Boeing Field and Harborview with ground transport to Children's and with only a few helicopter flights (with destabilizing patients) landing on the grassy area outside Children's Emergency Room entrance. In addition, a No Action Alternative is characterized by all flights landing at Boeing Field, Harborview or other helistop, with ground transport of patients to Children's.
Action Sponsor	Children's Hospital and Medical Center 4800 Sand Point Way N.E. Seattle, Washington 98105
Approximate Date of Implementation	Construction would be completed within approximately two months of approvals.
Lead Agency	City of Seattle Department of Construction and Land Use
Responsible Official and Contact Person for Questions, Comments and Information	Julia Gibb City of Seattle Department of Construction and Land Use Room 408, Municipal Building Seattle, Washington 98104 Phone: (206) 625-4509
Licenses, Permits, and Approvals	City of Seattle Council Conditional Use Permit City of Seattle Building, Electrical Permits FAA Approval

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Authors and Principal Contributors to EIS

This Environmental Impact Statement (EIS) was prepared under the direction of the City of Seattle, Department of Construction and Land Use. Research and analysis were provided by the following firms:

Shapiro and Associates, Inc., Environmental Consultants - Glenn Bachman, Ray Sachs, Susan Killen

Towne, Richards and Chaudiere - Jan Hauge

Location of Background Data

Land Use Review Section
Department of Construction and Land Use
Room 408, Municipal Building
Seattle, Washington 98104
Phone: (206) 625-4509
Refer to File No. 8405870

Shapiro and Associates, Inc.
Suite 1812, The Smith Tower
506 Second Avenue
Seattle, Washington 98104
Phone: (206) 624-9190

Issue Date of Draft EIS

September 2, 1986

Date Comments Due

October 2, 1986

Public Hearing

September 23, 1986

Public Agency Review and Response

In accordance with the SEPA guidelines, the Draft EIS is being circulated for a 30-day review period. Information on the availability of this Draft EIS will appear in the Seattle Daily Journal of Commerce and will be included in the Department of Construction and Land Use (DCLU) Land Use Information Bulletin; notice will also be posted within the Department of Construction and Land Use. The Department invited suggestions on items to be covered in the scope of this document. These letters are on file in the Department and are available for review there.

Comments on this Draft EIS are welcome and should be addressed to:

Holly Miller, Director
Department of Construction and Land Use
408 Municipal Building
Seattle, Washington 98104

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Approximate Date of Final Action by Lead Agency	December 22, 1986
Type of Agency Decisions	Council Conditional Use to grant, conditionally grant, or deny permits for the Proposed Action.
Cost to Public	Copies of this Draft EIS have been printed and made available for reference at the Seattle Public Library, Downtown, Northeast and University Branches, University of Washington Library, and the Governmental Research Assistance Library. Until the supply runs out, some free copies of this DEIS are available at the Department of Construction and Land Use. Additional copies are available from the Land Use Review Section, Department of Construction and Land Use, at the cost of production ($.25 first page, $.10 each additional page).

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ELEMENTS OF THE ENVIRONMENT

Following is a list of Elements of the Environment as set forth in Chapter 25.05.444 of the Seattle Municipal Code. Items marked "Reviewed" are discussed in this document, on pages specified in the preceding Table of Contents. Items marked "Not Reviewed" have impacts deemed to be non-significant, for reasons briefly stated thereafter.

1. Natural Environment

a. Earth

i. Geology	Not reviewed; no unusual conditions exist on this urban site.
ii. Soils	Not reviewed; no unusual conditions exist on this urban site.
iii. Topography	Not reviewed; no unusual conditions exist on this urban site.
iv. Unique Physical Features	Not reviewed; no unique physical features exist on this urban site.
v. Erosion/Enlargement of Land Area (Accretion)	Not reviewed; construction-related erosion would not be significant.

b. Air

i. Air Quality	Not reviewed; helicopter emissions would not be significant.
ii. Odor	Not reviewed; helicopter emissions not expected to generate significant odor.
iii. Climate	Not reviewed; construction of helistop and operation of helicopter would not result in significant impact.

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c. Water		
	i. Surface Water Movement/ Quantity/Quality	Not reviewed; no surface water on site.
	ii. Runoff/Absorption	Not reviewed; amount of impervious surfaces would not be significant.
	iii. Floods	Not reviewed; not applicable to this urban site.
	iv. Groundwater Movement/ Quantity/Quality	Not reviewed; not applicable to this urban site.
	v. Public Water Supplies	Not reviewed; water consumption of proposal expected to have no impact on overall City of Seattle supply.
d. Plants and Animals		
	i. Habitat for and Numbers or Diversity of Species of Plants, Fish or other Wildlife	Not reviewed; currently only usual urban birds or small mammals can reasonably be expected on site.
	ii. Unique Species	Not reviewed; none exist on site.
	iii. Fish or Wildlife Migration Routes	Not reviewed; not applicable to site.
e. Energy and Natural Resources		
	i. Amount Required/Rate of Use/Efficiency	Not reviewed; insigificant amounts of energy consumed.
	ii. Source/Availability	Not reviewed; energy requirements would have insignificant effect on overall supplies.
	iii. Nonrenewable Resources	Not reviewed; the only use of resources would be for normal building materials, and energy requirements.
	iv. Conservation and Renewable Resources	Not reviewed; no significant impacts on conservation and renewable resources.
	v. Scenic Resources	Not reviewed; no significant impacts on scenic resources.

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2.	<u>Built Environment</u>	
a.	Environmental Health	
	i. Noise	Reviewed
	ii. Risk of Explosion	Reviewed; discussed under Traffic Hazards (Helicopter Safety).
	iii. Releases or Potential Releases to the Environment Affecting Public Health, such as Toxic or Hazardous Materials	Not reviewed; proposal involves no significant hazard in this area.
b.	Land and Shoreline Use	
	i. Relationship to Existing Land Use Plans and to Estimated Population	Not reviewed; proposal involves no significant departure from land use.
	ii. Housing	Not reviewed; proposal has no significant impact on housing.
	iii. Light and Glare	Not reviewed; increase in light and glare determined to be non-significant.
	iv. Aesthetics	Not reviewed; proposal involves no significant changes to aesthetic character.
	v. Recreation	Not reviewed; no significant demand for recreation resources would be generated.
	vi. Historic and Cultural Preservation	Not reviewed; no affected historic or cultural resources have been identified.
	vii. Agricultural Crops	Not reviewed; small therapeutic garden on-site would be relocted.
c.	Transportation	
	i. Transportation Systems	Not formally reviewed; the proposed action by its nature would alter the transport of pediatric medical teams and patients; discussed under Introduction, Description and Traffic Hazards (Helicopter Safety).
	ii. Vehicular traffic	Not reviewed; proposal not expected to have significant impact on vehicular traffic.

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iii.	Waterborne, Rail and Air Traffic	Not reviewed; proposal would generate relatively insignificant amount of air traffic, which is quantified in description of proposed action.
iv.	Parking	Not reviewed; not applicable to site or proposed action.
v.	Movement/Circulation of People or Goods	Not reviewed; proposal would not have significant impact on movement/circulation.
vi.	Traffic Hazards	Reviewed
d.	Public Services and Utilities	
i.	Fire	Not reviewed; existing and future services not significantly affected.
ii.	Police	Not reviewed; existing and future services not significantly affected.
iii.	Schools	Not reviewed; no significant increase in school population is anticipated to result from development of this project.
iv.	Parks or Other Recreational Facilities	Not reviewed; not applicable to site.
v.	Maintenance	Not reviewed; owner would contribute taxes to pay for maintenance of public systems.
vi.	Communications	Not reviewed; proposed action not expected to disrupt communications.
vii.	Water/Storm Water	Not reviewed; project would be served by existing system with minimal upgrade.
viii.	Sewer/Solid Waste	Not reviewed; project would not require sanitary sewer or generate solid waste.
ix.	Other Governmental Services or Utilities	Not reviewed; provision of energy discussed in energy section; demand for government services would be small.

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State of Washington

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Washington State Department of Ecology
Washington State Department of Social and Health Services
Washington State Historic Office
Washington State Department of Transportation
Washington State Planning and Community Affairs
Washington State Commerce and Economic Development

Regional Agencies

Puget Sound Council of Governments
Puget Sound Air Pollution Control Agency
Puget Sound Health Systems Agency
METRO

City of Seattle/King County

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Seattle-King County Department of Public Health
Seattle City Council
Seattle Law Department
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League of Women Voters
Allied Arts of Seattle
University of Washington, Puolic Archaeology
University of Washington, University Hospital
King County Medical Society
King County Emergency Medical Society
King County Emergency Medical Services Coordinating Council
Harborview Medical Center
Washington State Medical Association
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EXECUTIVE SUMMARY

Introduction

This environmental impact statement examines the University District and Laurelhurst neighborhoods of northeast Seattle and the potential impacts associated with construction and operation of the proposed Children's Hospital Helistop. The proposed action is the approval of a Council Conditional Use Permit to allow development of the Children's helistop located on the campus of the Children's Hospital and Medical Center at the northeast corner of Sand Point Way N.E. and N.E. 47th Street. The sponsor of the project is the Children's Hospital and Medical Center.

The sponsor's objective in developing the proposal is to create a landing pad for helicopters transporting critically ill or injured children to Children's. The specific objectives of the proposed action are to minimize both the patient transport time and the number of potentially destabilizing patient transfers from the place of patient pickup to the Emergency Room entrance at Children's while maintaining appropriate medical treatment and to construct a helistop and to operate the helicopter service so as to minimize potential environmental impacts.

The Children's campus is located in the Laurelhurst neighborhood, less than one mile east of the University of Washington. The Children's campus is situated on an east-facing hillside and consists of one large hospital building and a detached parking garage along the north edge of the campus boundary. The proposed helistop pad would be located approximately 120 feet north of the Emergency Room entrance, somewhat southwest of the parking garage and in the central portion of the campus.

Description of the Proposed Action and Alternatives

The proposed action would relocate the existing "Kitchen Garden" to a new site on campus and would remove three tall trees and assorted shrubbery prior to grading and construction of the helistop. The 40-foot-square helistop would be marked by a large red "H" and would be surrounded by a fence 2.5 to 3.5 feet tall. The helistop would be identified from the air by the red "H" and at night by ground lights that would be turned on for emergency landings. The helistop would initially involve ten patient transports per month and over time would receive up to an estimated 15-20 critically ill patients each month. For the near-term, approximately ten patients per month are expected to be transported by helicopter to Children's. The majority of these flights would be performed by Airlift Northwest (ALNW), a Seattle vendor based at Boeing Field; although flights could occur by other ambulance services, U.S. Army MAST helicopters, or private helicopters. Two takeoffs and two landings would be associated with each ALNW patient delivered to Children's--one landing and takeoff for the pickup of the pediatric medical team, the other for the delivery of the patient and departure of the helicopter.

Nearly all of these flights would approach Children's from the southwest, along Sand Point Way N.E., before turning to the south over the parking garage and making final approach to the helistop from the north. In

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rare conditions of strong winds from the northwest quadrant, the helicopter would approach and land from the northeast (final flight paths would be approved by the FAA). Upon arriving at the helistop, the engine would be shut down, a ground crew would assist the on-board medical team for transporting the patient to the Emergency Room. The patient would be removed from the helicopter, placed on a gurney, and wheeled to the Emergency Room entrance. Once the patient is inside the Emergency Room and medical equipment is retrieved, the pilot would restart the engines and depart, following approximately the same flight path as the approach, but with greater altitude.

There are four alternatives to the proposed action discussed in the EIS. The University of Washington Intramural Field Helistop Alternative would consist of construction of a secured helistop at Graves Field on the University of Washington athletic field complex. The helistop would receive a similar number of Children's-destined flights as the proposed action. As with the proposed action, four flights wold be associated with each patient delivery. Patients landing at the Intramural Field Helistop would be transferred to a ground ambulance for the trip to Children's Emergency Room. Total transfer and transport time from helicopter touchdown to entry to the Children's Emergency Room would be a minimum of 10 minutes.

The University of Washington Hospital Helistop Alternative would consist of receiving approval by the Seattle City Council for a Conditional Use Permit on an already constructed, secured helistop on the roof of the hospital's expansion wing. As with the Intramural Field Helistop Alternative, this alternative would receive a similar number of Children's-bound patients as the proposed action in addition to an undetermined number of University of Washington-destined flights. As with the Intramural Field Helistop Alternative, this alternative would require the transfer of Children's-bound patients to a ground ambulance for the transport to Children's. Total transfer and transport time from landing to Children's Emergency Room is estimated at a minimum of 17 minutes.

The third alternative examined in this document is the Limited Landings Alternative, under which Children's-destined patients would be flown to Boeing Field and/or Harborview Hospital, stabilized, and transferred to a ground ambulance for transport to Children's. Occasional landings of destabilizing patients would occur in the grass area outside the Children's Emergency Room.

The final alternative is the No Action Alternative under which all Children's destined patients would be flown to Boeing Field and/or Harborview Hospital, stabilized and transferred to a ground ambulance for transport to Children's. No landings would be allowed on the Children's campus.

Impacts on patient outcome are expected to be more favorable under the proposed action than under the Intramural Field Helistop Alternative, the University Hospital Helipad Alternative, Limited Landings or the No Action Alternative. The increased time of transport and increased manipulation of patients that would result from any of the alternatives other than the proposed action could result in suffering, the need for prolonged treatment, or even death.

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Environmental Impacts of the Proposed Action and Alternatives

Through the mandatory scoping process, two elements of the environment were identified as warranting analysis in the EIS. These elements are Noise and Vibration, and Helicopter Safety. "Cumulative Impacts" was added as a scoped element because of the possibility that the proposed action could serve as a precedent for the development of other helistops in Seattle.

An evaluation of noise and vibration impacts expected to be caused by the proposed action indicates that although helicopter noise would be noticeable, it would not cause significant impact during daytime hour, when three-quarters of the patient transports are expected to occur. During sleeping periods, helicopter flights could cause sleep disturbance of varying degrees to 15-30% at the closest, line-of-sight residences. The worst case impact of monthly helicopter noise exposures would increase ambient levels of 55-58 dBA by 3-5 dBA at residences closest to the helistop, which does not represent a significant increase over existing levels. Structural vibrations due to helicopter flights are not expected to be significant, although helicopter-induced vibrations could cause movement of small household objects, such as dishes, in the residences nearest the flight path. The Intramural Field Helistop Alternative would not be expected to create noise impacts when the primary approach and departure paths are used, although some impact could occur to the occupants of the University of Washington dormitories and classrooms when the secondary path over the University of Washington is used. The University Hospital Helistop Alternative would result in noise impacts for residents south of the Montlake Cut; due to a slightly greater distance from the flight path, these impacts would be slightly less than those impacts expected for residents in the vicinity of the Children's Helistop. Under the Limited Action Alternative, helicopter flights and resultant Ldn noise levels are expected to remain at current levels, resulting in occasional but not significant impacts. Under the No Action Alternative, there would be no noise impacts from helicopter operations at Children's or in the vicinity; however, there would be noise at Boeing Field and Harborview Hospital. Any alternatives to the proposed action could result in ambulance sirens being used between the landing area and Children's. These sirens are approximately as loud as the helicopter.

Helicopter safety impacts associated with the proposed action would be similar to those associated with the Intramural Field Helistop Alternative and the University Hospital Helistop Alternative. The difference between the three would be the probable location of potential helicopter accidents. Based on available data, the worst case expected statistical frequency of a helicopter accident on a flight destined for one of the proposed helistops would be one in every 5,459 flights, which, assuming an ave age of 20 patient transports a month, translates to a worst case of an accident occurring once every 23 years. Such an accident could occur anywhere along the flight path. Since the number of helicopter flights in the area would be less under the Limited Landings or No Action Alternatives than any of the other alternatives, the resulting helicopter safety impacts on the University/Laurelhurst area would be expected to be less as well, with the potential for impacts displaced to the other approach and departure loca-

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tions, i.e. Boeing Field and Harborview Hospital. It should be noted that limited landings in the grassy area do pose some public safety risks because the site is not secured.

In addition to helicopter safety, there are safety issues associated with ground ambulance transport and the natural gas meter house located near the site of the proposed action. In the case of a helicopter accident on the Children's site that breached the natural gas supply line, the natural gas would flare until shut off at the main valve across from Children's on Sand Point Way N.E. Under the Intramural Field Helistop Alternative, the University Hospital Helistop Alternative, and the Limited Landings and No Action Alternatives, patients destined for Children's would require ground transport from the Intramural Field, the University Hospital, and Boeing Field, Harborview Hospital, respectively, creating the possibility of traffic accidents that would not exist under the proposed action. Although specific statistics are not available regarding the frequency of traffic accidents involving ground ambulances, it is considered to be higher than the frequency associated with non-emergency vehicles.

The potential for cumulative impacts associated with the action alternatives centers around the likelihood of helistops proliferating at additional Seattle-area hospitals. There are three primary factors that would tend to discourage the improper use and proliferation of helicopter services in Seattle. First, the land use criteria used by the City of Seattle to evaluate helistop applications limit the use of helistops to those facilities that can demonstrate that the helistop is needed to save lives. (Only a few Seattle area hospitals that serve as tertiary care centers, offering specialized services to the region, are routinely involved in treating life-threatening emergencies that are referred from other hospitals and physicians in the region.) Therefore, the few hospitals in the Seattle area that can demonstrate the need or unique medical services and capabilities would be the only likely candidates for helistops. Second, the Puget Sound Health Systems Agency (PSHSA) has written two proposals to develop guidelines for the siting of helistops and to develop policy options for integrating helicopter services with regional and statewide Emergency Medical Service planning efforts. The Washington State Medical Association is drafting guidelines for assisting referring physicians in the selection of appropriate emergency medical transport. Finally, through the Certificate of Need process, the State Department of Social and Health Services (DSHS) will evaluate all future helistop installations at hospitals. (It should be noted that DSHS has exempted the Children's helistop proposal from the Certificate of Need process and, therefore, has not reviewed this proposal.) It is assumed that only those institutions with a demonstrated need for a helistop would be granted DSHS approval.

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I. INTRODUCTION

The purpose of this document is to provide decision-makers, regulatory agencies, and interested citizens with a review of pertinent background information, a description of the construction and operation of a proposed helistop that would allow critically ill patients to be brought by helicopter to Children's Hospital and Medical Center (Children's), a description of alternative means of transporting critically ill patients (including alternative helistop locations), and an analysis of the potential impacts and mitigation associated with the proposed action.

This document is organized into three primary chapters: Background Information, Description of the Proposed Action and Alternatives, and Affected Environment, Significant Impacts and Mitigating Measures. The chapter on background information is intended to provide the reader with a context for the consideration of the proposed action. The chapter profiles the provision of general health care and describes the unique medical services offered by Children's; describes the conditions of patients who have been and would be transported to Children's by helicopter; characterizes the transport of critically ill patients--highlighting the role of helicopter transport; and reviews the authority of various public and private agencies with respect to the helistop construction approval and the provision of emergency helicopter transport services.

The chapter on the Proposed Action and Alternatives identifies the proponent's objectives, describes the process used to identify potential helistop sites; explains the derivation of the number of anticipated flights; and for each alternative characterizes flight operations and flight paths, and describes the transfer of the patient from the helicopter to the Emergency Room entrance at Children's.

The chapter on the Affected Environment, Significant Impacts and Mitigating Measures provides a detailed analysis of the elements of the environment that were determined to be significant during the scoping process. These elements are noise and vibration, helicopter safety, and cumulative impact.

Although the issue of medical need is not within the scope of this EIS, it is a requirement of the City Council's Conditional Use Permit and, therefore, is related to this proposal. At the request of the Seattle Department of Construction and Land Use, a report on medical need issues was prepared by Dr. Nicola, Director of the Seattle-King County Health Department. Dr. Nicola's report is appended to this document.

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II. BACKGROUND INFORMATION

Health Care Services

The evolution of medicine has been characterized by increasing sophistication of both medical professionals and the capabilities of technical support equipment. The complexities of the medical system are reflected in the emergence of numerous specialty disciplines within the medical profession. In simple terms patients with complex illnesses or injuries are now commonly referred to specialists who have the particular expertise and equipment for their effective treatment. Because of the relative infrequency of need of their expertise (on a per capita basis), medical specialists are generally affiliated with regional medical centers located in populated areas, with patients coming from the surrounding urban center, as well as from rural and remote areas (Nicola, 1986). This aspect of the provision of health care is referred to as the regional medical referral system.

The provision of medical services can also be considered from the perspective of the age of the patient: neonatal (less than one month old), children, adults and the elderly. Each of these stages in life development are unique in that the health care of the individual requires attention to specific physiological and psychological conditions. Pediatrics is the specialized branch of medicine that deals with the development, care and diseases of children.

In the Pacific Northwest, many clinics, hospitals and medical centers offer pediatric services; however, Children's is the largest medical center that is equipped and, with 1,050 active physicians, staffed to offer full service, tertiary care for children and as such is an integral component of the regional health care network. Tertiary care is defined, by Children's and University Hospital, as those services necessary to deal with illnesses characterized by complex patho-physiologic processes. The most effective management of these illnesses requires integrated diagnostic and therapeutic services provided by multiple specialists. Tertiary care services require continuous management from the presentation of an illness to its resolution. Complex illnesses may present numerous conditions, such as severe congenital anomalies, multiple organ system trauma, prematurity in newborns, poisonings and neuropsychiatric disorders (Neff, 1985). Children's is recognized as the regional, tertiary referral center for children in the Pacific Northwest. A summary of 1984-1985 cases indicate that of the 621 Children's patients affiliated with the Blue Cross system, 64% were categorized as unique cases (defined as patients diagnosed with illness or medical need common to no other or one other patient affiliated with the Blue Cross system).

In the Puget Sound area, hospitalized neonatal emergencies are generally admitted to the Neonatal Intensive Care Unit (NICU) at Children's, which has 19 beds, or to the NICU at the University of Washington Medical School Hospital (University Hospital), which has 12 beds. The only other NICU beds in the Puget Sound area are the twelve located at Tacoma General Hospital. The only other neonatal intensive care beds in the state are located in Spokane. Pediatric medical emergencies in the Puget Sound region

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that require hospitalization are generally admitted to the Pediatric Intensive Care Unit (PICU) of Children's, which has 17 beds. Children's, through its formal affiliation agreement, is the pediatric teaching hospital for the UW School of Medicine. There are an average of 450 occupied pediatric beds (excluding NICU beds) in the state of Washington; one-third of these are locted at Children's.

The University Hospital high-risk obstetrical program uses the University Hospital's NICU beds so that most low birthweight babies born at the University Hospital do not have to be transported between hospitals. Even with an excellent maternal transport program, there are still mothers who deliver low birthweight babies in community hospitals; many of these babies need to be stabilized and transported to a tertiary care hospital (Nicola, 1985). Because the University Hospital's NICU is often busy caring for the babies of mothers who delivered at University Hospital, low birthweight babies born in outlying hospitals are frequently transported to Children's. The two institutions have developed a system for coordinating the transport of these infants to either hospital based on the child's needs and the availability of services.

Children's has seven of the ten Board-certified pediatric surgeons in Washington, Alaska, Montana and Idaho. These surgeons offer a variety of unique capabilities including bone marrow and kidney surgery. Much of the pediatric surgery in the four-state region is currently performed at Children's.

Traumatized and severely burned children in the Puget Sound region generally go first to the region's recognized trauma center, Harborview Medical Center, but may be transferred to Children's for follow-up surgery or treatment and stabilization. (Harborview Medical Center is a County institution that is administered by the University of Washington.) Children's is not a trauma center, as it does not meet all criteria necessary to be so designated.

In 1985, Children's admitted 11,612 inpatients and 66,006 outpatients. As Table 1 indicates, 55% of these patients were from King County; 22% from Snohomish, Pierce and Kitsap Counties; 11% from other counties west of the crest of the Cascades; 7% from east of the Cascades; 2% from Alaska; 1% from Montana; and the remainder from other states and countries. The distribution of origins is displayed in Figure 1.

Emergency Transport of Patients

A key element of the regional medical referral system is the transport of the critically ill or injured patient to the referral hospital. This referral may occur either for a patient in a clinic or hospital who needs the services offered by a more sophisticated and/or specialized medical facility, or for a patient in the "field" (home, work, play or the scene of an accident).

The Emergency Medical Service (EMS) system refers to the extension of medical services to critically ill patients and, if necessary, the transport of these patients to appropriate medical facilities. The State of Washington's Department of Social and Health Services coordinates EMS

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Table 1

CHILDREN'S OUTPATIENT AND INPATIENT ORIGIN IN FISCAL YEAR 1985
(by area)

Service Area/ County	Outpatients (1985)	Inpatients (1985)	Percentage of Inpatients
Primary Service Area			
Seattle	30,961	3,654	31.5%
King County	14,997	2,760	23.8%
(Subtotal)	45,958	6,414	55.3%
Secondary Service Area			
Snohomish County	7,615	1,606	13.8%
Pierce County	1,654	554	4.8%
Kitsap County	1,541	380	3.3%
(Subtotal)	10,810	2,540	21.9%
Tertiary Service Area (all Washington Counties west of Cascades other than King, Pierce, Kitsap, or Snohomish)	5,221	1,325	11.4%
All Other Washington Counties (east of Cascades)	2,618	807	6.9%
Alaska	546	260	2.2%
Montana	191	115	1.0%
Idaho	165	53	.5%
Oregon	179	52	.4%
(Subtotal AMIO)	1,081	480	4.1%
Other States & Countries	318	46	.4%
GRAND TOTAL	66,006	11,612	100.0%

Source: Children's Orthopedic Hospital and Medical Center, 1986

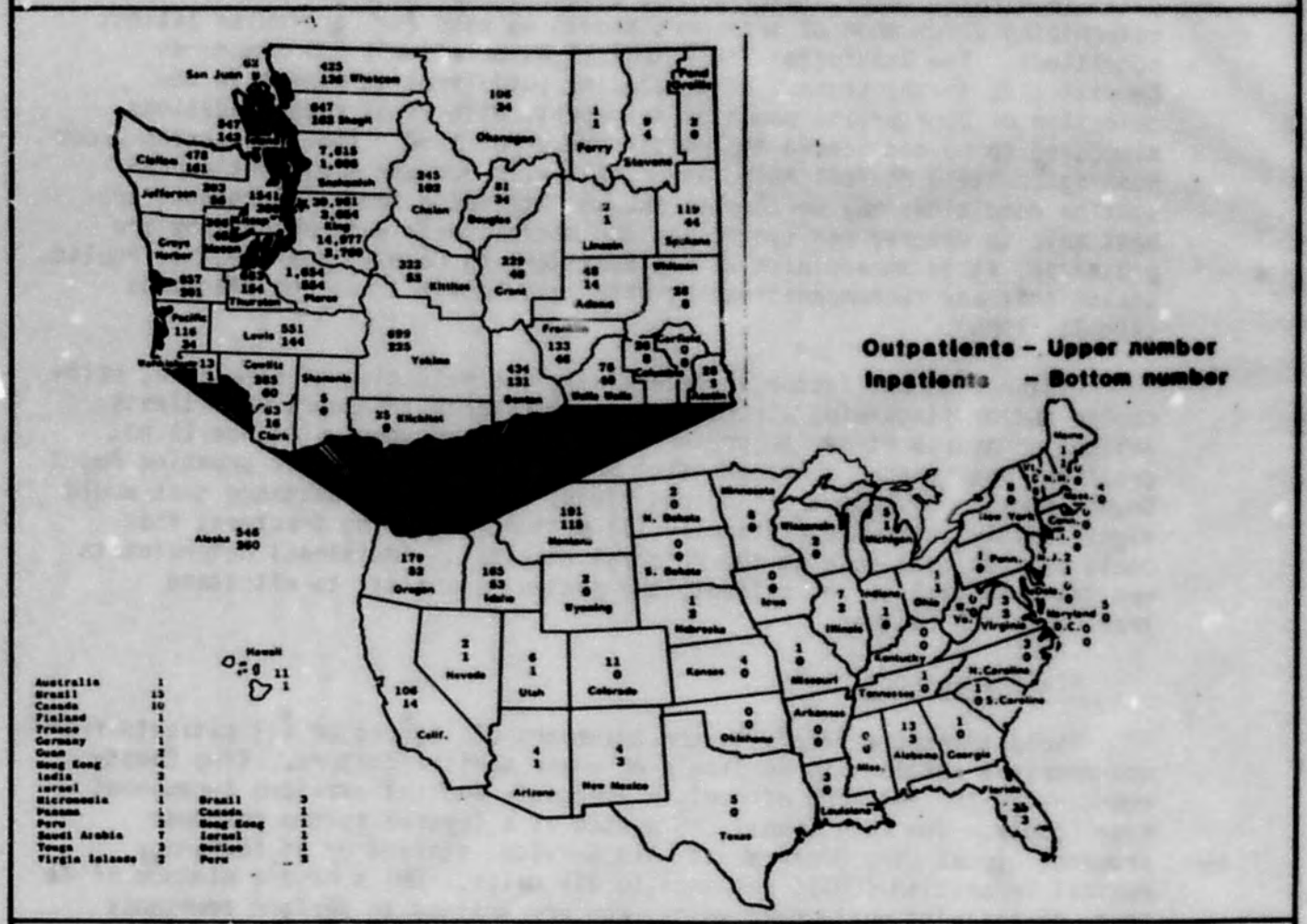

FIGURE 1

DISTRIBUTION OF CHILDREN'S OUTPATIENTS AND INPATIENTS IN FISCAL YEAR 1985

SHAPIRO & ASSOCIATES

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planning for the entire state. The EMS transport system in the central Puget Sound region is comprised of Medic One units, Fire Department aid units, private ground ambulance, military and private helicopter services and the specific emergency medical services offered by area hospitals.

Transporting critically ill children to Children's has long been a service offered by the hospital. Sending a specially trained transport team to referral hospitals has ensured specialized medical care en route and increases the potential for better outcomes for the patients brought to Children's. The Children's/University Hospital pediatric ground transport team has been in operation about ten years and currently brings more than 300 transports per year to the intensive care units at both hospitals.

Interhospital Transport

Under emergency conditions the interhospital transport of patients may occur by ambulance, by helicopter, by fixed wing aircraft or by a combination of these modes. Although there are existing medical guidelines and standards for patient care while being transported (American Academy of Pediatrics and American College of Obstetricians and Gynecologists, 1985 as cited in Nicola, 1985), there are no standard published guidelines for determining which mode of transport should be used for particular patient conditions. The Washington State Medical Association's EMS Standards Committee is in the process of developing guidelines to assist in the selection of appropriate modes of transport, with final recommendations scheduled to be considered during the summer of 1986. (See discussion under Washington State Medical Association, below.) Because a patient's presenting conditions may be complex and the attending medical personnel are best able to observe and synthesize the medical data with which they are presented, it is the opinion of the Seattle-King County Department of Public Health that any recommendations be used as guidelines and not standards (Nicola, 1986).

Distance is one factor in determining the selection of ambulance, helicopter and/or fixed-wing aircraft in the emergency transport of patients. Helicopter transport may be preferred in instances where distance is not great but when ground transport time would be long because of crossing Puget Sound, because of poor traffic conditions, or other circumstance that would significantly delay the critically ill patient receiving treatment that could only be available at the referral hospital. Additional determinants are the condition of the patient, the patient's ability to withstand transfers, and weather.

Field Transport

Field transport refers to the transport of injured or ill patients from non-hospital settings to hospitals or other medical centers. King County coordinates the delivery of certain emergency medical services throughout King County. The King County EMS system is a layered system response program: local Fire Departments' Aid Service, staffed by an Emergency Medical Technician (EMT), responds to all calls. EMT's have a minimum of 81 hours of training while paramedics, who are trained to perform emergency work in the field, have at least 1500 hours of training. Thus, paramedic units are dispatched to the more severely injured or ill patients in the

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field, including patients facing life-threatening medical situations. In King County, seven area hospitals provide medical control to paramedics:

Auburn General	Auburn
Evergreen General	Kirkland
Harborview Medical Center	Seattle
Highline Community	Burien
Overlake	Bellevue
Northwest	Seattle - Shoreline
Valley Medical Center	Renton

Volunteer medic units are also located in Carnation, Duvall, Enumclaw, Issaquah and on Vashon (Call, 1986b).

Paramedics operate as an extension of the physician services offered at the base hospital. Unless otherwise stipulated by the patient or patient's physician, paramedics will recommend transport of those patients requiring advanced treatment to the closest facility that provides the appropriate level of care. To that end, the King County Medical Society, the King County Emergency Medical Society, the King County Emergency Medical Services Coordinating Council and EMS Division of the Seattle-King County Department of Public Health have developed a classification of hospitals according to the services that they provide. The King County EMS Division has prepared a Patient Distribution Guide to assist field and base hospital medical staff in determining the appropriate medical center for treating the patient. The King County Medical Society has assumed responsibility for periodically updating the Guide.

The Patient Distribution Guide classifies Children's as both a Group A and Group B hospital. The Group A hospitals, of which there are 25, are characterized by the following services (King County Division of Emergency Medical Services, 1978):

- 24-hour Emergency Room Physician, trained in resuscitative measures
- Intensive Care Unit, staffed and operated at all times
- Coronary Care Unit, staffed and operated at all times
- Laboratory and X-ray unit services available at all times
- Major sub-specialty services available (on call) within one hour of notification

The 15 Group B hospitals satisfy the criteria for categorization as Group A and also have a neurosurgeon "actively involved with the hospital and [who] will examine and operate on patients in that hospital if it becomes necessary" (King County Division of Emergency Medical Services, 1978).

Only Harborview Medical Center is categorized as either a Group C (operating room staffed 24 hours a day) or Group D (intensive burn patient care) hospital.

Group E hospitals are subgrouped into specialized services including alcohol, psychiatric, neonatal, cardiac bypass and hyperbaric treatment. Only two hospitals--Children's and University--offer neonatal services, while Children's is one of six designated hospitals that can perform cardiac

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bypass surgery. Although not a formal subgroup, pediatric emergency services involving critically ill or injured patients are generally referred to Children's (Call, 1986b). In 1985, there were a total of 141 patients who were served by the County's EMS system and subsequently transported to Children's--two of these by helicopter (Call, 1986b). Additional EMS ground transports were made by the Seattle Fire Department, which provides comparable services in incorporated Seattle.

The County's EMS Division has established guidelines for paramedics in South King County in order to assist in selecting air or ground transport for critically ill patients (Call, 1986a). The underlying principle is the consideration that air transport provides a rapid method for getting the appropriate medical help to the patient, not that the patient gets to the hospital quickly (Call, 1986a). The following guidelines are used by EMS paramedics in South King County in order to assess the need for helicopter transport (Call, 1986a):

"1. Must be an extremely ill patient [such] that the arrival at a hospital capable of providing specialized care will immediately save their life or reverse their medical deterioration.

   Examples of presenting medical problems that would most likely indicate use of a helicopter in order to expedite transport of a patient are as follows:

   a. Gunshot wound with vitals of blood pressure (BP) less than 80 and heart rate (HR) over 120 with possible respiratory problems

   b. Aneurysm (aortic) with BP less than 100 and dropping, or other internal bleeding signs requiring immediate intervention.

   c. Major medical problems in a pediatric patient where time is critical for survival of the mother and/or baby.

   d. Multiple injuries that indicate bleeding of such a nature that the patient is in danger of bleeding out within minutes.

   e. Obstetrical problems that require immediate medical intervention and that are not generally handled at local hospitals.

   f. Major head injuries.

2. Time must be the major consideration when using a helicopter. Overall, the time discussed means the helicopter must be able to reach the designated receiving hospital, in less time than the paramedic unit could reach the hospital if they scooped and ran. The time on scene is always a major concern and under no circumstances should there be a delay at the scene waiting for a ride from the helicopter. If a patient is committed to a ground vehicle, under most circumstances transportation should continue in the vehicle to avoid unnecessary delays or interruption in treatment by the ground vehicle.

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3. Generally, a helicopter should only be used in areas in eastern and southeastern King County when the patient must be transported for specialized care to a distant hospital such as:

Harborview Medical Center	- Major trauma, head injuries, burns
Children's Orthopedic Hospital	- Pediatric medical emergencies that would be delayed by ground transportation
University Hospital	- Obstetrical emergencies

4. Permission to use any helicopter by a paramedic must be obtained from the medic unit's base hospital physician.

5. Helicopters should only be requested when there are qualified emergency medical personnel on scene who can evaluate the patient's needs. Paramedics should be responsible for requesting helicopter transport as they are usually the most qualified medical personnel. While in route to an accident, it may be appropriate for paramedics to consult with EMTs on scene regarding the patient's condition.

6. Under no circumstances should paramedics request dispatch centers to get comparative estimated time of arrival from MAST and Airlift Northwest. The paramedics are expected to make a decision regarding which helicopter transport service can best serve the needs of the patient, and to request it. If the first service of choice is not available, then the second helicopter service should be requested."

The Role of Helicopters in the Transport of Patients in Western Washington

The Korean conflict was the first to recognize that the helicopter's ability to land nearly anywhere and then to transport the patient rapidly to Mobile Army Surgical Hospitals (MASH) greatly increased the ability of wounded soldiers to receive medical treatment. During the Vietnam War, the airborne MASH teams provided rescue, medical stabilization, and evacuation to approximately one million military and civilian personnel. Postwar studies on the application of military helicopters in a civilian context provided the basis for the development of medevac operations that were inaugurated by the Maryland State Police in 1970. The first civilian helicopter ambulance service in the United States was initiated in 1972 at Saint Anthony's Hosital in Denver. In the past 14 years, this concept has expanded to include 75 hospital-based helicopter services that land at more than 900 hospital helistops (Reich and Kania, 1985).

Patients who are transported to Children's by helicopter are in critical condition. Children's defines critically ill or injured patients as those patients who might die or become seriously damaged unless appropriate treatment is received immediately (Neff, 1986). Critically ill patients who are brought to Children's include but are not limited to near-drownings, premature children, severe injuries, overwhelming

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Table 2

KEY CHARACTERISTICS OF CRITICALLY ILL PATIENTS
TRANSPORTED BY AIRLIFT NORTHWEST HELICOPTER DIRECTLY TO CHILDREN'S
(August 1, 1985 - June 10, 1986)

Admission Date	Time[1]	Referring Hospital/Scene	Age/Weight	Presenting Condition	Admitted To	Discharge/Current Status
8/3/85	1600-1800	Naval Hospital Bremerton, WA	Newborn	Perforated bowel; two surgeries	IICU	Expired 8/4/85
8/20/85	1100-1550	Forks Community Hospital, Forks, WA	Premature infant; 2 lbs	Collapsed lung; extreme prematurity	IICU	Dischgd. Olympic Memorial 9/25/85; dischgd. home 10/85
8/27/85	1800-2022	St. Helen's Chehalis, WA	1 month	Fulminating meningitis (bacterial inflammation of the brain); coma; neurologically damaged	IICU	Dischgd. home 12/13/85
10/15/85	0630-0800	Wenatchee	Premature newborn; 27 wk. gestation	Multiple congenital abnormalities; spinal Trisome 18; CPR in route with twin	ER	Expired 10/15/85
11/19/85	0300-0400	Covington, WA (scene)	Premature newborn; 28 wk. gestation; 2-1/2 lbs.	Delivered at home; extreme prematurity; developed overwhelming infection; chronic lung disease	IICU	Discharged to Valley General 2/22/86
11/27/85	1150-1225	St. Joseph's Bellingham, WA	Newborn; 37 week gestation	Respiratory distress; severe pneumonia; overwhelming blood borne infection and shock	IICU	Discharged 12/5/86
11/28/85	1125-1255	St. Peter's Olympia, WA	2 months	Subdural hematomas; some vision and brain damage	IICU	Dischgd. to St. Peter's, Olympia, 12/16/85
12/4/85	0935-0945	Harrison Memorial Bremerton, WA	Premature newborn; 32 wk. gestation; 4 lbs.	Severe lung disease; overwhelming infection; respiratory failure	IICU	Expired 12/14/85
12/13/85	2215-2245	St. Helen's Chehalis	Newborn; 37 wk. gestation	Pneumomediastum (air dissecting around heart and lungs)	IICU	Dischgd. home 1/5/86
12/22/85	1329-1350	Skagit Valley Hospital Mt. Vernon	7 months	Overwhelming infection and shock; meningitis (bacterial inflammation of brain); no brain activity; possible loss of some fingers	PICU	Dischgd. to Skagit Valley Hospital 1/8/86
1/11/86	1510-1740 (Boeing) -1800 (COH)	Ketchikan, AL	Newborn; 35 week gestation; 4-1/2 lbs.	Overwhelming infection; Group B strep; intracranial bleeding; from Alaska to Boeing 2 seizures;	IICU	Expired 1/20/86

Table 2 (continued)

Admission Date	Time[1]	Referring Hospital/Scene	Age/Weight	Presenting Condition	Admitted To	Discharge/Current Status
1/20/86	0735-0805 (Boeing) -0815 (COH)	Yakima Valley Hospital, Yakima, WA	18 months	Massive bleeding from intestines and lungs; shock	PICU	Expired 1/20/86
2/12/86	2100-2200	Grays Harbor Community Hospital, Grays Harbor	3 year old	Lost child found in river. Extremely low temp. 37.5 degrees C. Decision made to begin extensive resuscitation efforts. Required continuous CPR.	ER	Expired 2/12/86
2/13/86	1040-1055	Whidbey General Whidbey Island	Newborn term infant	Massive generalized body edema, heart failure. Difficulty breathing at birth, collapsed lung cyanotic. Later determined congenital problems resulting in ruptured bladder.	IICU	Expired 2/14/86
3/21/86	2225-2245	Harrison Memorial Hospital, Bremerton, WA	Newborn; full term	Critical congenital anamoly collapsed lung; diaphragmatic hernia (surgery performed at COHMC)	IICU	Expired 3/22/86 following surgery
4/5/86	1005-1020	Federal Way (scene)	19 months	Child found partially submerged in lake by father; cold, pulseless and no spontaneous respiration. Pupils fixed and dilated. Father began CPR, Medics arrived and contacted ALNW. During hospitalization, child developed aspiration pneumonia. She was treated successfully and should be completely normal in every respect.	ER/PICU	Discharged to home 4/10/86
4/18/86	1510- -1600 (COH)	Sunnyside Hospital Sunnyside, WA	Newborn; full term 5 lbs.	Multiple congenital anamolies including a diaphragmatic hernia, no anus, possible heart disease and absence of a part of the lower spinal canal. At birth the child was severely acidotic , requiring intubation and mechanical ventilation with high pressures. Immediate surgery was the child's only hope for survival. The child was transported to Boeing by fixed wing and by helicopter to COH.	IICU	Expired 4/18/86
5/21/86	0850-0910	Bainbridge Island Middle School Winslow, WA	14 year old	Born with transposition of great vessels. Had cardiac surgery at COH 10/84. Had seizure in gym class with acute caridac arrest. Paramedics were called who in turn called ALNW. Child showed gradual improvement with a very rapid downhill course 12 hours before she died. She was found to have increased intracranial pressure and herniation of her brain stem.	PICU	Expired 5/26/86

Table 2 (continued)

Admission Date	Time[1]	Referring Hospital/Scene	Age/Weight	Presenting Condition	Admitted To	Discharge/Current Status
5/31/86	0015-0040	Whidbey Island	Newborn; full term	At delivery, child had marked progressive respiratory difficulty requiring increasing amounts of O2 by mouth. Chest x-ray showed child had aspirated newborn fecal material and had a right-sided partially collapsed lung. Possibility of complicating pneumonia.	IICU	Discharged to Whidbey Island 6/3/86
6/1/86	1218-1235	Medic 6[2] (Auburn Area) (scene)	21 months	Chemical ingestion (Pine-Sol). Child had respiratory distress, became cyanotic and comatose in a short time and had vomited. Child had a past history of asthma and showed evidence of penumonia.	PICU	Discharged home 6/11/86
6/17/86	0915-0940	Bremerton Naval Hospital	Newborn; 35 week gestation, 6 lbs.	Child born to diabetic mother. Increasingly severe respiratory distress. Child was acidotic with low blood oxygen. Child was intubated. Shows evidence that blood is being intermittently shunted away from the lungs, making it impossible for the baby to completely oxygenate his own blood, even with 100% oxygen.	IICU	Still at COH 6/20/86

[1]Time left referring hospital's Emergency Room or scene, to time of arrival at Children's
[2]EMS referred field pickup

IICU - Infant Intensive Care Unit; PICU - Pediatric Intensive Care Unit; ER - Emergency Room

infections, and ingestion of toxic substances. It is important to note that not all patients in these medical situations warrant helicopter transport to the Emergency Room entrance: that is a decision properly made by the referring physician in consultation with the advanced care unit or by the transport physician (Nicola, 1986). Although many outlying hospitals are equipped and staffed to appropriately deal with these medical conditions, there are situations when the severity of the condition warrants treatment at a tertiary care center. For example, pediatric surgeons and pediatric plastic surgeons are most capable of performing surgery on severed arteries, severe toxic shock may require dialysis, other conditions are best served by the recognized medical specialists that work in the infant and pediatric intensive care units. Table 2 presents data on the medical conditions of patients who were transported directly to Children's by helicopter.

The two main objectives of a helicopter transport system are to reduce the time before appropriate advance treatment can begin and to decrease patient manipulation.

Critical Time Saved

Surgical emergencies in the child, as well as infections, near drownings and trauma, are some of the conditions that need immediate intervention. Since time is critical, transport time has a direct bearing on the patient's prognosis. For critical patients, every moment lost increases mortality (Neff, 1986). Table 3 illustrates the time savings hypothetically involved in transporting and transferring an infant and equipment from Enumclaw to Children's Emergency Room.

Decreased Patient Manipulation

Whenever a patient is loaded or unloaded during an emergency transport, there are risks involved not only because of time loss but also because of patient handling. Two major risks are the possibility of losing critical life support tubes and lines, and the consequences of a lowered body temperature (hypothermia).

Isolettes are self-contained units that incorporate advanced life support systems. If an isolette that keeps a transported premature infant warm is opened to replace a tube that has been jostled, there is a risk that the child will become hypothermic if the outside temperature is below the ideal temperature of approximately 91°F (Neff, 1986). The hypothermic infants will try to breathe faster due to increased oxgen needs, which only results in more heat loss. In addition, a build-up of acid in the blood is also associated with hypothermia, which can contribute to the rupture of a premature infant's fragile blood vessels in the brain, which can cause brain damage or brain death.

The role of helicopter transport is generally described in a statement from the Puget Sound Health Systems Agency:

> "Helicopter transport is appropriate when it operates within a regional emergency medical service (EMS) system. It is most valuable in linking rural and other isolated populations and medical facilities to tertiary trauma centers in Seattle.

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Table 3

COMPARISON OF ELAPSED TIME
FOR TRANSPORT OF A PATIENT FROM ENUMCLAW TO CHILDREN'S

Mode	Transport Step	Time (in Minutes)
GROUND	Private ambulance to Children's for equipment pickup	10
	Travel from Children's to Enumclaw ER, including transfer of equipment from ambulance to Enumclaw ER	45
	Stabilization of patient	20
	Return trip from Enumclaw to Children's ER	45
	TOTAL TRANSPORT TIME:	120 (2 hours)
	TOTAL TRANSFERS: 2 patient/2 equipment	
HELICOPTER	Helicopter to Children's for equipment pickup	10
	Air travel from Children's to Enumclaw ER, including transfer of equipment from helicopter to Enumclaw ER	12
	Stabilization of patient	20
	Air travel from Enumclaw to Children's ER	12
	TOTAL TRANSPORT TIME:	54
	TOTAL TRANSFERS: 2 patient/2 equipment	
	Transporting an infant via helicopter from Enumclaw to Children's would save one hour and six minutes compared to ground transport.	

Source: Children's, 1985.

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Medical conditions which require helicopter transport are those in which more rapid transport and the availability of highly specialized care en route can affect outcomes when compared to alternative methods of transportation. Helicopter transport is not inherently better than ground transport in ensuring survival and recovery.

Emergency services have developed as part of a regional system in Washington, and helicopter transport is integral to the provision of these services" (PSHSA, 1985).

The City of Seattle's Department of Construction and Land Use requested that Dr. Nicola, the Director of the Seattle-King County Department of Public Health, provide expertise in the assessment of medical need for the proposed Children's helistop. Dr. Nicola prepared recommendations based on a review of the literature, discussion with transport physicians, a review of helicopter flight logs, public hearing and discussions with knowledgeable individuals both in and out of the region (Nicola, 1986). Dr. Nicola's findings are appended to this report.

In Dr. Nicola's review of the literature examining the situations warranting helicopter transport, there are several cited studies that relate severity of illness to need for transport. One study revealed that over a six and one-half year period 81% of the patients transported by helicopter to a regional center were admitted to the ICU or were taken to surgery (overall mortality of 9%). A second study demonstrated that nearly one half of the patients arriving directly from the injury scene were delivered by helicopter (overall mortality of 6%). Another study cited in Nicola's report evaluated air transport of 569 patients in a rural EMS system and, using uniform guidelines, determined that helicopter transport was essential to 16.5%, helpful to 10.9%, and not a factor to the preservation of life in 54.7% of the cases. "In spite of rapid evaluation and maximal intervention, 102 (17.9%) of the patients died. The group for which air transport was judged "not a factor" (54.7%) consisted of patients whose injuries would not have proven fatal had their transportation to the tertiary care center been delayed. Retrospective analysis of the data available to the tertiary care center at the time of the decision to transfer the patients by air revealed that it was not possible to differentiate those patients who did not benefit from the service from those for whom the service was judged essential or helpful (Am. Surg. 1984 Apr.; 3-1348:183-8)" (Nicola, 1985).

A fourth study examined seven hospital-based helicopter transport medical emergency services that treated and transported 1273 blunt trauma patients. The study indicated that there was a 21% reduction in expected morbidity, however, there is some debate about methodologic soundness of the study (Nicola, 1985). The authors noted that the data must be viewed with caution and further suggested that predicted reduction in total trauma-related mortality may be more directly correlated to experienced medical teams reaching a patient than to the transport of a stabilized patient by helicopter rather than by ground transport (Baxt and Moody, 1983).

Dr. Nicola's review of literature prepared for DCLU concluded:

"...that there are medical conditions (especially trauma) where time of transport is critical regardless of mode of transporta-

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tion, that specific clinical criteria may be helpful in selecting helicopter versus ground ambulance transport but do not help in predicting patient outcome, and that the experience of other tertiary centers, while helpful in describing the seriousness of injury seen in the usual patient populations transported, do not clearly shed any statistical light on (DCLU's) question (of the appropriate location for siting Childr n's helipad)." (Nicola, 1985)

Dr. Nicola also concluded that of the te patients that he estimated would be transported to Children's by helicopter each month, an estimated three or four "may have a medical need for helicopter transport to the doors of the hospital" (Nicola, 1985). The outcome of these patients may be adversely affected by a 3-5 minute delay in receiving treatment in the hospital (Nicola, 1985).

Dr. Nicola further noted tha. "the literature review indicated that there are not definitive predictive clinical indicators of prognosis; that is, any number [of transferred patients] would have to include an additional number of patients whose condition at time of referral was appropriate for air transport..." (Nicola, 1985).

Helicopter transport in the central Puget Sound area is provided by two general services: Military Assistance to Safety and Traffic (MAST) and Airlift Northwest.

MAST

MAST is responsible for the emergency transport of all military personnel and their dependents within 100 nautical miles of Fort Lewis. Military personnel and their dependents have no choice but to use MAST, unless a private airlift service is arranged and paid for by them or the military. MAST will fly civilians in areas where there are no civilian transport programs or where civilian programs do not have the appropriate equipment to respond (e.g., a mountain rescue). MAST units accept missions according to the following criteria: 1) life and death emergencies; 2) loss of limb or eyesight; 3) undue suffering; 4) only accessible transport due to terrain, etc.

MAST helicopters transfer patients from accident sites within a 100 nautical mile radius of Fort Lewis to Harborview, Children's, and other hospitals in Seattle and to St. Joseph in Tacoma. The MAST program in Puget Sound is based at Fort Lewis where six "Huey" helicopters are located; a seventh "Huey" is located at the U.S. Army's Yakima facility. The "Hueys" are Vietnam-era helicopters that are noisy, slow and characterized by a lot of vibration. The military plans to phase in UH60 Blackhawks in 1989. Compared to the "Hueys," the dual-jet-engine Blackhawks are larger inside, faster and more quiet. A representative of MAST has indicated that it is possible the plans to phase-in the Blackhawks may be altered (Greenawalt, 1986).

MAST is a training program for military medics, and as such is designed to support military capabilities and operations. In times of peace, MAST personnel develop and maintain patient care skills and are trained by both

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civilian and military personnel, including physicians. New personnel entering the MAST unit are graduates of the military basic training program and also of advanced training programs in which they are taught military occupational skills. Serving in the MAST program and communicating and working with civilian hospitals allows recruits to continue Emergency Medical Technician (EMT) training.

MAST patient transport missions may be requested by anybody. MAST flys with EMTs and without advanced life support (ALS) and, therefore, no drugs unless the condition of the patient warrants that the helicopter pick up a physician/paramedic team from either Madigan Army Medical Center, a local hospital, or an emergency rescue program. MAST does not pick up the medical transport team at Children's. When a newborn is transferred by MAST to Children's, Madigan supplies the physician team (on an as available basis) to accompany the baby. Madigan had two pediatric staff and two neonatal fellows; however, as of July 1, 1986, Madigan no longer has neonatal fellows.

For those hospitals willing to supply their own physicians for MAST flights, understaffing during the physician's absence could exist for the referring hospital. Because MAST must return as quickly as possible to their base, they do not fly physicians, paramedics, or other civilian personnel back to the originating site unless that site is on the return flight path. Thus, the referring hospital will be without the services of the physicians involved in the transport until they are able to return. Other medical personnel may need to fill in for the medical team involved in the transport. On missions to Seattle hospitals, MAST will fly physicians back to Madigan, as long as they are ready to go quickly, because Madigan is on the MAST return flight path.

In 1985 Fort Lewis-based MAST flew approximately four hundred missions. Approximately 70% of these missions were field-site pickups and the remainder were hospital transfers. Transports were evenly divided between civilian and military personnel. From 1983 to date, MAST transported 29 patients to Children's; 12 of the patient missions to Children's were interhospital transfers (Kranz, 1986). These transfers occurred days or hours after the onset of the illness or injury.

MAST has a civilian advisory committee, chaired by Dr. Jay Kranz, a Seattle surgeon. The committee purchases equipment with State Department of Transportation monies and donations. Purchased equipment includes an incubator and three radios and installation kits; the latter was provided to enhance communications between the helicopter and emergency room staffs. Dr. Kranz independently reviews MAST transports for appropriateness.

Airlift Northwest

After nearly ten years of transporting critically ill children by commercial carrier and charter flights, Children's joined with three other regional medical centers (University of Washington Hospital, Harborview Medical Center, and Providence Medical Center) to form Airlift Northwest. The four-year-old Airlift Northwest is a Seattle-based airborne patient transport service designed to support the regional medical referral system and specifically to make specialized critical care accessible to patients throughout the Pacific Northwest and Alaska. Airlift Northwest provides

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medically outfitted, ventilator-equipped turboprop jet and rotary winged aircraft, with a medical team of ICU physicians and ICU nurses to resuscitate and provide proper medical care to patients who are being transported. Patients requiring tertiary care generally will be transported to appropriate care facilities of one of the four members of the Airlift Northwest consortium. Airlift also will transport patients to non-consortium hospitals.

Airlift Northwest is a cooperative venture among the four public and private member institutions, with Harborview serving as the primary administrative arm of the consortium. Each of the three associate institutions has a contract with Harborview. The contract characterizes the airlift program and organizational structure, the roles of support personnel, the sharing of equipment, the allocation of costs and distribution of revenues, indemnification, record-keeping, services extended to non-participating hospitals, and provisions for amendment and termination of the contract (Childs, 1986b).

The turboprop jet, a Cheyenne III, is used for the transport of patients who are located more than 120 miles from Airlift Northwest's King County Airport (Boeing Field) base. This fixed wing aircraft is always used to transport patients from Alaska and for the majority of missions flown east of the Cascade Mountains in Washington, and elsewhere (Idaho and Montana) in the four-state referral area. Airlift also will accept missions to other states. Two other Cheyennes and a Sabreliner provide back-up capabilities in the event the primary Cheyenne III is unavailable.

In order to more effectively transport patients from areas in the Puget Sound region that are not easily accessible by ground transportation and not served efficiently by fixed wing, Airlift Northwest added a helicopter service in May of 1985.

The helicopter that Airlift Northwest operates is a twin-engine Agusta A109 Mark II helicopter, one of the fastest and quietest helicopters manufactured. The helicopter's specifications are listed in Table 4.

Standard medical equipment on Airlift Northwest's helicopter includes the following:

- 2 patient stretcher rack
- Patient oxygen system with two 50 psi oxygen outlets
- Compressed air system with one 50 psi air outlet
- Patient suction system with continuous and intermittent regulator capabilities
- 115 volt electrical system with 2 wall-mounted outlets in cabin
- Overhead lighting with high intensity halogen lamp
- Overhead IV hooks
- Double lock narcotics safe
- Lifepak 5 cardiac monitor/defibrillator
- Holter infusion pumps
- Doppler

The helicopter also can carry a 160-pound isolette unit (with ventilator) for the transport of neonates and babies. This isolette unit is

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Table 4

AGUSTA A109 MARK II SPECIFICATIONS

Dimensions:	Overall length from Rotor Tip to Tail	42.8	feet
	Rotor Diameter	36	feet
	Ground Clearance of Rotor Blade	7	feet
Weight:	Maximum Gross Weight	5,730	lbs
	Average Empty Weight	3,892	lbs
Engines:	Twin Detroit Alison C20B Turbines		
Fuel:	Jet fuel capacity	147	gallons
Range:	2-1/2-hour fuel supply with 45-minute reserve. Normally, the Canadian border to the north, the crest of the Cascades to the east, the Oregon border to the south and the Pacific Ocean to the west.	150	miles
Speed:	Velocity not to exceed	195	mph
	Normal cruise (indicated air speed)	184	mph
Seating:	1 pilot, 2 attendents, 2 patients		

Source: Airlift Northwest, 1986.

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powered by the aircraft electric system while in the helicopter or by its self-contained battery pack. Additional medical equipment can be carried to provide the specific support necessary to individual patients.

The medical transport team of ICU physicians and nurses are based at Harborview, except for the pediatric team, which is based at Children's. When not flying, the pediatric medical transport team members work in the ICU at Children's. The transport team is medically trained and also receives a two-day orientation from Airlift pilots on helicopter operations and safety procedures. This safety orientation is maintained through biannual training.

Airlift Northwest annually transports hundreds of patients by aircraft. Table 5 indicates the frequency of use in previous fiscal years, in the current year and projections for the next ten years. From 1981 through mid-1985, Children's destined patients represented one-third of the total number of Airlift's fixed-wing transports.

With respect to Children's-destined patients, the Airlift Northwest helicopter transit service provides intensive care support to a number of critically ill or injured patients. Table 2 describes Airlift helicopter transports to Children's through mid-June 1986. This table identifies the date, time, origination of flight and the age, condition of patient, admitting unit, and discharge data or status. Approximately 63% of the children transported directly to Children's were newborns. Only one patient was older than three years old.

A Review of the Authority of Federal, State, Local and Private Agencies with Respect to Air Ambulance Service and Helistop Siting

This section highlights key jurisdictional issues with respect to emergency helicopter transport.

A review of the missions of various public and private agencies indicate that there is no single agency with jurisdiction regarding the siting of a helistop and the operation of an emergency airborne patient transport service. Rather, there are a number of agencies that have specific, defined authority. These agencies include the Federal Aviation Administration, the State of Washington's Department of Social and Health Services and the Seattle City Council, which is supported by the Department of Construction and Land Use and the Seattle-King County Department of Public Health.

In addition, there are a number of agencies that provide support of an informal and/or advisory nature. Among these agencies are the Washington Department of Transportation, Puget Sound Health Systems Agency, the Seattle Area Hospital Council, the Washington State Medical Association, American Society of Hospital-Based Emergency Air Medical Services, and the National Emergency Medical Services Pilots Association.

Federal Aviation Administration (FAA)

The FAA is a federal regulatory agency charged with the promotion of aviation safety. As such it provides programs certifying pilots and

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Table 5

TOTAL AND CHILDREN'S-DESTINED PATIENT TRANSPORTS
INVOLVING AIRLIFT NORTHWEST'S FIXED WING AND ROTARY AIRCRAFT

Fiscal Year[1]	Fixed-Wing Transports		Rotary Aircraft Transports	
	Total	Children's-Destined	Total	Children's-Destined
81-82[2]	45	13	0	0
82-83	286	80	0	0
83-84	411	112	0[3]	0[3]
84-85	532	212	44	4
85-86[4]	458	181	560	91
86-87[4]	518	206	684	116
87-88[4]	N/A	N/A	720	122
88-89[4]	N/A	N/A	732	124
89-90[4]	N/A	N/A	744	126
90-91[4]	N/A	N/A	756	129
91-92[4]	N/A	N/A	768	131
92-93[4]	N/A	N/A	780	133
93-94[4]	N/A	N/A	792	135
94-95[4]	N/A	N/A	804	137
95-96	N/A	N/A	816	139

[1] July 1-June 30 fiscal year.

[2] Fixed wing service began February 1982.

[3] Rotary service began in May 1985. The total number of patients transported to Children's including landings outside the emergency room, and landings with ground transports from Graves Field, Boeing Field, Harborview Medical Center.

[4] "... [these forecasted] numbers may well turn out to be significantly higher or lower than reality... These numbers are considered 'ballpark' figures from which actual volumes may deviate significantly" (Childs, 1986a).

Note: The number of transports reflects the total number of patients transported and does not reflect all flight segments for the pickup of medical transport team pickup and delivery of patient and return of the helicopter to base.

Source: Childs, 1986a, 1986b.

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ensuring that aircraft are operated in a manner consistent with established regulations. There are no specifications for the construction of helistops. Rather, there are guidelines for the construction contained in an Advisory Circular, "Heliport Design Standards."

Helicopter operations are subject to specific FAA regulations, including Parts 61, 91, and 135. Parts 61 and 91 of these regulations pertains to General Rules for Aviation and to the qualifications of pilots and airmen, and equipment specifications. Generally, helicopters are given more latitude in their operations than fixed wing aircraft.

The establishment of a helistop facility requires the proponent to file Form 7480, which identifies the proposed approach and departure paths. The FAA will review the form and either approve or deny the request for flight path approval. It is important to note that the FAA does give pilots discretion in deviating from the flight path; they will investigate complaints but would generally not take action on a complaint unless the pilot was operating in an inherently unsafe manner (Benedict, 1986). Children's submitted a form 7480 to FAA on February 14, 1985. Because the proposed flight path has been revised, an updated application will need to be submitted.

State of Washington Department of Social and Health Services (DSHS)

Health planning in the State of Washington is performed both on a statewide as well as on a subregional basis. The DSHS is the designated health planning agency for the state. Its duties include needs assessment, planning, evaluation, implementation of the state health plan, and administration of the Certificate of Need program.

Certificate of Need Program. The state Certificate of Need program is a process for reviewing the following: construction, development or establishment of new health care facilities; significant capital expenditures; changes in number or distribution of beds; acquisition of major medical equipment; and the provision of new institutional health services.

A recent amendment to the Washington Administrative Code (248-19-230(1)(b)), effective March 30, 1986, specifies that helistops are subject to review:

> (i) The specific services subject to review under this subsection are limited to:
>
> (A) Air ambulance services licensed under chapter 18.73 RCW including a change between fixed wing and rotor aircraft. This includes, but is not limited to, acquisition of aircraft or construction of landing facilities...
>
> (ii) The services listed in subsection (1)(b)(i) of this section are subject to review under any one of the following circumstances:
>
> ...(F) The establishment of a new or different landing site for an air ambulance service.

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With respect to the proposed construction of a helistop at Children's, DSHS has determined that a Certificate of Need review is not required because the regulations specifically requiring a Certificate of Need were issued after Children's received a ruling that it was not subject to Certificate of Need review (Chestnut, 1986b).

Emergency Medical Services. The State of Washington, through RCW 18.73, amended, provides statewide emergency medical services (EMS) program planning with funding and guidelines to continue EMS systems development and improvement. Key functions of the EMS Division of DSHS are to prescribe minimum requirements for equipment (including ambulances) and personnel engaged in prehospital EMS, to establish EMS system standards, and to evaluate program development, expansion and improvements. The Washington Administrative Code (248-17-135) provides specifics on air ambulances. The Washington Administrative Code (248-18-285) also provides specific regulations for the provision of emergency care services:

> "Emergency care services. The hospital shall have a well defined system for providing emergency care services. The nature and scope of the hospital's emergency care services should be in accord with the community's needs and the hospital's capabilities.
>
> (1) The hospital shall provide the following basic, outpatient emergency care services.
>
> (a) Assessment of a person's condition to determine the nature, acuity, and severity of the person's immediate medical need.
>
> The condition of each person, who comes or is brought to the hospital for emergency medical care, shall, upon arrival, be assessed by a registered nurse, physician, or physician's assistant for the purpose of determining the nature and urgency of the person's medical need and the timing and place of the person's care and treatment.
>
> (b) Immediate diagnosis and treatment of any life threatening cardiac arrythmia, respiratory insufficiency or shock.
>
> (c) Appropriate transfer or referral of a patient who needs medical care services not provided by the hospital. Prior to transfer of an emergency patient to another health care facility, the hospital shall:
>
> (i) Perform the emergency procedures needed to minimize aggravation of the patient's condition during transport to the other health care facility; and
>
> (ii) Ascertain that the means by which the patient is to be transported to the other health care facility are suitable for the patient."

Currently, the EMS Division has no direct authority with respect to the proposed Children's helistop, except for equipment and personnel being certified to meet State standards. The Systems Development Administrator of the EMS Division staffs the Washington State Medical Association's EMS Standards Committee's Subcommittee on Air Ambulances (see below).

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City of Seattle - Land Use

The City of Seattle guides land use through its comprehensive plan and land use policies and regulates land use through its Land Use Code. As a major medical center, Children's is designated a major institution and, as such, is subject to Seattle's Major Institutions Policy and specific regulations contained in the Major Institutions Chapter (23.48) of the Seattle Municipal Code (SMC).

The purpose of Seattle's Major Institutions Policy (SMC 23.16.10) "is to balance the need for institutional growth and change with the need to protect the livability of neighborhoods adjacent to institutions." A series of nine implementation guidelines (plus one guideline specific to the University of Washington) provides the basis for considering the institutions' needs in conjunction with those in the surrounding area. Relevant policies include the following:

Implementation Guideline 4 - Institutional Classifications

f. Mitigate adverse impacts associated with the use of the proposed facility so that the location of parking and the routing of traffic do not create serious noise, safety problems or blighting influences on the surrounding area.

g. Reduce adverse impacts of light and glare.

i. Promote safety for those living, working and visiting the area.

Helistops are conditional uses that are permitted in Major Institutions subject to the following provisions of the SMC:

23.48.05 Conditional Uses

A. Helistops

1. A helistop may be permitted as a Council conditional use if the Council finds that:

a. The helistop is needed to save lives;

b. The helistop is located so as to minimize impacts upon surrounding residential property;

c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

2. The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas.

This EIS is designed to fulfill the SEPA requirements of the Conditional Use Permit. With respect to the specific findings of medical need necessary to secure a conditional use permit, DCLU requested that Dr.

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Nicola, the Director of Seattle King County Department of Public Health, assist DCLU in the medical need determination. The issue is independent of the SEPA process and the EIS. (For the convenience of the reader, Dr. Nicola's report is appended to this EIS.) The other conditional use issues, including restricted use, sensitive siting and alternative locations are addressed in subsequent chapters of this EIS.

Seattle-King County Department of Public Health

As a joint City/County agency, the Seattle-King County Department of Public Health serves all residents of King County. The Department operates health centers throughout the County, numerous satellite clinics in schools and community centers, a regional center for tuberculosis control, and a sexually transmitted disease control program and clinic located at Harborview Medical Center. The agency provides health services for the jail, vital statistics information, and operates the public health laboratory.

The Department includes the Divisions of Alcoholism and Substance Abuse, Emergency Medical Services, and the Medical Examiner. The Division of Emergency Medical Services plans, develops and administers paramedic services outside of Seattle, and assists fire departments to improve emergency medical services.

The Department has also provided expertise to the City of Seattle's Department of Construction and Land Use regarding the issues of medical need and noise and vibration associated with siting a helistop at Children's.

Washington State Department of Transportation

The Washington Department of Transportation has the responsibility of providing statewide planning services, enhancing safety and funding transportation improvements. The Division of Aeronautics deals specifically with air transportation, by participating in statewide transportation planning, assisting in the enforcement of FAA Regulations, investigating aircraft accidents, providing search and rescue support for missing General Aviation aircraft and providing funding for public aviation facilities. The Department does not have specific authority with respect to the siting of a helistop at Children's or the operation of the helicopter service (Hamilton, 1986).

Puget Sound Health Systems Agency

Puget Sound Health Systems Agency (PSHSA) is a non-profit, quasi-public corporation that was founded in 1976 for the purpose of assisting in implementing the (National) Health Planning and Resource Development Act. PSHSA is actively involved in health planning throughout its health service area: the ten counties of northwestern Washington. PSHSA also assists DSHS in review of Certificate of Need applications and offers services to companies, hospitals and other clients in research, data collection and analysis, education, health program development and policy analysis.

The responsibility of all Health Systems Agencies in the state, including PSHSA, is:

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"...the provision of effective health planning for its health service area and the promotion of health services, manpower, and facilities which meet identified needs, and reduce documented inefficiencies..." (RCW 70.38.085)

To that end, PSHSA assembles and analyzes data; establishes, annually reviews and, as necessary, amends a health system's plan and implementation plan; prepares recommendations to the Department of Social and Health Services with respect to new institutional health services proposed within its service area; and periodically reviews institutional and home health services offered in its service area.

PSHSA has recently submitted a (revised) proposal to the Seattle-King County Department of Public Health and another proposal to the State Emergency Services Office to investigate the key issues surrounding the development of helicopter transport in the region and in the state. The goal of the State project is to develop a state plan and implementation strategies that will integrate air ambulance services with the EMS system. The State of Washington has withdrawn its commitment to participate in the development of this proposal (Nicola, 1986b). Specific project objectives under the statewide proposal are:

- Assess the current status of air ambulance services in Washington State and describe the development trend of this service in other locations across the nation.
- Identify and assess current and projected problems and needs with respect to air ambulance services.
- Establish goals for development of this service and criteria for evaluation, including WSMA user guidelines.
- Identify and assess a series of alternative State policies to meet identified problems and needs.
- Evaluate and select from among various options available a set of policies and a plan for development of air ambulance services in the state of Washington that integrates and coordinates these services with the EMS System. (PSHSA, 1986)

The original purpose of the proposed Seattle-King County project was to supplement the overall State plan with an air ambulance services plan and implementation strategy for the King County area. The objectives of the supplement were as follows:

- Monitor development of the statewide air ambulance plan, and review and comment on various aspects of the plan during its evolution.
- Conduct an inventory and analysis of air ambulance services in King County and present as input into development of State plan.
- Conduct a King County needs assessment regarding air ambulance services, including the development of a need projection model, and make recommendations regarding its adoption to the statewide steering committee.

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. Analyze the state plan to determine if more specific policies and a more specific plan should be adopted in Seattle-King County.

. Develop strategies to implement the state plan and local alternatives in Seattle-King County and work with local agencies on implementation. (PSHSA, 1986)

At this time, the status of the PSHSA proposal is unclear (Nicola, 1986b).

American Society of Hospital Based Emergency Air Medical Services and National Emergency Medical Services Pilots Association

The American Society of Hospital Based Emergency Air Medical Services (ASHBEAMS) and the National Emergency Medical Services Pilots Association (NEMSPA) are voluntary organizations that were established within the EMS helicopter industry to provide organization and guidance to the industry. These organizations do not have legal authority to impose regulations except to the extent that a hospital or helicopter operator must meet their guidelines in order to be accepted as members. As a result of the relatively high number of EMS helicopter accidents in 1985, ASHBEAMS and NEMPSA leaders met in February of 1986 and agreed that uniform guidelines and standards were needed in the industry. A first draft of the guidelines is expected to be available in the summer of 1986. According to Nina Merrill of ASHBEAMS, the guidelines and standards will address three primary issues:

. Creating a training program for hospital administrators in the aviation-related aspects of EMS helicopter programs in order to educate non-aviation personnel on aviation safety issues.

. Providing additional aviation safety orientation to air and ground medical crews that are involved with the transfer of patients.

. Recommending the requirement that EMS helicopter pilots undergo (a yet undetermined) amount of continuing pilot education every year. This continuing education requirement would be in excess of existing FAA regulations, which require one test flight every year to determine that the pilot is still capable of flying the aircraft.

These guidelines are being developed primarily to bring some of the smaller operations into conformance with unofficial standards to which major vendors within the industry already conform (Merrill, 1986).

Washington State Medical Association

The Washington State Medical Association is a trade organization that represents medical doctors in the state. Physician members voluntarily serve on committees that include, among others, the EMS Standards Committee, which has a subcommittee that is specifically addressing issues involving air ambulance services. The subcommittee is focusing on several issues (Pinkers, 1986; Cvitanovic, 1986) that will enable the creation of "User Guidelines" for the use of helicopter services:

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. Medical indications, procedures, appropriate skills of personnel to administer procedures and guidelines for selection of the most suitable transport vehicles for prehospital (field) transports.

. Medical indications, procedures, appropriate skills of personnel to administer procedures and guidelines for selection of the most suitable transport vehicles for interhospital transports.

. Procedures and capabilities for flight crews.

. Coordination between air and land services considering:

- the need to have land units financially survive,
- the development of land-air transfer points to reduce total flight time,
- the effect of medical crew/patient origin on patient outcome.

Key principles of these user guidelines are that helicopters are a useful, but expensive, instrument of patient care and that care protocols must be designed to enable MAST to continue to operate in western Washington (Pinkers, 1986). It is anticipated that the Subcommittee on Air Ambulance Medical Standards will have a preliminary report submitted to the full committee during the summer of 1986.

Washington State Hospital Association

The Washington State Hospital Association is an independent trade organization that represents approximately 90% of the hospitals in the state. The Association activities include advocacy, education and lobbying of both the legislature as well as regulatory agencies. The Association is not directly involved in the issue of emergency airborne transport services (Mero, 1986).

Seattle Area Hospital Council

The Seattle Area Hospital Council is a trade organization that represents the major hospitals in King County and southern Snohomish County. The purpose of the Council is to provide a forum for issue identification, discussion, and collective action that is responsive to the needs expressed by member hospitals in their continued efforts to discharge their individual and collective responsibilities. The Council is not directly involved in the issue of emergency airborne transport services (Nell, 1986).

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III. DESCRIPTIONS OF THE PROPOSED ACTION AND ALTERNATIVES

This section states the sponsor's objectives, identifies how alternative helistop locations were developed and screened, characterizes the process used to project the estimated number of patients transported by helicopter to Children's and the associated number of flights, and provides a detailed description of the proposed action and alternatives, including descriptions of the helistop and flight paths.

Sponsor's Objectives for the Proposed Action

The proposed action is the construction of a helistop outside the Emergency Room of Children's Hospital and Medical Center (Children's). The helistop would be used as a landing area for a helicopter transporting critically ill patients to Children's. The objectives of the proposed action are:

- to make specialized medical expertise available to critically ill patients in the least amount of time
- to minimize transport time from place of patient pickup to the Emergency Room entrance of Children's
- to minimize the number of patient transfers that could result in patient destabilization
- to construct a helistop and operate the helicopter service so as to minimize potential environmental impacts in a manner that would not sacrifice proper patient medical treatment

Overview and Location

The 25-acre Children's Hospital and Medical Center campus is located at 4800 Sand Point Way N.E., Seattle, Washington, along a portion of the western edge of the Laurelhurst neighborhood. The campus is less than one mile east of the University of Washington campus (Figure 2, Vicinity Map.) The campus boundary on the northwest is Sand Point Way N.E. to and along N.E. 50th Street south along 44th Avenue N.E. to and along N.E. 47th Street to and south along 45th Avenue N.E. to N.E. 45th Street, to approximately 42nd Avenue N.E., if extended, and north to Sand Point Way N.E. (Figure 3, Campus Map).

Children's campus generally slopes downward to the west and south. It is landscaped and provides a sense of open space to the area. Principal access to the campus is via a signalized intersection with Sand Point Way N.E. The principal drive--Penny Lane--winds generally east to west and provides access to the various entrances to the medical center building and parking areas. The principal structural feature of the hillside campus is the medical center building, which contains the medical facilities and equipment. A parking garage contains four levels of parking: three for staff, and one for patients and visitors. There are two primary paved surface parking areas and several smaller parking areas that provide additional parking for visitors, service vehicles and medical staff. A

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FIGURE 2
VICINITY MAP

0 .5 1 Mile
Approximate
Scale

N

SHAPIRO &
ASSOCIATES

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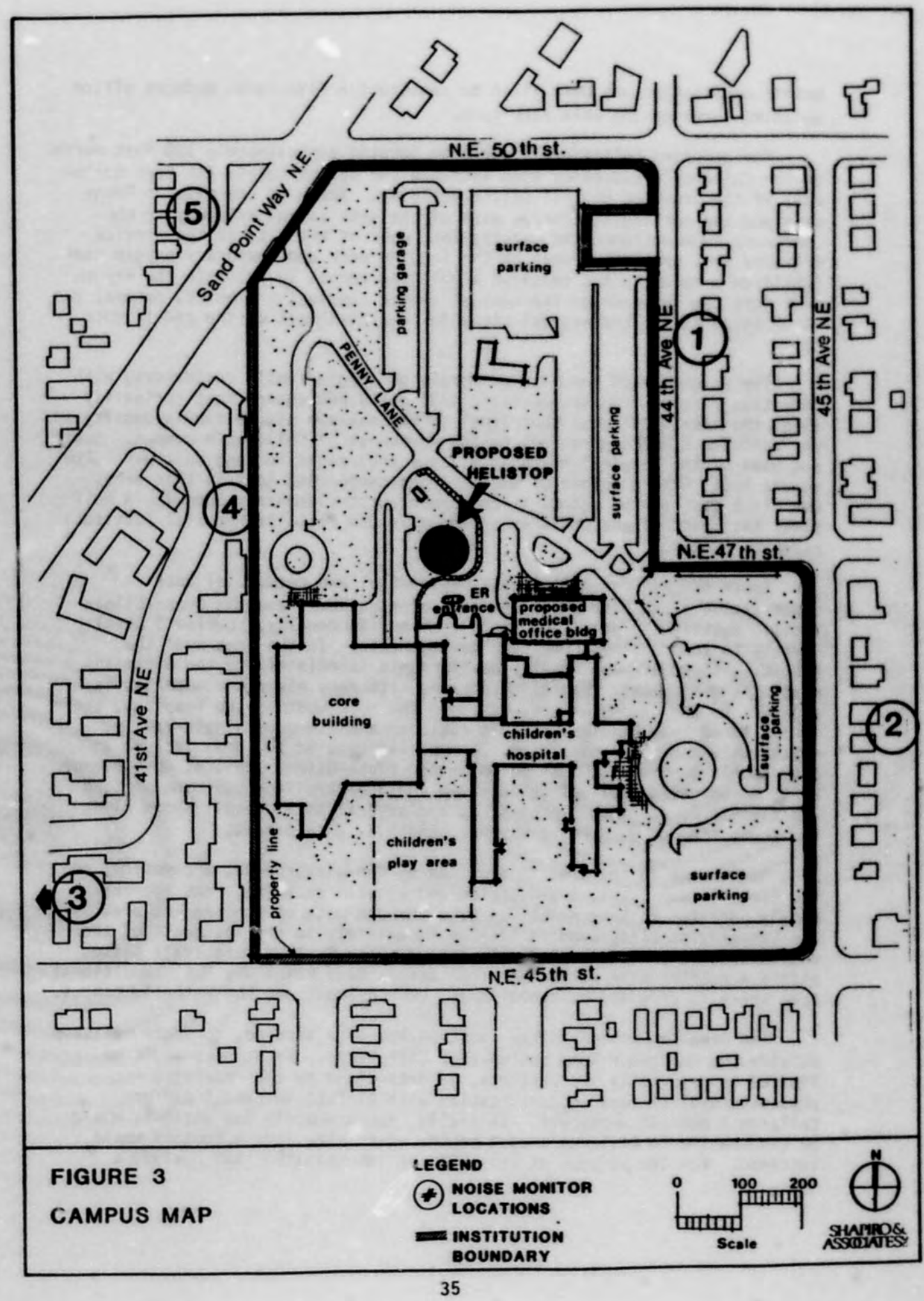

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permit application has been filed to construct a five-level medical office building north of the main structure.

The proposed helistop pad would be located approximately 120 feet north of the Children's Emergency Room entrance and approximately 115 feet northwest of the proposed Medical Office Building. North of the site is Penny Lane and the parking structure; east of the site is the driveway to the Emergency Room entrance and parking lot; west of the site is the service driveway that provides access to the loading dock and temporary oxygen tank (Children's recently has received a building permit to relocate the oxygen tank into the interior of the medical center complex). A brick, natural gas meter house is located approximately 48 feet northwest of the pad (Figure 4).

The neighborhood consists primarily of single-family residences, with densities ranging from one dwelling unit per 9,600 square feet (primarily along the Lake Washington shoreline) to the maximum single-family density of one unit per 5,000 square feet to the northwest of Children's campus. South and east of the hospital there is a large area zoned for one unit per 7,200 square feet, with a number of smaller, non-conforming lots in this area. One block east of the campus is the Laurelhurst Elementary School. A half block southeast of the Children's campus is the Battelle Memorial Institute research campus.

There are several multifamily residential and commercial uses concentrated along both sides of Sand Point Way N.E. and the Burke-Gilman Trail. Multifamily densities range from medium density, Lowrise 3 developments to low density, Lowrise 2 developments. In the area near the hospital, there are multifamily developments immediately to the north and west of the hospital. Laurelon Terrace, with many elderly occupants, is adjacent to the campus on the west. To the northwest of the hospital, there is a Planned Unit Development that includes a mixture of single-family, multifamily and open space uses. Commercial uses in the area include an Albertson's Supermarket just north of the Burke-Gilman Trail at 40th Avenue N.E., a medical/dental office building and a bank/office building at Sand Point Way N.E. and 40th Avenue N.E., and several small retail shops along the south side of Sand Point Way N.E. and N.E. 45th Street.

Open space in the area is provided by two playgrounds, a cemetery, and the Burke-Gilman Trail, a pedestrian and bicycle path that runs approximately parallel to Sand Point Way N.E. through most of the project area. The Laurelhurst Playground is located immediately to the southeast of the southeast corner of the Children's campus. The Burke-Gilman Trail passes within a quarter mile of the hospital across Sand Point Way N.E. Additional open space is provided by schoolyards, churchyards, and the Battelle campus.

The proposed action is the construction of a secured, concrete helistop outside the Emergency Room entrance of Children's. Transports would be limited to critically ill patients, as determined by the referring physician/medical team in consultation with Airlift Northwest and/or Children's medical personnel. Initially, approximately ten patients would be transported to Children's each month. Over time, these numbers would increase. For the purpose of this EIS, it is estimated that by 1990 a

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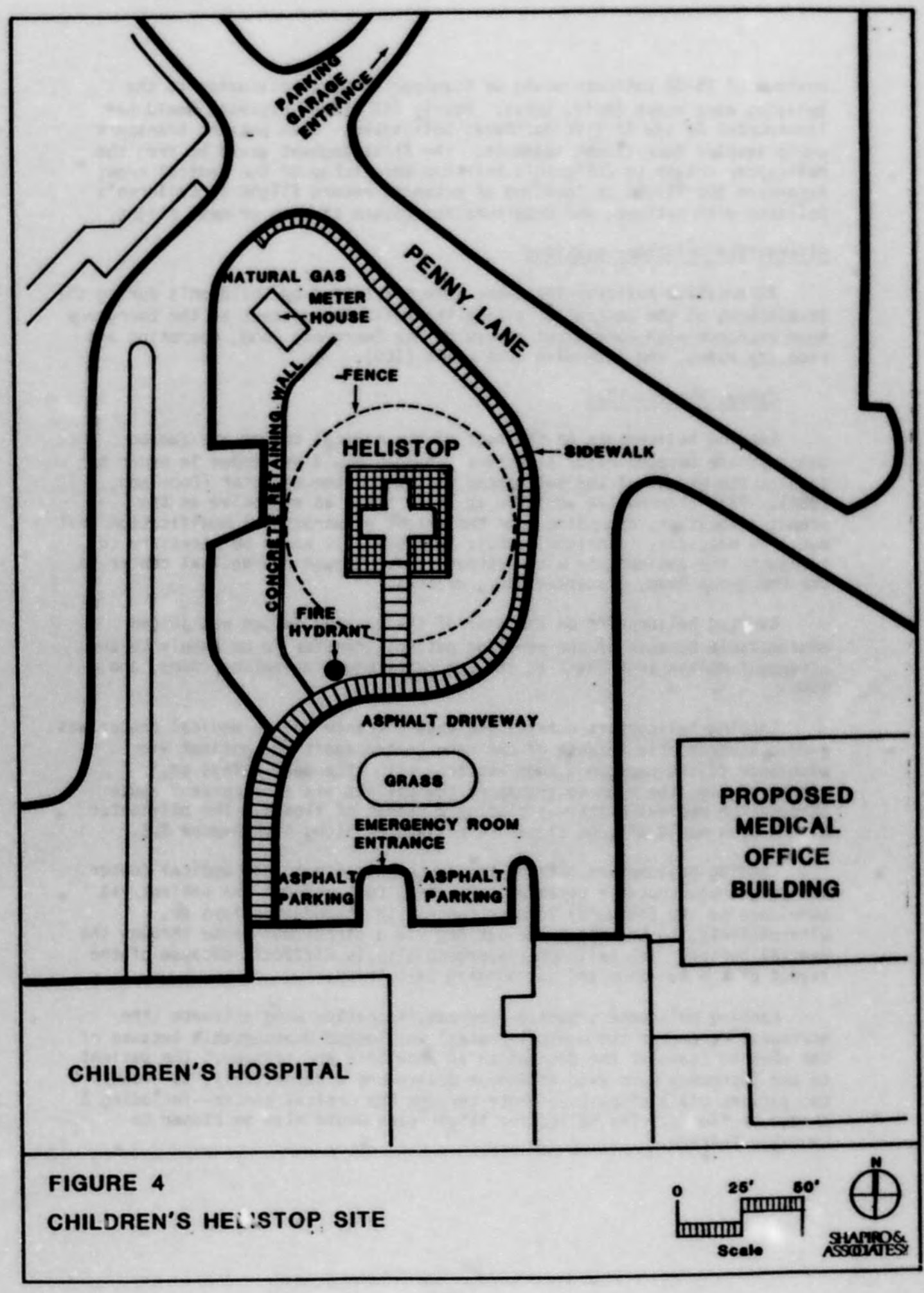

FIGURE 4

CHILDREN'S HELISTOP SITE

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maximum of 15-20 patients would be transported by a helicopter to the helistop each month (Neff, 1986). Nearly all of the patients would be transported by the Airlift Northwest helicopter. Each patient transport would involve four flight segments: the first segment would be from the helicopter origin to Children's helistop for pickup of the medical crew; departure and flight to location of patient; return flight to Children's helistop with patient; and departure for return to base or next flight.

Alternative Helistop Locations

Alternative helistop locations were considered by Children's during the development of the concept of siting the helistop adjacent to the Emergency Room entrance with convenient access to the Emergency Room, operating and recovery rooms, and intensive care units (ICU).

Campus Alternatives

Landing helicopters on the roof of the medical center was judged unacceptable because major structural changes would be needed in order to support the weight of the helicopter and extend the elevator (Donelson, 1986). This alternative would be at least twice as expensive as the proposed location, depending upon the extent of structural modification that would be necessary (Donelson, 1986). Moreover, it would be necessary to transport the patient via a circuitous route through the medical center to the Emergency Room, operating room, or ICUs.

Landing helicopters on the roof of the parking garage was judged unacceptable because of the need for patient transfer to an ambulance and attendant delays in transit to the Emergency Room, operating rooms, and ICUs.

Landing helicopters outside the east entrance to the medical center was judged unacceptable because of the need to transport the patient via ambulance to the Emergency Room entrance with attendant delays or, alternatively, the need to transport the patient via a circuitous route through the medical center--including a change of floors. The helicopter flight path would also be closer to residences along 45th Avenue N.E.

Landing helicopters outside the south entrance to the medical center was judged unacceptable because of the need to transport the patient via ambulance to the Emergency Room entrance with attendant delays or, alternatively, to transport the patient via a circuitous route through the medical center. The helicopter approach also is difficult because of the layout of the building and surrounding tall trees.

Landing helicopters outside the administrative wing entrance (the northwest corner of the medical center) was judged unacceptable because of the need to transfer the patient to an ambulance and transport the patient to the Emergency Room with attendant delays or, alternatively, to transport the patient via a circuitous route through the medical center--including a change of floors. The helicopter flight path would also be closer to Laurelon Terrace.

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Landing helicopters on one of the surface parking lots was judged unacceptable because of the need to transfer the patient to an ambulance for transport to the Emergency Room entrance with attendant delays. Moreover, the helistop and helicopter flight paths would be closer to residences to the east.

From a safety perspective, flat surfaces, such as rooftops, generally present the least accident risk during landing due to an absence of vertical obstructions. Rooftops, however, are less safe in the unlikely event of engine failure due to the structure's height and lack of a uniform surface on which to make an emergency landing. The other Campus Alternatives discussed above are all considered to be somewhat less safe than the proposed action due to their proximities to obstructions, their locations in topographically depressed areas, or their proximities to residential or educational land uses (Hill, 1986). The significance of the safety distinctions are believed by the pilots to be negligible (Hill, 1986).

Off-Campus Alternatives

The principal off-campus helistop locations that have been suggested include University of Washington's Intramural Field, sharing a helistop with University Hospital, Sand Point, sharing Harborview's helistop, sharing radio/television station helistops and bringing patients to Boeing Field. As part of the EIS scoping process, two off-campus alternatives were selected for detailed analysis: a helistop at the Intramural Field and a shared helistop with the University Hospital.

The Intramural Field helistop alternative involves the construction of a secured, concrete helistop or the designation of an unsecured landing area at Intramural Field. A maximum of 15-20 Children's-destined, patients would be brought to the helistop or landing location each month. Each patient would involve four flight segments--similar to the proposed action--plus ground transport of the patient to Children's.

The University of Washington is proposing the approval of a secured helistop already constructed on the roof of its expansion wing. A maximum of 15-20 Children's-destined, critically ill patients would be brought to the helistop each month; additional flights would involve University Hospital-destined patients. Each patient would involve four flight segments--similar to the proposed action--plus roof-to-ground and ground transport to Children's.

With the objectives of needing to minimize transfers and attendant transport time, the proposed project location was judged to be the most suitable for landing critically ill patients. Moreover, the helistop is located near the central portion of the campus; such a location meets the objective of minimizing off-site impacts without sacrificing patient care.

The Proposed Action

Demolition, Site Development and Improvements

The proposed helistop site is located at a landscaped site called "the Kitchen Garden." The garden would be relocated to a new site on campus.

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Three taller trees and shrubbery that exist in the helistop area would be removed--some of the smaller shrubs would be transplanted elsewhere on campus. Prior to tree removal, Children's would require the contractor to implement standard erosion control measures (such as installing hay bales, plastic sheets, etc.) to minimize construction-related erosion.

Following clearing, a new concrete retaining wall would be constructed along the western edge of the site. Approximately 410 cubic yards of earth would be imported to the helistop site, where it would be used to raise the western portion of the site to the (base) level of the eastern portion of the site. The fill would be removed from other (as yet unspecified) locations on Children's campus.

The helistop would be constructed of concrete shaped into a "plus" sign. The two arms of the "plus" would be approximately 30 feet long and ten feet wide (see Figure 4). This concrete helipad would be within a 40 foot square grasscrete area (alternating one foot square areas of grass and concrete) that, in turn, would be within a 45 foot radius circular area. The concrete pad and grasscrete surface would delineate the pad and provide stable support for the helicopter. The concrete center of the pad would be marked with a 4x7.5 foot, red "H" that would designate the helistop from the air. A 2.5 to 3.5 foot tall fence with locked gate would surround the circular area. An approximately 40 foot long concrete walk would link the helipad to the existing sidewalk.

The helistop would require the construction of 1,610 square feet of concrete (impervious) surface. Forty eight hundred square feet would be sodded and 6,540 square feet, according to the Landscape Plan, would be landscaped in juniper, azalea, and other low shrubbery. Blue star juniper would be planted along the outside of the fence and, in time, would partially obscure the fence.

The helistop would be equipped with ground lights that would be turned on for emergency nighttime landings. These lights would meet minimum FAA standards and would not have any off-site spillage because of the absence of horizontal throw. In effect these pilot-preferred lights "glow," rather than emanate direct ray lights (Hill, 1986). The shrubbery and positions of the medical center building and parking garage would prevent any helistop safety lighting creating glare off-site.

Signs warning motorists of the possibility of helicopter operations would be posted on Penny Lane and, if necessary, on Sand Point Way N.E. No aviation fuel would be stored on campus.

Number of Transports and Flights

Children's projects that initially ten patients per month would be transported by helicopter directly to Children's. Children's also estimates that in the future up to 15-20 critically ill patients could be transported directly to the medical center by helicopter each month. Each patient transport involves four separate flight segments: one for the pickup of the specialty pediatric transport crew, the second for departure with transport crew, the third segment delivering the patient, and the fourth for return to

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base or next operation. Thus, there could be a maximum of 60-80 overflights (flight segments) per month. Based on data from existing flights (Table 2), it is estimated that 20% of the flights would occur in nighttime hours (10 p.m.-7 a.m.). The worst-case estimate of 15-20 patients is for the year 1990 and exceeds Airlift Northwest's projections (see Table 5). The worst-case estimate is derived by Children's medical and planning staff by assuming that the Airlift helicopter patient transports will increase at the rate of 10% per year from 1987 through 1990. This figure is greater than the projected patient population increase of 5.6% from 1985-1990 in the primary and secondary service area (Hunter, 1986) and reflects an anticipated continuing trend in referring physicians using Airlift. Thus, by 1990, there would be an average of 13 transports per month based on existing capabilities and use. This figure is consistent with Airlift's projections. In addition, Children's anticipates that there could be one to two MAST patient transports that would be made by either MAST "Hueys" or by Airlift or other air ambulance carrying patients that would previously have been carried by MAST aircraft. The remaining five to six patient transports reflect several factors that are difficult to predict with any reliability but that, nevertheless, could influence the number of patient transports: breakthroughs in medical technologies; growth in population of adolescents; inability to predict disasters--such as toxic spills, nuclear facility accidents, earthquakes; increased poverty that results in increase in premature births (Neff, 1986); or changes in the hospital referral patterns or the capabilities of Children's or of other community hospitals (Nicola, 1986b). Initially, an average of ten critically ill patients would land at the proposed helistop each month; however, as physicians in outlying areas become more familiar with Airlift Northwest services Children's projects that they will become more likely to use Airlift for the interhospital transport of critically ill patients.

The Seattle-King County Department of Public Health (Nicola, 1985) estimates a maximum of ten critically ill patients a month should currently be transported by helicopter to Children's. This estimate is based on a review of Airlift Northwest flight/medical logs, interviews of transport and other physicians. Nicola estimates that three or four would have a clear medical need for direct transport to Children's Emergency Room entrance--such that delays or transfers could affect patient outcome (Nicola, 1986); however, this estimate is not definitive (Nicola, 1986b). The difference between the maximum (10) and the clear medical need cases (3-4) are the (6-7) patients whose condition at time of referral was appropriate for helicopter transport (as determined by the attending physician and/or medical team) but who in retrospect were determined not to have need for helicopter transport directly to the Emergency Room doors (Nicola, 1985).

Airlift Northwest confirms that with their existing service they can fly a maximum of 80-90 helicopter transports a month, and, assuming that Children's share of 17% of all helicopter flights remains constant (see Table 5), that a maximum of 15-20 transports for Children's-destined patients is a reasonable estimate (Childs, 1986).

Children's is obligated by state requirements (WAC 248.18.285) to treat all patients brought to the hospital: the hospital construes this statute to mean that no helicopter transporting an emergency patient can be refused permission to land at the proposed helistop, if constructed, or elsewhere on the campus grounds.

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In order to ensure that the patients brought by helicopter to Children's are critically ill, consistent with the provisions of Section 23.48.05 of the Seattle Municipal Code, representatives of Children's are meeting with MAST personnel in order to develop landing and communications guidelines. As a policy, Children's will encourage only critically ill MAST transports patients that are destabilizing or at risk of destabilizing, as determined by on-board medical personnel, to land at the helistop. Any MAST flights to Children's, however, would not involve four flight segments, as there would be no pickup of the pediatric medical crew at Children's.

Helicopter Operations

The process of transporting a patient to Children's may be considered by separating the operation into a series of discrete steps. The following description is designed to provide the reader with an overview of the process and does not constitute the full array of operational or medical procedures that would be involved in a patient transport by helicopter. There is a difference in the process depending on whether the patient is in the field, or is the subject of either a pre-arranged or unscheduled interhospital transfer. There are also distinctions between private air ambulance services and the military (MAST) service. For illustrative purposes, an unscheduled Airlift Northwest interhospital transfer to Children's is profiled.

- The system is activated by an attending physician contacting Airlift Northwest's physician and/or Medical Director.
- The patient's medical profile is described and the attending physician, referral hospital and landing area are identified.
- The Airlift Northwest Medical Director and/or physician assesses whether helicopter transport is warranted and, if so, provides the referring physician with an estimated time of arrival (ETA).
- The helicopter pilot is alerted, as is the pediatric medical crew, which is based at Children's. (Because of distinct treatment requirements, there are separate medical crews for adult and child patients). The helicopter takes off.
- Children's secures the area surrounding the helistop and stops traffic on adjacent Penny Lane--only ambulances and medical staff on emergency call are allowed to pass into the secured area.
- Approximately six minutes after the helicopter leaves Boeing Field it lands at the proposed Children's helistop. Following two minutes to shut down the rotor, it takes approximately two minutes to load medical crew (physician and flight nurse), and equipment. Following loading, the aircraft takes off. In some situations, loading of medical crew and equipment would occur without the rotor being shut down.
- The helicopter arrives at the referring hospital's designated landing area or helistop. The patient may be at the landing area and prepared for flight or the medical crew may have to go to and prepare

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the patient. Elapsed time could be as little as three minutes for the former or two hours for the latter. Transfer by ground ambulance from the referring hospital to the helicopter may or may not be involved.

. The medical crew monitors the patient en route and administers medication and/or other care as needed. En route the helicopter contacts Children's and relays medical condition and needs, and flight information (e.g., ETA).

. Again, the helistop area is secured prior to ETA.

. The helicopter arrives and shuts down the engines at the proposed Children's helistop, where a ground team assists in disconnecting monitoring systems, unloading the patient and wheeling the transport gurney to the Emergency Room door, approximately 40 yards away. After retrieval of equipment, the pilot restarts the engines and after an estimated total ground time of three to six minutes returns to Boeing Field.

Thus, each patient transported by Airlift typically involves four segments: first, to pick up the pediatric medical crew at Children's; second, to fly the medical crew to the patient; third, to fly the patient and medical crew to Children's; finally to return to base or the next operation. Those flights in which a patient is first transported to Boeing by fixed wing already have a pediatric medical crew in attendance. Consequently, there usually would be no need to pick up a crew at Children's, and, therefore, no need for two of the four flight segments.

Flight Path - General

For all construction alternatives, with the helistop at Children's, Intramural Field and UW Hospital, the flight path would be comparable for flying into the vicinity. Only the individual approach and departure routes would be different. Flight path information in this section is based on the approaches and departures that have been recently designed by Airlift Northwest pilots. Final approach and departure routes will require FAA approval pursuant to Airspace Review; however, the FAA allows the pilot to deviate from flight paths (Benedict, 1986). In selecting flight paths, the Airlift Northwest helicopter pilots are sensitive to safety, reducing patient transport time, and noise considerations. In general, when and where possible, the pilots avoid flying over hills, over or near densely populated areas, or at altitudes less than 1000 feet (Hill, 1986). Typical altitudes are in excess of 2,000 feet (Hill, 1986).

In general north-south flights would follow the I-5 corridor. When headed from the south, flights would turn toward Children's once past Capitol Hill. When headed from the north, flights would turn toward Children's when approximately even with the southern end of Green Lake. Flights from the east would generally pass south of Webster Point and north of Madison Park, before turning north over Union Bay and entering the final approach. Flights from the west would generally pass between Magnolia/Queen Anne and Ballard/Fremont and turn toward Children's once past I-5 (see Figure 5, Generalized Flight Paths).

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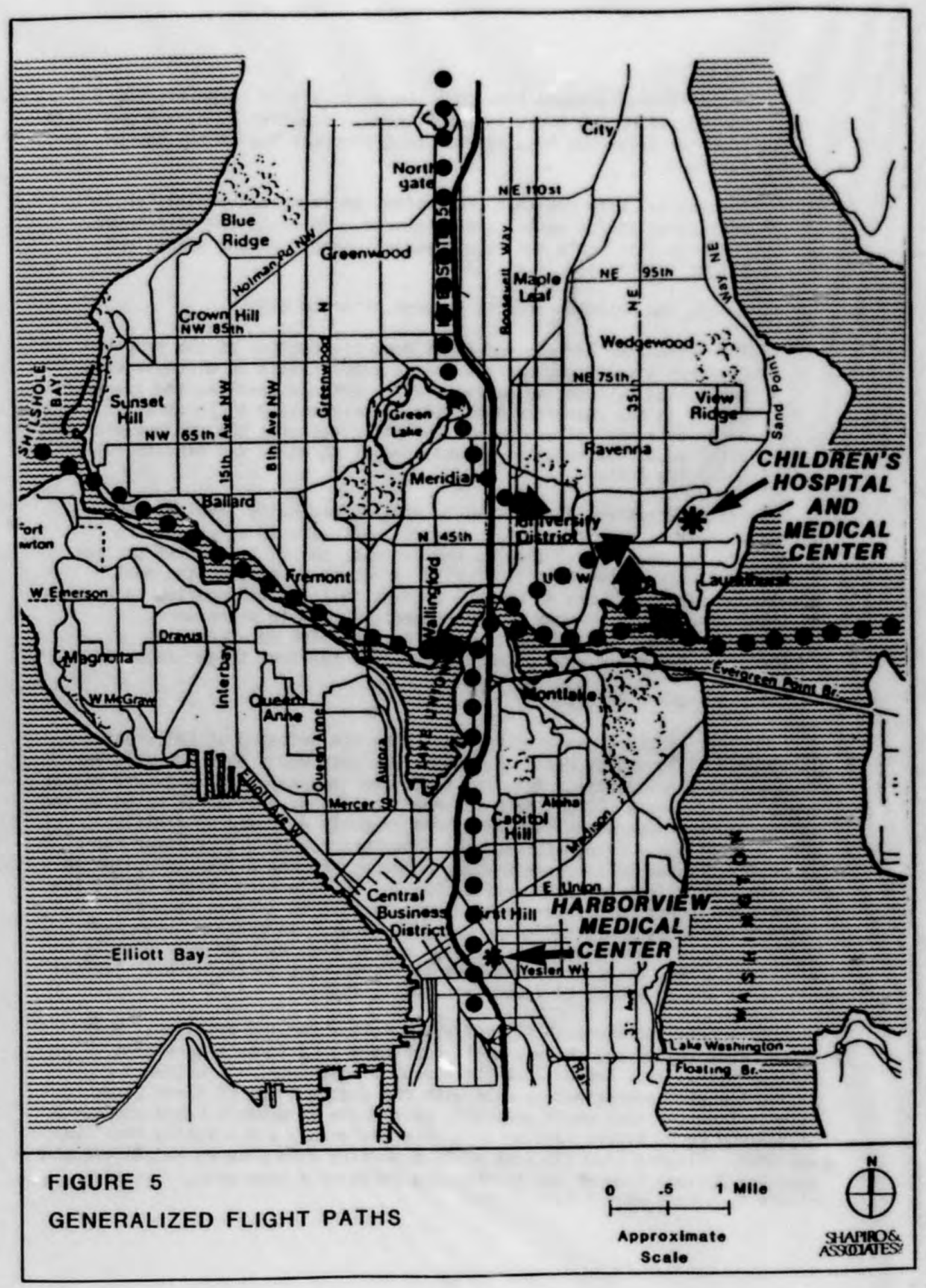

FIGURE 5

GENERALIZED FLIGHT PATHS

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The land uses in the areas over which Airlift Northwest helicopters would primarily fly vary considerably, ranging from urban freeway to commercial to residential.

Actual flight paths could be different depending on meteorological and patient conditions, and specific origin of the flight. The helicopter would not be used during adverse weather conditions. For daytime flights, the FAA minimum standards must be met: the helicopter is not used if there is less than a 300-foot ceiling or less than one-half mile visibility. Airlift pilots also have the option to use the company's guidelines of a 500-foot ceiling or less than one-mile visibility. The helicopter, as a company policy, does not fly in winds in excess of 40 knots (Hill, 1985, 1986).

Flight Path - Approach and Departure to Children's Helistop

Two final approach-departure paths into the Children's helistop would be used by Airlift Northwest. A primary approach-departure path would be used under most wind conditions, a secondary approach-departure path would be used during northwesterly winds that are in excess of approximately 17 knots. Based on surface wind data for Sand Point this latter situation is expected approximately 0.2% of the time, and would be most likely to occur during the winter months (U.S. National Climatic Center, 1982). For either the primary or secondary approach-departure a "noise abatement" profile would be followed.

The primary approach to the Children's helistop (see Figure 6) would originate approximately at the intersection of N.E. 45th Street and Union Bay Place at an altitude of 1,000 feet. At that approximate point, the pilot would decelerate from approximately 160 to 120 knots but not reduce altitude. The pilot would maintain the 1,000-foot altitude and airspeed for approximately the next 1,500 feet, while staying within the general N.E. 45th Street/Sand Point Way N.E. corridor. Approximately southwest of the intersection of Sand Point Way N.E. and 40th Avenue N.E., the landing gear would be extended and the pilot would begin to descend at a rate estimated at 1,500 feet per minute. The helicopter would continue northeast along Sand Point Way N.E., decelerating to a speed of approximately 74-80 knots prior to the turn onto the Children's campus and final approach. As illustrated in the profile of the noise abatement approach-departure path in Figure 7, the rate of descent decreases considerably in the final stages of the approach. The helicopter would enter the Children's campus north of the main entrance and while approximately over the parking garage at an altitude of 100 feet turn south toward the helistop. Under most wind conditions, the helicopter would then make its final descent to the helistop directly from the north. In the case of infrequent strong easterly winds (less than one-tenth of one percent of all winds) the helicopter would turn more tightly over the main entrance and approach the pad more from the west. In the case of strong westerly winds (also less than one-tenth of one percent of all winds) the helicopter would make a wider turn over the parking garage and approach the pad more from the east.

The helicopter generally would land on the helistop facing south. For medical crew pickup and patient discharge, the helicopter typically would shut down its engines on the helistop. In departing, the helicopter would rise to approximately 35 feet, turn counter-clockwise toward the north and

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climb rapidly so as to be at approximately 500 feet when over the parking garage. The departure path would be over the same area but at a higher altitude than the approach paths, so that at the end of the climb (at the point of commencing deceleration on the inbound flight) the helicopter would be at 2000 feet (see Figures 6 and 7).

The secondary approach to the Children's helistop would be used only in conditions of strong winds (above 17 knots) from the northwest quadrant. This approach would be from the northeast and also would use the noise abatement profile (see Figures 6 and 7). This approach would originate just north of the intersection of 55th Avenue N.E. and Windermere Road and would proceed in a direct line to the Children's helistop. The profile of the final descent would be similar to that explained under the primary approach, above.

The departure characteristics of the secondary route would reflect the secondary approach path in terms of the area over which the helicopter would fly, and the primary departure path in terms of altitude (see Figures 6 and 7).

Ground Activities - Patient Transport to the Emergency Room Entrance

Once at the helistop, the medical crew on board the helicopter would be assisted by ground-based medical personnel after the engines are shut down. The critically ill patient would be removed from the helicopter. Electrical monitoring systems that were connected to the patient while in the helicopter would be disconnected, the patient would then be transferred to a gurney and wheeled to the Emergency Room entrance. Neonates or babies in isolettes, which have self-contained ALS systems, could be transported directly to the ICU from the helicopter. Total elapsed time from helicopter touchdown to the patient entering the hospital building is estimated at three minutes. After the patient enters the Emergency Room entrance, the pilot would restart engines and depart. (If the patient is transported in an isolette, the pilot will usually wait for the isolette to be returned.)

The delivery of critically ill patients to the Children's Emergency Room entrance minimizes both the transport time for patients and the need to transfer patients from one mode of transport to another. This is the objective of the Proposed Action. The reduced transport time to the advanced services offered at Children's, and the avoidance of additional transfers minimizes the risk of the patient destabilizing during transit and allows advanced treatment to commence at the earliest possible time. This time savings can reduce suffering, decrease hospital stay time and, in the most severe cases, can mean the difference between life and death.

It should be noted that although transport guidelines for referring physicians may provide guidance in determining the appropriate mode of transit, it is ultimately the attending physician or medical team members who makes the decision to transport by helicopter and where to fly. The risk of exposing a patient to destabilizing circumstances must be evaluated by the attending medical team (Nicola, 1986), and the appropriate medical response (to land at Children's or not) made.

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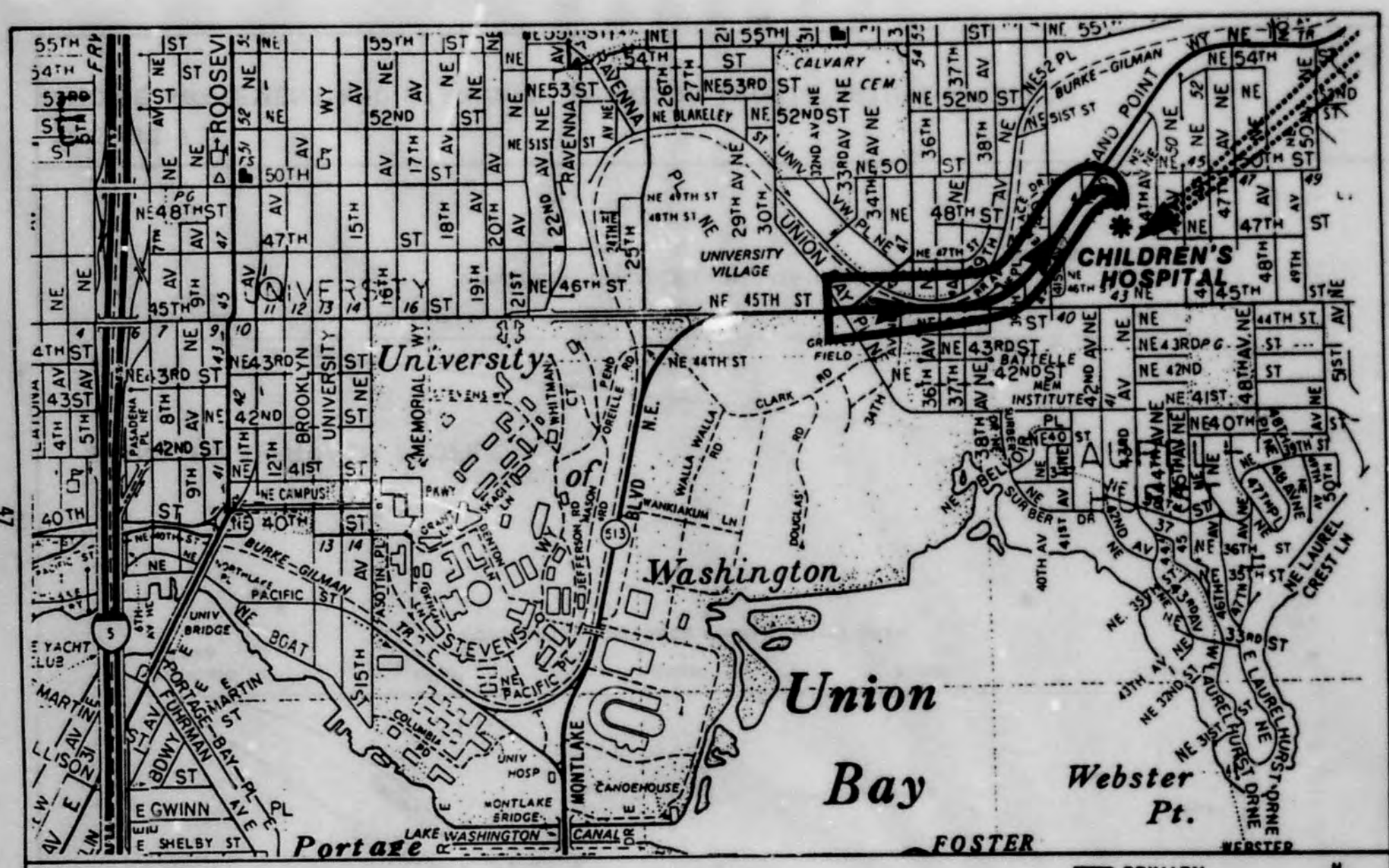
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Portage Bay
CHILDREN'S HOSPITAL
UNIVERSITY VILLAGE
MEMORIAL WY
BROOKLYN
UNIVERSITY WAY NE
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BURKE-GILMAN
PACIFIC ST
NE BOAT ST
MONTLAKE BLVD NE
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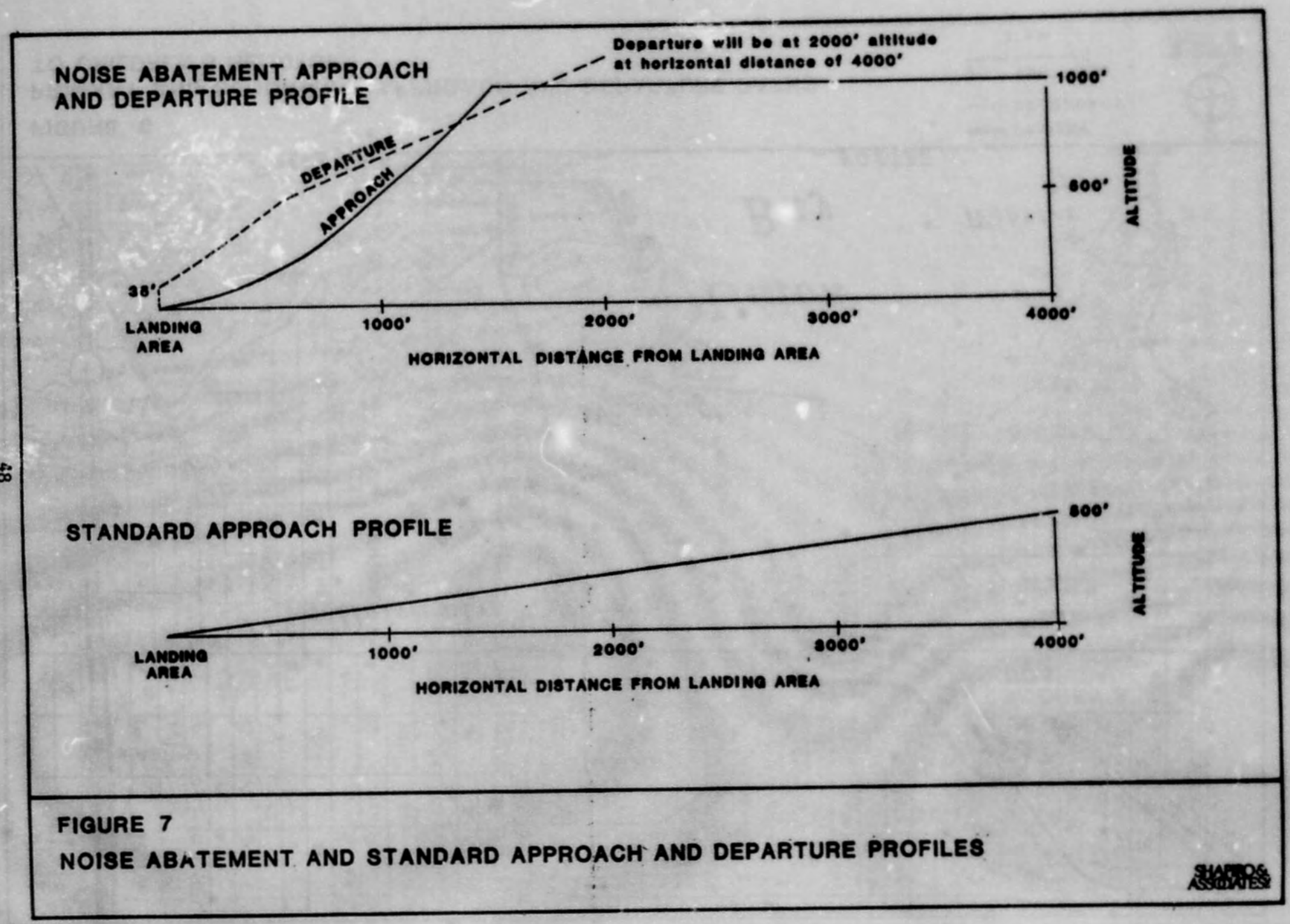

FIGURE 7

NOISE ABATEMENT AND STANDARD APPROACH AND DEPARTURE PROFILES

SHAPIRO & ASSOCIATES

Mitigation Measures that are a Part of the Proposed Action or Alternatives

As part of the Proposed Action, the proponent has agreed to implement measures that will reduce the adverse impacts associated with the project. During construction the contractor will be required to implement erosion control measures. Children's is moving the location of its oxygen tank, thereby minimizing that potential hazard. The helistop will incorporate a fire-prevention system. No aviation fuel will be stored on campus. The helistop is fenced for security, and procedures for controlling vehicular and pedestrian traffic have been developed with responsible personnel trained. Warning signs will be posted on Penny Lane. The helistop will be landscaped. "Glow" rather than direct beam landing lights will be used--these lights will only be turned on during nighttime use. Engines normally will be shut down during medical crew pickup and patient delivery.

Flights will be limited to those associated with critically ill patients. Children's and Airlift have actively participated in the development of communications guidelines to ensure communication from air-to-ground is facilitated. As a policy, Children's will only encourage destabilizing patients on MAST transports to land at the helistop.

Airlift's flight path has been designed to reduce, as far as practicable, flight over sensitive properties--with general flight paths following I-5, water bodies and arterials. The primary approach and departure path has been redesigned so as to minimize impacts on adjacent properties. A noise abatement flight path--involving flying higher for a longer period during approach and departure--will be used.

Airlift Northwest guidelines on acceptable weather conditions are more restrictive than those of the FAA. In addition, Airlift has personnel levels (pilots per aircraft) that exceed NEMSPA/ASHBEAMS levels, a minimum experience requirement and ongoing certification for pilot hiring that exceeds ASHBEAMS requirements, and ongoing training for pilots and medical team personnel that address the guidelines and standards that are being developed by ASHBEAMS and NEMSPA.

Children's has agreed in principle to the development and participation on a review panel composed of physicians and others involved in helicopter transport in order to examine the appropriateness of individual flights, to enhance air-land communications, and to improve operations.

Descriptions of Alternatives to the Proposed Action

Intramural Field Helistop Alternative

The Intramural Field Helistop Alternative is distinguished by the construction of a fenced, lighted, helistop similar to that design proposed for Children's but without perimeter landscaping. The helistop would be located near the University of Washington's Intramural Field, off Union Bay Place N.E., approximately one road mile from Children's Emergency Room entrance (see Figure 8). Purchase, lease or permission to use the property would need to be acquired from the University of Washington. The University has indicated its opposition to a fenced, concrete helistop constructed on

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any of its Intramural Fields (Trask, 1986). Electricity for landing lights also would need to be extended to the site.

The Intramural Field Helistop Alternative also differs from the proposed action in terms of the helicopter's final approach and departure routes, in the pick-up of the medical crew at the Intramural Field (or Harborview) and in the need to transfer the patient to ground ambulance for transport to the Children's Emergency Room entrance.

The Intramural Field site is located in the midst of the University of Washington Athletic Field complex just east of the University Campus, south of N.E. 45th Street, and west of the Laurelhurst neighborhood. The primary land use surrounding the site is athl ic fields and parking lots. The University Village shopping mall is located north of the site, across N.E. 45th Street, with residential uses to the north, east, and west of University Village. The University of Washington Campus is located to the west of the site, the Laurelhurst neighborhood to the east.

Flight Path. The flight path to the general vicinity of the Intramural Field Helistop, whether for pick up of the medical crew or for unloading the critically ill patient, would follow that path described under Flight Path - General, above. Two primary and one secondary final approach and departure paths have been proposed by the pilots of Airlift Northwest. Final paths would need to be approved by the FAA.

The two primary approaches to the Intramural Field Helistop site are a linear approach from the southeast and a curved approach from the southwest (see Figure 8). These alternatives would involve 1-2 minutes less flight time per segment, depending upon point of origin, than that required under the proposed action. The southwesterly approach would be used when flying from the south or west; the southeasterly approach would be used when flying from points to the east. The southwesterly approach would originate just northwest of the Montlake Bridge and fly over Husky Stadium and the athletic fields. The southeasterly approach would originate just north of Foster Island, north of the University of Washington Arboretum and fly over the University of Washington athletic fields.

The secondary approach would be employed only in times of winds in excess of 17 knots from the northwest quadrant. This approach would fly over the University of Washington campus before making a final approach from the northwest. All three of these approach patterns could also serve as departure routes depending upon the destination of the flight.

In that Airlift Northwest would use a standard approach (as opposed to a noise abatement approach) for any of these approach patterns, the helicopter would begin its final approach at an altitude of 500 feet. Approximately 4,000 feet from the landing zone the pilot would begin his/her descent and decelerate from 160 to approximately 120 knots (see Standard Approach Profile in Figure 7). The descent would continue uniformly at a rate of 175 feet per 1,000 feet of horizontal distance until touchdown at the helistop. The average speed during the final approach would be approximately 40 knots.

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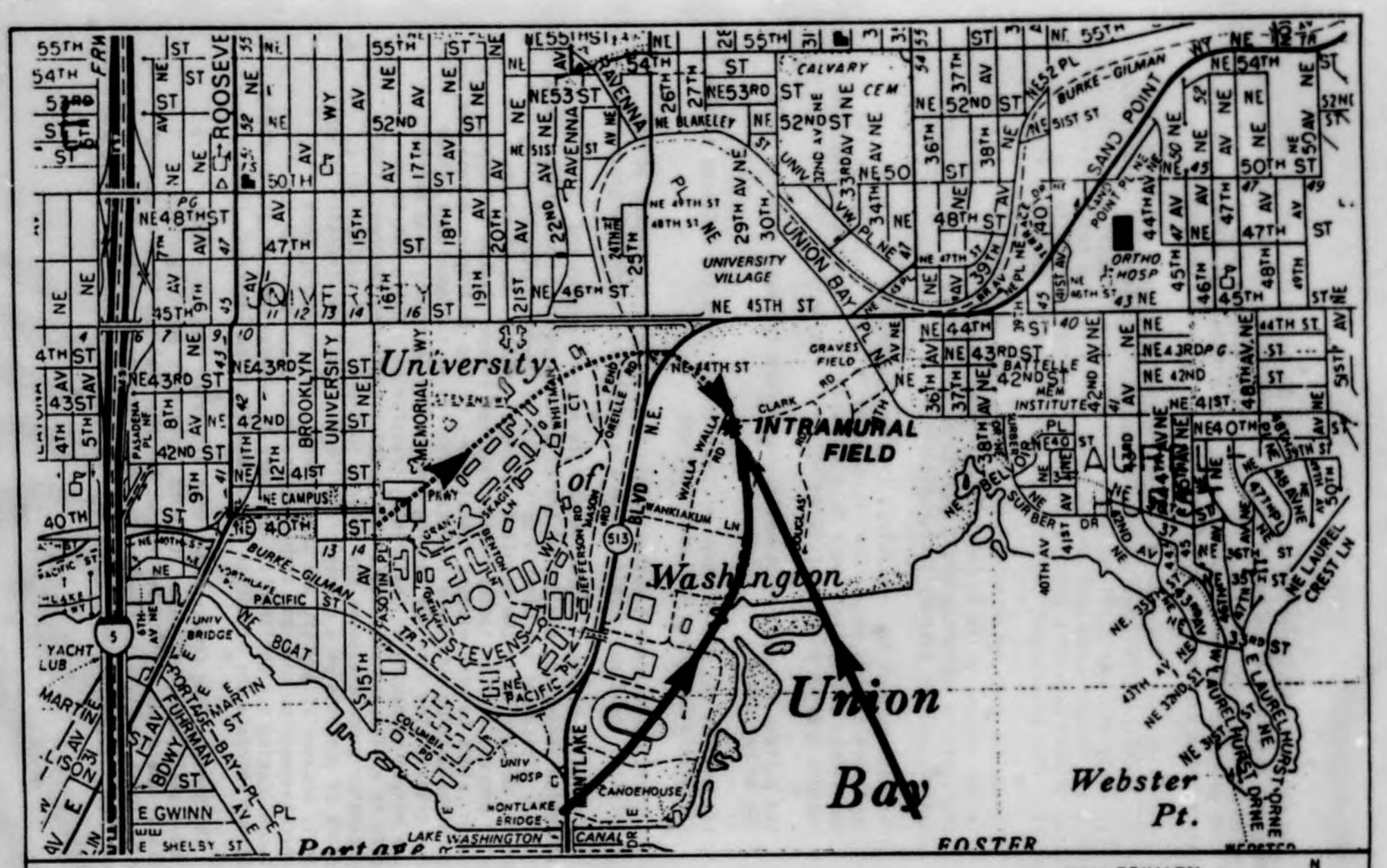
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Union Bay
Webster Pt.
INTRAMURAL FIELD
UNIVERSITY VILLAGE
CALVARY CEM
SAND POINT
ORTHO HOSP
MEM STADIUM
BATTELLE INSTITUTE
GRAVES FIELD
MEMORIAL WY
RAVENNA AV
BURKE-GILMAN
UNIV BRIDGE
MONTLAKE BRIDGE
CANOEHOUSE
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2ND AV NE
1ST AV NE
ROOSEVELT WY NE
BROOKLYN AV NE
UNIVERSITY WY NE
MEMORIAL WY NE
BOYER AV E
MARTIN ST
FUHRMAN AV E
PORTAGE BAY PL
BOYER AV E
MONTLAKE BLVD E
LAKE WASHINGTON BLVD
LAKE WASHINGTON BLVD N
LAKE WASHINGTON BLVD N.E.
WALLA WALLA RD
GRAVES FIELD RD
CLARK RD
JEFFERSON RD
MASON RD
DOUGLAS RD
BENTON LN
SKAGIT LN
WHITMAN CT
OREILLE RD
PEND
WANKIAKUM LN
STEVENS WAY
PACIFIC PL
PACIFIC ST
NE CAMPUS PKWY
PASADENA PL NE
SURBER DR NE
BELVOIR PL NE
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The departure would involve vertical lift to an altitude of 35 feet, turning and ascending along one of the routes designated as an approach path depending on flight destination. The ascent rate would be approximately half that proposed for the proposed action: an altitude of 1000 feet would be achieved at a distance of 4000 feet from the helistop.

Ground Activities - Patient Transport to the Children's Emergency Room Entrance. Once the helicopter with medical crew and patient has landed, the pilot typically would shut off engines. A ground-based medical crew with ambulance and driver would meet the aircraft and assist the helicopter's pediatric medical crew in preparing the critically ill patient for transport. This process could involve some or all of the following steps:

- any of the helicopter monitoring systems that were connected directly to the patient while in the helicopter may have to be disconnected (Patients in isolettes would need to be disconnected from aircraft systems and the battery pack connected.);
- the patient must be transferred from the helicopter into the ambulance and may have to be reconnected to support systems in the ambulance; the patient would face the greatest risk of advanced life support systems disconnecting during this transfer;
- the patient may require stabilization before the ambulance can leave the soccer field;
- the patient and medical team would be driven from the helistop to the Children's Emergency Room entrance; and,
- the patient's support systems would have to be disconnected at the hospital for final transfer from the ambulance to the emergency room.

The transfer process, depending on life support system and stabilization needs, and the ground travel time, depending on traffic, could result in a minimum of ten minutes or as long as 20-30 minutes elapsing before the patient is in the hospital (Andrews, 1986). The 15-minute transfer process (for an isolette) is comprised of two minutes helicopter cool down, eight to nine minutes transfer out of the helicopter across the field to the waiting ambulance and stabilization in the ambulance, three minutes transit time from the parking area to the Emergency Room entrance and one minute unloading at Children's; transfer of a child not in an isolette is easier and requires an estimated ten minutes (Andrews, 1986). This transfer process exposes the patient to the risk of destabilizing. For transport of patients on a gurney or in the isolette, the transfer is more difficult because if any IVs are inadvertently disconnected, then reconnection must be made and stabilization must occur prior to the ambulance leaving for Children's. Exposure to adverse weather and/or field conditions increase the potential for destabilization (Andrews, 1986).

The Seattle-King County Department of Health concluded that "there will be a small number of cases at (both Children's and University Hospitals) where the ability to land at the hospital may be life-saving" (Nicola, 1985). Delays in treatment of other patients, while perhaps not a life or death situation, could result in suffering, the need for prolonged

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treatment, permanent disability or other unfavorable outcome. Examples of these other situations include patients with impaired breathing, diaphragmatic hernia, aspiration of a foreign body, cardiac irregularities, near drownings and vascular collapse from general infections. (Neff, 1986)

Because this alternative involves a minimum of ten minutes of additional transit time for ground transport, the transfer of the patient from the helicopter to the ambulance, and then out of the ambulance at Children's, as well as the possibility of disconnection/reconnection/ disconnection of advanced life support systems, this alternative does not meet the proponent's objective to minimize transport time and the number of transfers.

University Hospital Helistop Alternative

The University of Washington has proposed using the helistop located on the roof of the new wing to the University Hospital. The purpose of the helistop is to allow critically ill patients (high risk obstetrical patients, premature infants with respiratory distress, cardiac patients, etc.) destined for University Hospital to be transported directly from the helicopter to the University Hospital, thereby saving time and the need for potentially destabilizing patient transfers involved with patient transports from other landing locations. This alternative proposes that the University Hospital, also a member of the Airlift Northwest consortium, share the use of the University Hospital Helistop with Children's. For patient care and liability reasons, it is unlikely that the University Hospital would allow Children's-destined patients to be landed on the helistop on the roof of the hospital (Goertzen, 1986; Shawcroft, 1986).

The University Hospital Helistop has been designed as a 3,300-square-foot area on the roof of the Hospital's new east wing. The structure has been built to accommodate helicopter landings. The flight path and requirements for patient transfer are different than those proposed for either the Children's or Graves Field helistop Alternatives.

The University of Washington Hospital Annex is located on the southern boundary of the University of Washington Campus, immediately northwest of the Montlake Bridge. The hospital is surrounded primarily by the University of Washington Campus, which is located to the north, northeast, and east of the site. There are other University oriented uses to the west of the site, with some commercial activity along N.E. Boat Street, west of the site. To the southeast of the site immediately south of the Montlake Cut of the Lake Washington Ship Canal is an area of single-family residences and the Seattle Yacht Club. Portage Bay lies to the southwest of the site.

Flight Path. The flight path is more compact and the flight would generally be of slightly shorter duration (except for the southeasterly approach to the Intramural Field) than the approaches to either the proposed Children's or Intramural Field Helistop Alternatives. Moreover, the rooftop location decreases the total helicopter descent distance.

The two approach and departure routes for the University Hospital Helistop would be from the northeast and slightly south of due east (see Figure 9). The northeasterly approach would originate above the University

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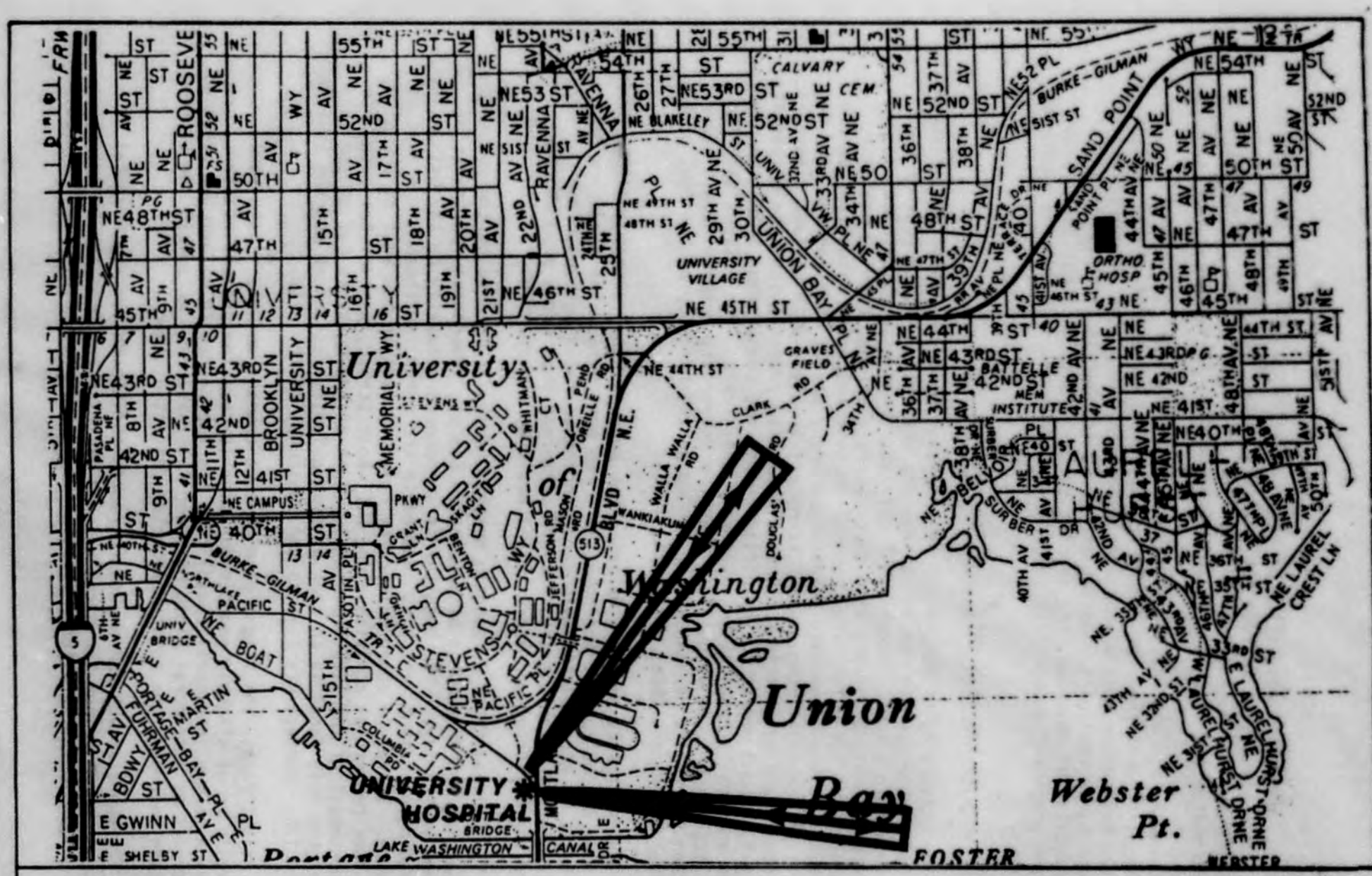

FIGURE 9

PRIMARY APPROACH AND DEPARTURE PATHS
TO UNIVERSITY HOSPITAL HELISTOP

of Washington athletic fields, near Intramural Field, and fly over Husky Stadium and Hec Edmundson Pavillion. The easterly approach would begin over Union Bay at a point slightly north of Foster Island. Due to the limited size of the landing area and the proximity of the hospital building to the pad, the helicopter would be unable to turn around over the pad, rendering it unable to depart in the same direction from which it approached (Hill, 1986). Thus, the helicopter would have to approach from one of the indicated directions, and depart from the other on every flight. Following liftoff, any flight path could be followed after the helicopter clears the building.

As with the approaches to the Intramural Field site, Airlift Northwest would approach the University Hospital helistop at a standard approach angle, as described above.

Ground Activities - Patient Transfer to the Children's Emergency Room Entrance. Once the helicopter, with medical crew and patient has landed, the pilot would shut off engines. A ground-based crew would meet the aircraft and, with the helicopter's pediatric medical crew, prepare the patient for transport. The patient would be transported via elevator down five floors through University Hospital to the Hospital's Emergency Room. The patient's medical crew would be met by ambulance and transported to Children's. The patient could need the disconnection of monitoring systems and reconnection in the ambulance and then disconnection of the system at the Children's Emergency Room entrance. The patient would face the risk of ALS systems disconnecting and destabilizing during these transfers.

The approximately two mile trip from the University Hospital to Children's would include travel along N.E. Pacific Street, N.E. Pacific Place, Montlake Boulevard N.E. and then onto N.E. 45th Street and Sand Point Way N.E. Traffic at the intersection of N.E. Pacific Place and Montlake Boulevard N.E. is likely to be congested during commuter hours and on event days at Husky Stadium, Hec Edmundson Pavillion or on campus. Compared to the Intramural Field Helistop Alternative, the elevator travel time and the additional road travel time is estimated to add seven minutes to the total patient transport time to the Children's Emergency Room entrance, but could be slightly shorter, or decidedly longer under extreme traffic conditions. Thus, it is estimated that from the time of landing on the roof of University Hospital, it would take a minimum of 17 minutes for a patient to arrive at Children's. If the patient is in an isolette, it would take a minimum of 22 minutes. Any manipulation of life support systems or need for restabilization would add to this travel time total. The risk to the patient would be greater than that for the Intramural Field Alternative. The need for transfer of the critically ill patient from the University Hospital rooftop, through the hospital to an ambulance and transport to the Children's Emergency Room entrance conflicts with the proponent's objectives for minimizing transfers and transport time.

Limited Landing - No Construction of the Proposed Action or Alternatives

The Limited Landing Alternative is characterized by no construction of a helistop at Children's or Intramural Field or use of the University Hospital's helistop, if its use is approved by the Seattle City Council. Critically ill patients who otherwise would be transported to Children's by

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an Airlift Northwest helicopter would be off-loaded at Harborview or Boeing Field, transferred to a ground ambulance and driven (Code Red) to Children's. MAST helicopters would probably continue to land at the Intramural Field. There would, however, be continued limited landings in the driveway area outside the Children's Emergency Room entrance.

Prior to the ambulance departing from either Harborview or Boeing Field, critically ill patients would need to be disconnected from the support and monitoring systems in the helicopter, transferred to an ambulance, reconnected and, possibly restabilized. Ambulance travel time from Harborview Helistop to Children's averages 15 minutes; from Boeing Field to Children's, 25 minutes (Andrews, 1986). Actual transit time may be shorter or longer, depending on traffic conditions, and is likely to be lengthened or complicated during commute hours, during delays due to traffic backing up with Montlake Bridge openings, during events at the University, Seattle Center or other locations in Seattle, or during construction that affects traffic on I-5, SR-520, Montlake Boulevard or Sand Point Way N.E. Thus, total minimum elapsed time for transit from landing at Harborview or Boeing Field to a patient entering Children's Emergency Room entrance would be 20 minutes or 30 minutes, respectively, with an additional five minutes if the patient is in an isolette.

The helicopter's pediatric medical crew could judge, in consultation with Children's medical staff and/or Airlift's Medical Director, that patient and/or traffic conditions warrant the critically ill patient being landed at Children's in the driveway area outside the Emergency Room entrance. It is estimated that three to four patients a month could need to be landed for medical reasons at the Children's Emergency Room entrance (Nicola, 1986). These patients typically would be destablizing while in flight and/or those patients whose transport time could adversely influence the patient outcome. An additional, unknown number of patients would need to be transported to the Children's Emergency Room entrance area landing zone in order to avoid exposing the patient to a severe risk of destabilizing or of a potential adverse outcome due to a delay in receiving treatment at Children's.

In instances in which landings occur outside the Children's Emergency Room entrance, it would be necessary to secure the landing zone area. This would be accomplished by security and/or other personnel from Children's. The flight approach to this landing zone area is similar to that for the proposed helistop, however, it is different in the final approach off Sand Point Way N.E. where the flight path is altered to avoid the tall trees to the north of the landing area. Rather than turning directly onto the hospital grounds just north of the main entrance, the helicopter would turn to the northwest near the intersection of Sand Point Way N.E. and N.E. 47th Street. The pilot would make a wide 180 degree turn toward the hospital grounds while over an open field to the northwest of the Sand Point Way N.E./N.E. 47th Street intersection at an altitude of approximately 500 feet. It would then approach the hospital from the northwest and turn to the southwest over the west edge of the parking garage. It would then fly to a point directly west of the landing area before making a final descent from the west. Because of the tall trees in the area of the proposed helistop, the actual landing would be from the west.

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In instances in which MAST helicopters land at the Intramural Field, it would be necessary to secure the landing zone area, which would be approximately the same location as the helistop site under the Intramural Field Helistop Alternative. This procedure involves security and/or medical personnel from Children's and/or the University controlling athletes, passersby and onlookers. The flight path in and out of the Intramural Field would be identical to that described under the Intramural Field Helistop Alternative. Muddy conditions on the field could also expose the patient to risk of complication in the event that attendant(s) slip during transport and jostle connecting lines to the ALS systems. An ambulance also has become stuck in the mud at this site.

Because of the additional transport time and need for potentially destabilizing transfers, the Limited Landing Alternative does not meet the proponent's objectives.

No Action - No Construction of the Proposed Action or Alternatives

Under a No Action Alternative, no helistop would be constructed at either Children's campus or the University of Washington's Intramural Field. Additionally, Children's-destined patients being transported by helicopter would not be permitted to land at the University Hospital Helistop, if approved, or in the driveway area outside the Children's Emergency Room entrance.

Children's-destined patients flown by helicopter would need to land either at Boeing Field or Harborview Hospital and transported by ambulance to Children's. As described in the Limited Landings Alternative, the total minimum elapsed time for transit from landing at Harborview or Boeing Field to a patient entering Children's Emergency Room entrance would be 20 or 30 minutes, respectively, with an additional five minutes if the patient is in an isolette.

It is Children's position that the Hospital is obligated by State Administrative Code (WAC 248-18-285) to provide basic emergency care services. The Hospital construes the administrative regulations to mean that it cannot prohibit a helicopter from landing on the campus even if by doing so the Hospital would be in violation of applicable land use laws and regulations. Moreover. the Hospital believes that the standard of care created by helicopters now landing at Children's cannot be diminished without violating the provision of Section 7.70.040 of the Revised Code of Washington, which establishes thresholds for assessing whether the health care provider has exercised expected care, skill and learning.

Because of the additional transport time and need for potentially destabilizing transfers, the No Action Alternative does not meet the proponent's objectives

Comparison of Environmental Impacts of Alternatives

Implementation of the Proposed Action or Build Alternatives would cause environmental impacts of varying degree. The important potential impact areas have been identified through the scoping process and are addressed in this document. These elements include noise and vibration; aircraft safety;

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and the potential for the project to establish a precedent (cumulative impact).

Implementation of the proposed action would involve the creation of noise and vibration to which area residents would be exposed. Noise impacts would not be as great at the Intramural Field Helistop Alternative because residential areas are further from the proposed helistop location. Similarly, noise impacts on Montlake residents would not be as great for helicopter transports under the University Hospital Helistop Alternative. The Limited Landings Alternative involves some noise at Children's from landings and takeoffs, which would be particularly annoying to residents to the west and also involve noise at off-campus landing locations. The No Action Alternative is characterized by noise at Harborview or Boeing Field. Any alternative except the Proposed Action could involve ambulance siren noise.

The risk of aircraft accident is statistically possible under any alternative, including no action. The construction of a structurally sound, secured, lighted landing area increases the safety of takeoffs and landings but does not negate the risk. The potential for non-aircraft property damage or personal injury is probably the least under the secured Intramural Field Helistop Alternative followed by either Children's or the hospital helistop locations.

Approval of the Proposed Action or Alternatives is not expected to have an impact on the number of Emergency Helistops constructed in the region.

Benefits and Disadvantages of Reserving Implementation of the Proposed Action for the Future

The benefits of reserving implementation of the Proposed Action includes the near-term avoidance of environmental effects associated with project implementation: the preservation of the tall trees on the site; minimizing the number of helicopter flights landing at Children's and thereby reducing the exposure of area residents to noise and vibration, and reducing the risk of a helicopter accident.

Disadvantages of delaying project implementation include delay of up to 35 minutes in some critically ill patients receiving treatment offered only at Children's. This delay could cause unfavorable outcomes for the critically ill patients.

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IV. AFFECTED ENVIRONMENT, SIGNIFICANT IMPACTS AND MITIGATING MEASURES

In this chapter, analyses of environmental impacts that were deemed important through the scoping process are presented. These elements are: helicopter safety, and noise and vibration. For each of these elements, the proposed action is analyzed through a review of existing conditions, a description of probable impacts and impacts of the alternatives where such impacts differ substantially from those of the proposed action, and an identification of possible mitigating measures that are beyond those measures included as part of the proposed action or alternatives. An assessment of cumulative impacts also is included in this chapter, as is a summary of impacts that apparently cannot reasonably be mitigated.

HELICOPTER SAFETY

Introduction

This section presents information on helicopter safety. The characterization examines both general aviation (non-military) helicopter service for the years from 1976 to 1981, and Emergency Medical Service related helicopter service from 1972 through 1985. Trends in helicopter safety are also explored qualitatively.

Primary sources for this study are reports by the National Transportation Safety Board, which is the federal agency with the responsibility of maintaining accident statistics on air and ground transportation, and articles in periodicals dealing with helicopter safety and helicopter ambulance safety. In addition, personal interviews were conducted with recognized authorities in the field of hospital aviation safety, a rotorcraft safety specialist from the Federal Aviation Administration (FAA) and a helicopter pilot from Airlift Northwest, the EMS helicopter service consortium of which Children's is a member.

The National Transportation Safety Board (NTSB) maintains comprehensive statistics on accidents involving U.S. General Aviation, and publishes them annually in the Annual Review of Aircraft Accident Data. NTSB statistics for general aviation have not yet been published for the years 1982-1985, so this review is limited to 1975-1981. Data from other sources for the years since 1981 are also presented.

Helicopter Accident Frequency Trends

Between 1975 and 1981, there was a decrease of almost 60% in the rate of helicopter accidents as measured in number of accidents per 100,000 flight hours. As shown in Table 6, the number of accidents per year remained relatively stable, yet the number of total flight hours increased almost 150%. Therefore, over the seven year period, the number of accidents per 100,000 flight hours decreased steadily from 27.31 to 11.16.

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Table 6

Accident Frequency For All Helicopters
(1975-1981)

Year	Number of Accidents	Elapsed Time	Accidents/ 100,000 hours
1975	266	947,000	27.31
1976	249	1,103,000	22.57
1977	247	1,170,000	21.11
1978	285	1,397,000	20.40
1979	267	1,522,000	17.54
1980	263	1,891,000	13.91
1981	257	2,303,000	11.16

Note: Includes turbine-powered helicopters

Source: National Transportation Safety Board, 1981.

One of the primary reasons for this increase in helicopter safety has been the increased use of turbine-powered engines and the corresponding decreased use of less dependable piston engines (Collett, Benedict, and Hill, 1986). Of the roughly 170 helicopters currently in use in nationwide air ambulance services, only one piston-powered helicopter is still in use (Collett, 1986); therefore, statistics on turbine powered helicopters generally are more representative of EMS helicopters. Unless otherwise noted, all NTSB statistics cited in the remainder of this report refer to turbine-powered helicopters.

As shown in Table 7, turbine-powered helicopters have shown a similar decrease of approximately 60% in the number of accidents per 100,000 flight hours over the same seven year period with a 1981 figure of 5.48 accidents per 100,000 flight hours. The annual number of accidents in turbine-powered helicopters nearly doubled between 1975 and 1981, but the number of flight hours more than quadrupled. In comparing Table 6 and Table 7 it is evident that with the exception of 1979, turbine-powered helicopters have consistently been more than twice as safe as all helicopters.

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Table 7

Accident Frequency For All Turbine-Powered Helicopters
(1975-1981)

Year	Number of Accidents	Hours Flown	Accidents/ 100,000 hours
1975	47	351,000	13.39
1976	39	423,000	9.22
1977	56	599,000	9.35
1978	60	631,000	9.51
1979	80	663,000	12.07
1980	80	1,172,000	6.83
1981	78	1,424,000	5.48
Totals	440	5,263,000	8.36

Source: National Transportation Safety Board, 1981.

NTSB does not compile statistics specifically regarding EMS helicopter flights, but some data have been gathered by those in the helicopter and EMS fields. Howard Collett, publisher of Hospital Aviation magazine, and Nina Merrill, Executive Director of the American Society of Hospital-Based Emergency Air Medical Services (ASHBEAMS) have assembled data on all EMS-related accidents since the first helicopter ambulance service was started at St. Anthony's Hospital in Denver in 1972.

Since the Denver program was started, there have been a total of 57 accidents involving EMS helicopter flights. Although actual figures on the total number of air ambulance flight hours have not been kept, Collett used estimated average trip time per patient figures to determine that, from 1972 through 1985, EMS helicopter accidents have occurred at an approximate rate of 18 times per 100,000 flight hours. Some specific data have been compiled for the years 1980-1985 by the National EMS Pilots Association. These data indicate an accident rate of 22.9 accidents per 100,000 flight hours (see Table 8). The data also note that during the period from 1980-1985, the EMS helicopter accident rates peaked in 1982 at a rate of 29.3 accidents per 100,000 flight hours, decreased to 18.5 accidents per 100,000 flight hours over the next two years,and then rose to 20.7 during 1985.

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Table 8

ACCIDENT FREQUENCY FOR EMS HELICOPTERS

Year	Number of Accidents	Number of Patients Transported	Accidents* per 100,000 Flight Hours	Average Number of Patients Between Accidents
1980	3	16,500	18.2	5,500
1981	6	23,000	26.1	3,833
1982	9	30,700	29.3	3,411
1983	7	37,900	18.5	5,414
1984	9	48,600	18.5	5,400
1985	15	62,000	20.7	4,133
Totals	49	218,700	22.9	4,463

*Based on a worst-case industry multiplier of 60 in-flight minutes per patient (Collett, 1986).

Source: Collett, 1986.

During the 1970s, many early EMS pilots were commercial pilots who branched out into EMS service: Many were "private rural pilots who wanted to relive the adrenalin rush of military helicopter service and expand the usage of their civilian aircraft businesses. Often their advertisements in the telephone yellow pages would list their aerial services as emergency medical, tourist, charter, cargo, and even crop dusting" (Reich and Kania, 1985). As the early industry organized (ASHBEAMS formed in 1980) and established safety standards, the number of these part-time operators declined, with a resultant improvement in safety.

Although industry experts acknowledge that 1985 was a particularly unsafe year, the data in Table 8 suggest fluctuations in EMS helicopter safety since the industry began to experience rapid growth in 1981. An article discussing the recent (1985) rash of accidents suggests that one reason for the accidents is the pilots' willingness to fly in adverse weather when other commercial helicopter pilots would not fly. As stated by Paul Procter, a business flying editor for Aviation Week and Space Technology, "Those guys absolutely hate the thought of losing a patient because they can't fly" (Ver Berkmoes, 1986).

EMS helicopters are frequently called in for particularly hazardous field pickups in locations that ground ambulances would have a difficult time reaching. Even on relatively routine EMS flights, the pilots often land in unfamiliar surroundings in makeshift landing areas in the field. Thus, EMS helicopters may never reach the same safety levels associated with general aviation. It should be noted, however, that the added risk associated with these types of flights is generally limited to the field and not designated landing pads (see Accident Potential with Respect to Phase of Flight, below).

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Nonetheless, there is an awareness in the industry that EMS helicopter safety can continue to improve. In an attempt to increase safety, ASHBEAMS and the National Emergency Medical Services Pilots Association (NEMSPA) are in the process of developing standards on pilot training, staffing, and operations protocols. (Aviation Week and Space Technology, 1986).

Fatal Accidents Involving Helicopters

General Aviation. As illustrated in Table 9, total fatal accidents declined from 1.71 fatal accidents per 100,000 flight hours in 1975 to 0.63 per 100,000 flight hours in 1981. The 73 fatal accidents identified in Table 9 account for a total of 139 fatalities during the seven year period. Of these, eight were ground fatalities (persons not in the helicopter at the time of the accident).

Table 9

FREQUENCY OF FATAL ACCIDENTS FOR ALL TURBINE-POWERED HELICOPTERS
(1975-1981)

Year	Number of Fatal Accidents	Hours Flown	Fatal Accidents/ 100,000 hours
1975	6	351,000	1.71
1976	8	423,000	1.89
1977	8	599,000	1.34
1978	11	631,000	1.74
1979	13	663,000	1.96
1980	18	1,172,000	1.54
1981	9	1,424,000	.63
Total	73	5,263,000	1.39

Source: National Transportation Safety Board, 1981.

EMS. In 14 years, there have been 17 fatal accidents (causing 46 deaths) involving EMS helicopters, resulting in an accident rate of approximately 6.5 fatal accidents per 100,000 flight hours, which is considerably higher than that of general aviation. Only two of these fatal accidents, however, have involved "major vendors" (defined as vendors serving three or more hospitals) [Collett, 1986], which represents an accident frequency of approximately 0.66 fatal accidents per 100,000 flight hours for major carriers--a 14-year total that is comparable with the safest year for general aviation, according to the NTSB figures. There has never been a ground fatality in an EMS helicopter accident. (Collett, 1986)

Accident Potential with Respect to Phase of Flight

General Aviation. The NTSB study identifies the location of helicopter accidents relative to the heliport or airport for 1981 only. These figures are available only for all helicopters (piston and turbine-powered). As shown in Table 10, more than half of the two hundred fifty seven accidents

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in 1981 (54%) occurred further than one mile from the airport or heliport. The second most frequent occurrence (22%) was at the site of an airport. 2.3% of the accidents occurred on heliports. Four percent of all accidents occurred within one mile of the heliports or airport.

Table 10

NUMBER AND FREQUENCY OF ALL HELICOPTER ACCIDENTS
IN RELATION TO AIRPORT OR HELIPORT
IN 1981

Location	Accidents	Percentage
On Airport	56	21.8
On Heliport	6	2.3
On Barge/Ship/Platform	1	.4
In Traffic Pattern (only applies to airports, heliports, etc. with established traffic pattern)	4	1.6
Miles From Port:		
Within 1/4	4	1.6
1/4 - 1/2	3	1.2
1/2 - 1	3	1.2
Beyond 1	139	54.1
Unknown/Not Reported	41	16.0
TOTAL	257	100.0

Note: Totals do not add to 100% due to rounding

Source: National Transportation Safety Board, 1981.

EMS. Of the 57 EMS helicopter accidents that occurred through 1985, two ocurred on the host hospital's landing area. (Both of these occurred when engines failed during takeoff from the landing area and takeoff had to be aborted. There were no injuries or deaths on either occasion.) There is no specific data available on the exact distance from the hospital of the other 55 accidents. Nina Merrill of ASHBEAMS was aware of only one other accident that occurred within one mile of the hospital; Tom Einhorn of NEMSPA thought that there may have been two or three. In either case, it appears that the great majority of EMS helicopter accidents have occurred in the field or en route at a distance of greater than one mile from the host hospital.

Reasons stated for the locations of these accidents include the pilot's lack of familiarity with the landing area, poor visibility at field landing areas, the panicky behavior of those on the ground attempting to guide the pilot, and the frequent need to land on marginally safe landing areas. The fact that the largest single cause of EMS helicopter accidents is flying into wires or obstacles (see "Causes of Accidents" section below) supports this assertion. In familiar landing areas, pilots and support teams know the locations of wires and obstacles and are careful to avoid them. At an

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unfamiliar pickup point in the field, unknown wires present a more serious danger (Collett, Merrill, Poulton, Hill, Benedict).

Causes of Accidents

General Aviation. The NTSB uses 14 different designations for types and causes of helicopter accidents, including "hard landing, collision with wires or poles, engine failure or malfunction," etc. (see Table 11). In 1981 the largest number of accidents (42%) were caused by engine failure or malfunction. Seventy-two percent of these accidents caused either minor or no injury. The other most frequent causes of accidents were "controlled" collisions with the ground and collisions with wires or poles (each causing 10.3% of all accidents). Both of these categories caused higher percentages of fatal and serious injury accidents. Nonetheless, even among turbine-powered craft, which have relatively dependable engines, engine failure or malfunction was the single leading cause of serious injury or fatal accidents. No data are available on twin engine helicopters.

Table 11

GENERAL AVIATION, TURBINE-POWERED HELICOPTER ACCIDENTS IN 1981 BY TYPE AND CAUSE

Type of Accident	Number	Percentage
Hard Landing	6	7.7
Roll Over	5	6.4
Collision between Aircraft--both in flight	1	1.3
Collision w/Ground/Water--Controlled	8	10.3
Collision w/Ground/Water--Uncontrolled	4	5.1
Collision w/Wires/Poles	8	10.3
Collision w/Buildings	1	1.3
Collision w/Dirt Banks	1	1.3
Collision w/Other	1	1.3
Engine Failure or Malfunction	33	42.3
Propeller/Rotor Failure	1	1.3
Tail Rotor Failure	7	9.0
Prop/Rotor Accident to Person	1	1.3
Miscellaneous/Other	1	1.3
TOTAL	78	100.0

Note: Total does not add to 100% due to rounding.

Source: National Transportation Safety Board, 1981,

EMS. Similar, although more general data have been assembled on causes of EMS helicopter accidents (see Table 12). The single greatest cause (32%) of EMS helicopter accidents has been striking wires or obstacles. (58% of this type of accident resulted only in damage to the craft, but no injuries.) The second leading cause of EMS helicopter accidents has been power loss or other mechanical failure, which has accounted for 26% of these

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accidents. (The majority of this group of accidents (64%) caused no death or injury.)

Table 12

AIR AMBULANCE HELICOPTER ACCIDENTS BY CAUSE
(1972-1985)

Type of Accident	Number	Percentage	Associated Fatal Accidents
Struck Wires/Obstacles	17	31.5	4
Loss of Control	9	16.7	1
System Management*	1	1.9	1
Power Loss/Other Mechanical Failures	14	25.9	1
Flew into Ground	12	22.2	9
Unknown	1	1.9	1
TOTAL	54		17

* Pilot failure to switch to full fuel tank.

Note: Total does not add to 100% due to rounding.

Source: Helicopter Association International (HAI) Convention News, January 28, 1986.

The third leading cause of EMS helicopter accidents and by far the leading cause of fatal accidents is the loosely defined category "flew into ground," which accounts for 22% of all EMS aircraft accidents and more than half (53%) of the fatal accidents involving EMS aircraft. This designation was applied to accidents that occurred in poor visibility, when the helicopter hit the ground, and where there was no evidence of any mechanical failure. It is assumed that the causes of these accidents were pilots becoming disoriented by low visibility.

Time of Day (Light) and Weather Conditions

General Aviation. The NTSB report provides data on daylight and weather conditions for 1981 accidents, but does not provide that information specifically for turbine-powered helicopters. Therefore, the information in this section is based on all helicopters. The designations used by NTSB regarding weather conditions are limited to the "Visual Flight Rating" (VFR) and Instrument Flight Rating" (IFR) designations common to aviation regulation. These designations refer primarily to visibility, are not standardized, and do not necessarily account for other factors, such as wind. For example, in some areas of relatively flat topography, the ceiling and visibility limits that would trigger an IFR designation might be more permissive than in an area with greater topographic relief. Therefore, if ten different accidents occurred under VFR conditions, it is possible that the weather could have been different for each of the ten.

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The statistics show that the majority (see Table 13) of helicopter accidents in 1981 occurred under VFR conditions. Although VFR conditions generally refer to better weather conditions than IFR conditions, this can be misleading. Most accidents occur under VFR conditions because far more pilots are qualified to fly under VFR conditions than those qualified for IFR flight (generally the more experienced pilots). One common situation is that a VFR rated pilot takes a helicopter out when the weather is good and when it turns bad, he/she is unprepared to deal with it. Many of the accidents that occur under conditions that are technically VFR, actually occur in poor weather (Stripling, 1986). The majority of accidents (88%) occur in daylight.

Table 13

LIGHT AND WEATHER CONDITIONS
ALL GENERAL AVIATION HELICOPTER ACCIDENTS IN 1981

Light Conditions	Type of Weather		Accidents	
	VFR	IFR	Number	Percent
Dawn	6	0	6	2.3
Daylight	216	9	225	87.5
Dusk	12	1	13	5.1
Night (dark)	9	2	11	4.3
Night (moonlight bright)	2	0	2	.8
TOTAL	245	12	257	100.0
Percentage	95.3	4.7		

Source: National Transportation Safety Board, 1981.

EMS. NEMSPA data indicate that approximately half of all fatal EMS helicopter accidents occurred at night, half during the day. Tom Einhorn of NEMSPA estimated that non-fatal accident records would be similar. Howard Collett, however, believed that a statistical analysis would show a greater percentage of non-fatal accidents occurring during daylight hours than at night.

Gene Hill, a pilot with Airlift Northwest, noted that under bad weather conditions, such as the fog that enveloped Seattle in December of 1985, the company does not fly at all. In fact, during that fog, Airlift Northwest refused to answer twenty calls over a two week period because they did not believe it was safe to fly. Additionally, it is company policy not to fly in winds in excess of 40 knots. Under marginal flying conditions, the company flies at the option of the pilot. In determining whether to fly or not, the pilot has the option of using FAA visibility criteria or more stringent Airlift Northwest guidelines. The FAA standards call for a minimum ceiling of 300 feet and minimum visibility of one-half mile; the Airlift Northwest guidelines are a 500-foot ceiling and one mile of visibility. The Airlift Northwest criteria were established specifically to give pilots the option of not flying if they were not comfortable flying in conditions that the FAA determined to be acceptable. In those cases of

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marginal weather conditions that the pilot decided to fly, they wouldn't land at Children's, but would land at Boeing Field or Sea-Tac, where the pilot could make an instrument controlled landing. Airlift Northwest would only land at Children's in conditions of good visibility.

Accidents by Make and Model of Helicopter

There are no assembled statistics available from NTSB on the makes and models of helicopters involved in accidents. However, Sue Godar, a marketing representative with Agusta, indicated that only one Agusta 109 had ever been involved in a fatal accident since the model was introduced in 1975. That accident involved two Agusta test pilots who were unable to maneuver out of a narrow dead-end canyon in the Italian Alps. According to Howard Collett, the Augusta 109 has been involved in two minor EMS related accidents. One occurred in Phoenix in 1983 and involved a blade slap against another helicopter while taxing at an airport. The other occurred in New Orleans in 1984 and involved an Augusta striking a parked, night camoflauged military helicopter, while performing a night landing at an airport. Neither of these accidents caused any fatalities or injuries.

Observations on Helicopter Safety

In addition to the empirical evidence presented in Tables 6 and 7, indicating a trend in greater safety in helicopter use over the seven years from 1975-1981, there is a general perception among sources in the industry, both EMS and general aviation related, that overall safety has improved and is continuing to improve. These sources offered several observations regarding this increased safety.

Gene Hill, the senior Airlift Northwest pilot, attributes improved helicopter safety, in part, to changes in the technology. He believes that the combined emergence of turbine-powered and twin-engine helicopters has eliminated most of the common equipment-related causes of accidents. Turbine engines are far more dependable than piston powered engines and, as a result, are used almost exclusively in professional flying today. Additionally, in a twin-engine craft, the likelihood of both engines failing at the same time is statistically remote. Illustrative of this point is the fact that the FAA no longer tests pilots of twin-engine helicopters for their ability to perform autorotation landings, which is the only way to land a single-engine craft with a failed engine.

Frank Benedict, a Seattle FAA inspector who certifies helicopter pilots, notes that another cause of improved helicopter safety is that the least safe type of flying, external load flying, has decreased. This type of flying involves carrying loads, such as logs or beams, suspended from the exterior of the craft.

Both Dr. Thomas Poulton, medical director of the St. Joseph Hospital Life Flight program in Omaha, Nebraska, a nationally recognized emergency medicine researcher, and Howard Collett have noted improvements in EMS flight safety. Dr. Poulton believes that most EMS programs are "extremely safe." He noted that a lot of early operators of air ambulance services were pilots who would use their helicopters to pick up patients as a sideline and frequently took unwarranted risks. He believes that most

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programs operated by medium to large hospitals are professional and are safe. He speculated that some of the smaller programs operate on more restrictive budgets that might affect their judgments regarding which flights to take and which flights not to take.

Dr. Poulton's views are supported by Howard Collett's statistic that only two of the 17 fatal accidents that have occurred to date have involved "major vendors," which he defined as vendors serving three or more hospitals. He is of the opinion that the safety of these major vendors compares favorably with any sector of the helicopter industry. Although Collett believes that improvements in EMS safety have leveled off somewhat since 1982, he notes that the industry is committed to safety and that further improvements are likely in the future. This in part is reflected in the joint ASHBEAMS and NEMSPA convention that resulted in the agreement to establish more rigorous pilot guidelines and an aggressive training program (see ASHBEAMS and NEMSPA discussion in Chapter II).

The FAA considers air ambulance services as "Air Taxi" services in their permitting and licensing process. This type of use has to meet the requirements of more stringent regulations for the pilots, the companies, and the aircraft than other types of uses. First, the air taxi helicopters are examined and flight tested by the FAA at least annually, often more frequently. General aviation craft are rarely inspected more than every five years. Second, air taxi pilots undergo more stringent flight testing than general aviation pilots. FAA Inspector Benedict characterized the distinction by stating, "With general aviation pilots, we have to be convinced that there is no serious doubt as to their control over the aircraft. With air taxi pilots, there can be absolutely no doubt at all as to their full control over the aircraft at all times." Air taxi pilots are also required to have more flight hours than general aviation pilots, but Benedict noted that this is more stringently enforced in insurance company standards than in the FAA regulations. Gene Hill noted that Airlift Northwest has more stringent standards for pilots than either the FAA or the insurance companies.

Affected Environment

The Seattle metropolitan area is served by two major airports (Sea-Tac International Airport and Boeing Field), several smaller airports and airfields (including seaplane ports on Lake Union and Lake Washington, some of which are private docks along the shorefront), and several heliports.

Sea-Tac and Boeing Field receive all of the jet traffic in the area; the nearest other jet ports are Paine Field in Everett and McChord Air Force Base, southeast of Tacoma. General aviation fixed wing traffic is also handled at Sea-Tac and Boeing, as well as at smaller airfields in the area. Several commercial helicopter organizations are headquartered at Boeing Field. In addition to the helicopters based at Boeing Field, several local radio and television stations maintain their own helicopters for news gathering and traffic reporting purposes, and have heliports at their buildings, located in the Denny Regrade area.

Airlift Northwest, the organization that would be transporting nearly all patients to and from Children's, is headquartered at Boeing Field.

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There have been no accidents in the four and one half year history of Airlift Northwest. Since May of 1985, when Airlift Northwest began operation of the Augusta 109 helicopter, there have been 604 transports (through June 1986); no helicopter accidents have occurred.

Significant Impacts

General Impacts - All Alternatives

In assessing the potential for accidents associated with air ambulance service to Children's, several assumptions must be made regarding the number of flights and the average duration of these flights. Children's estimates that a maximum of 15-20 patients per month will be transported to Children's by helicopter. (See description of the derivation of the number of flights in the description of the Proposed Project).

Gene Hill of Airlift Northwest estimates, based on flight logs, the average total flight (engine) time to serve Children's is 48 minutes. The 48 minute average flight time per patient transport to Children's reflects a combination of interhospital and field transports as well as cases in which the helicopter is used for the final leg of a transport involving a fixed wing transport. A representative 48-minute flight can be into four segments (ground time not included):

1.	Boeing Field to Children's: medical crew pickup	6 minutes
2.	Children's to Patient	18 minutes
3.	Patient to Children's	18 minutes
4.	Children's to Boeing	6 minutes
		48 minutes

The 18-minute segment can be further broken down into one minute of approach/landing, one minute of departure and 16 minutes of flight time, which, assuming a speed of 160 knots, would be equivalent to covering a distance of approximately 49 miles. (It is important to note that the 48 minute average is lowered by flights where the patient is transported to Boeing by fixed wing and then on to Children's.)

Several different accident frequency figures are used to derive projections for different statistical accident frequencies for Children's air ambulance service (see Table 14). The results are presented as the statistical probability of an accident occurring on any given Children's flight; in other words, out of "x" number of 48-minute flights, one would be expected to result in an acident. The frequency of such accidents occurring on a Children's-destined flight would depend on the actual number of patients brought to Children's by helicopter. As a worst case scenario, the statistically probable number of years between acccidents on Children's-destined flights is presented, assuming a worst case forecast of 20 flights per month starting immediately and perpetuating indefinitely.

General accident calculations are based on accident rates for U.S. General Aviation (turbine-powered helicopters) for 1981 and for 1976-1981. Considering that the number of accidents per 100,000 flight hours decreased by more than half between 1976 and 1981 and there is reason to believe that

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TABLE 14

EXPECTED FREQUENCY OF ACCIDENTS
FOR HELICOPTERS TRANSPORTING PATIENTS TO CHILDREN'S

	ASSUMPTIONS				
	Accidents/ 100,000 Flight Hours	Flights/ Month	Minutes/ Flight	Probability of Accident	Statistical Frequency of Accidents (Expected (Number of Years Between Accidents)
1. U.S. General Aviation, Turbine-Powered Craft, 1981	5.5	20	48	1 in 28,810	95
2. U.S. General Aviation, Turbine-Powered Craft, 1975-1981	8.4	20	48	1 in 14,828	62
3. Fatal Flights U.S. General Aviation, Turbine-Powered Craft, 1975-1981	1.4	20	48	1 in 89,928	338
4. Ground Fatalities 1976-1981	.1	20	48	1 in 833,333	3,472
5. EMS Related Accidents 1980-1985 (approximate)	22.9	20	48	1 in 5,459	22.7
6. EMS Related Fatal Accidents 1972-1986 (approximate)	6.5	20	48	1 in 19,231	80
7. "Major Vendor" EMS Related Fatal Accidents 1972-1986 (approximate)	.7	20	48	1 in 189,394	790

1, 2) See Table 7
3) See Table 9
4, 6, 7) See "Fatal Accidents" section
5) See "Accident Trends" section

*On Children's-Destined flight, anywhere in flight either picking up medical transport team, departing with transport delivering patient to Children's, or departing for return to base or next mission.

Source: Shapiro and Associates, Inc., text and tables from body of report.

this trend has continued (if one assumes piston-powered helicopters have been taken out of service and replaced by turbine-powered craft), the results based on the 1981 figures are probably more accurate, yet may still be too high. Since total figures from 1976-1981 represent a larger volume of data, however, assessments using this information were calculated.

Since there was no trend in fatality statistics from 1976-1981, average rates for the seven year period were used to estimate expected frequency of fatal accidents for flights transporting Children's patients. Ground fatality projections are based on the same seven year totals. Projections based on past EMS helicopter safety records using approximate figures generated by Howard Collett and Nina Merrill were also prepared. These calculations are based on total EMS related accidents from 1972-1985, EMS related fatal accidents over the same time period, and EMS fatal accidents involving "major vendors" for the same 14 years. No "major vendor" projections were made for overall accidents because the necessary base data have not been compiled. No "ground fatality" projections for EMS related accidents are presented since no ground fatalities have ever resulted from an EMS related accident.

To summarize the results (see Table 14) a worst case scenario was generated using the overall accident rate for EMS helicopters. Under this scenario, a flight involving a Children's-destined patient would have a statistical probability of an accident one in 5,459 transports. The accident could occur at any point on the four segments of each flight. If one assumes 20 flights per month, then the first accident would be statistically expected to occur every 23 years or before the year 2010. If one assumes that the accidents would occur in the flight in a manner comparable to EMS helicopters history, then 10% of the accidents would occur within one mile of the Children's helistop.

At any of the sites, helicopter operations could distract motorists and pedestrians along neighboring streets, and thereby be the indirect cause of an accident.

Children's Helistop Alternative

Regarding the proposed location of the Children's heliport, FAA Inspector Benedict believes that it is an extremely safe site (Benedict, 1986). He compared it to landing areas near the Seattle Center and downtown Seattle that are over busier streets and more congested conditions. He believes that the Children's site is far safer than such landing areas, which are already safe themselves.

A natural gas meter house is located approximately 48 feet northeast of the Children's helistop site. No other buildings are located within one hundred feet. Communication with representatives of Washington Natural Gas discloses that the current protection of the meter with a fence and a concrete structure is considered reasonable and adequate to prevent a fire in the event of a helicopter accident (Jainga, 1985). In the event of a major accident that results in the breach of the gas supply line, the natural gas would flare until shut off at the main valve across from Children's on Sand Point Way N.E.

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Other Alternatives

It is not anticipated that any of the alternative helistop locations would be more safe from a helicopter accident frequency perspective than the others. The Airlift pilots have indicated that a secured, lighted helistop--whether on a roof or on the ground--is preferred to unsecured, unlighted open field landing. Because the area immediately surrounding the Intramural Field and the primary and secondary approach/departure paths are located in an undeveloped area, potential physical damage from a helicopter accident would be relatively less for that alternative. Any distinction in potential accident risk among the alternatives would reflect any (minor) differences in flight time, with a no action alternative involving the least flight time, followed by University Hospital Helistop and Intramural Field Helistop.

All of the alternatives to constructing a helistop at Children's involve transport of patients and attending medical crew to Children's by ambulance. Although there is a risk of accident from transport by this mode, no statistics were available based on contacts with ambulance services, EMS agencies, the NTSB, insurance companies or other potential sources.

Mitigation Measures

Children's could contact Washington Natural Gas to discuss the possibility of receiving the necessary equipment and training to enable Children's personnel to shut off the main gas supply valve. This would allow any natural gas flare to be extinguished more quickly in an emergency situation.

Signs could be posted warning of helicopters operating in the vicinity of the helistop so as to inform them of potential distractions.

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NOISE AND VIBRATION

Introduction

This chapter discusses noise and vibration impacts of the proposed helistop. The chapter was prepared by Towne, Richards & Chaudiere, Inc.

The report Helipad Noise Evaluation Children's Orthopedic Hospital (Seton, Johnson & Odell [SJO], 1985), prepared as part of the environmental checklist for this proposal, is a partial basis for the noise and vibration analysis. Data from Federal Aviation Administration (FAA) documents, from Airlift Northwest, and from other sources were also used to evaluate and supplement the SJO analysis.

Sound Level Descriptors and Criteria

Descriptors

Sound levels are measured in decibels, abbreviated dB. Environmental noise is measured as A-weighted sound level in decibels, often abbreviated dBA or dB(A) to denote the A-weighting. The A-weighting is a frequency-dependent level adjustment that is based on the sensitivity of human hearing at various sound frequencies and takes into account the human ear's lack of sensitivity to low frequencies.

Table 15 shows A-weighted sound levels associated with various noise sources and conditions.

The dBA measurements scale is a logarithmic rather than a linear scale, and is therefore not directly proportional to the energy or loudness of the noise. The smallest noticeable increase in noise is usually considered to be about 3 dBA, which is a doubling of sound energy. A doubling of judged loudness occurs for each 10 dBA increase in level. For example, 80 dBA is judged to be twice as loud as 70 dBA and four times as loud as 60 dBA. The increase in loudness of various sound level increases is judged as follows:

Sound level increase, dBA	Judged loudness increase
0 to 2	Barely perceptible
3 to 5	Noticeable
10	Doubling of loudness
20	Quadrupling of loudness

For evaluating the effect of noise on people, one must consider both the level, time of day, and duration of the noise. Noise descriptors that are based on the average sound energy have in the past ten years been found to be the best indicators of noise impact and community response, regardless of whether the noise is steady (such as a freeway) or fluctuating (such as local traffic and aircraft). Community noise, therefore, is often measured as an equivalent or average sound level, Leq, which is the level of a steady sound that contains the same acoustical energy as the fluctuating noise over a given time period.

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TABLE 15

SOUND LEVELS OF VARIOUS NOISE SOURCES AND CONDITIONS

Sound Level, dBA	Source or Condition
140	Hearing damage risk for short exposure
130	Threshold of pain
120	Race car at 50 feet
115	Occupational noise limit for 15 minutes/day exposure
110	Orchestra fortissimo; rock concert
100	Occupational noise limit for 2 hours/day exposure; ambulance siren at 50 feet
95	Occupational noise limit for 4 hours/day exposure
* 90	Occupational noise limit for 8 hours/day exposure
* 85	Accelerating truck or bus at 50 feet; power lawn mower
* 80	Average downtown traffic noise; ambulance siren at 500 feet
* 75	Inside auto, accelerating
* 70	Inside auto, steady speed
* 65	Urban residential average noise; typical auto measured at residential setback
60	Normal conversation
55	Suburban residential average noise
50	General office
45	Residential indoor
40	Quiet indoor
20	Whisper
0	Threshold of excellent hearing

* Approximate sound levels of intermittent aircraft flyovers in Seattle area.

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Noise over 24 hours is measured as day-night average sound level, Ldn, which is the Leq over 24 hours with a 10 dBA penalty included when averaging the Leq for nighttime hours of 10 p.m. to 7 a.m., because of the greater noise sensitivity during nighttime. For locations exposed to intermittent aircraft noise, it is common for governmental agencies to use the yearly Ldn based on an average number of daily aircraft operations during the year to determine the average or long-term impacts of the aircraft noise. The Ldn based on a particular day or condition can also be used to evaluate short-term impact. Ldn is the most widely accepted noise descriptor in the U.S. The descriptor is used by the U.S. Environmental Protection Agency (USEPA), the U.S. Department of Housing and Urban Development (USHUD), and the FAA to evaluate noise impact and land use compatibility. Ldn noise criteria are based on studies or activity interference (speech and sleep), annoyance, and community reaction.

The highest instantaneous sound level occurring during a given time period is called maximum sound level, Lmax. The Lmax descriptor can provide information about intermittent sound levels from particular noise sources, and the amount of noise fluctuation.

Individual aircraft events are also measured as sound exposure level, SEL, which is the level of a steady one-second sound that would contain the same amount of sound energy as the entire event. The SELs of individual aircraft events are used to compute the overall Leq and Ldn.

Although the A-weighted sound level and the Leq and Ldn noise descriptors are currently considered the best overall measures of noise, there are other factors that may affect sensitivity to noise. Impulse noise associated with helicopter blade slap tends to distinguish the helicopter noise from other noise sources. (This blade slap noise is primarily a characteristic of helicopters with two-bladed rotors, whereas 90% of the flights to Children's would be by helicopters having four-bladed rotors and modifications to control blade slap noise.) Research to determine whether an adjustment should be made to the sound level based on the impulsivity of the helicopter sound has led to conflicting results. The current position of the FAA and the International Civil Aviation Organization (ICAO) is that an impulsivity adjustment is unnecessary to properly certificate aircraft and adequately assess human response.

Criteria

There are no local, State or Federal noise regulations specifically for helistops. The following is a discussion of existing noise standards and guidelines, and of noise effects.

Seattle Noise Ordinance. The Seattle Noise Ordinance (City of Seattle, 1977) exempts "sounds originating from aircraft in flight, and sounds which originate at airports and are directly related to flight operations." The ordinance also exempts "sounds created by emergency equipment and emergency work necessary in the interests of law enforcement or of the health, safety or welfare of the community." Exempt sound sources can also not be considered a public nuisance noise or public disturbance noise. Based on these exemptions, noise from aeromedical helicopters and from ambulance sirens would not be considered subject to the Seattle Noise Ordinance.

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United States Environmental Protection Agency (USEPA) Noise Guidelines. Day-night average sound levels, Ldn, affecting residential, hospital and educational activity can be evaluated using USEPA noise guidelines (USEPA Region 10, 1975). Significant impacts on these activities are considered to exist if exterior Ldn is 65 dBA or above. The guidelines consider overall noise increases due to a project of 0 to 5 dBA to cause slight impact, 5 to 10 dBA significant impact, and over 10 dBA very serious impact.

United States Housing and Urban Development (USHUD) Noise Standards. USHUD has established Ldn noise standards for USHUD-assisted projects and actions (USHUD, 1979). The USHUD standards are cited only as an additional reference, since this project is not USHUD-assisted. Ldn 65 dBA or less is "acceptable." Ldn exceeding 65 dBA but not exceeding 75 dBA is "normally unacceptable," and special approvals, environmental review and sound attenuation are required. Ldn exceeding 75 dBA is "unacceptable," and special approvals, environmental review and sound attenuation are required.

FAA Land Use Compatibility Criteria. The FAA (FAA, 1984) has developed land use compatibility criteria based on Ldn as shown in Table 16. The criteria basically consider residential or hospital land use to be not compatible where the yearly Ldn is 65 dBA or above, unless outdoor to indoor sound level reductions are 5, 10 or 15 dBA over standard construction sound level reductions of 20 dBA. All land uses are considered to be compatible where the yearly Ldn is below 65 dBA.

Sleep Interference. The probability of sleep disturbance from noise varies depending on the level and duration of the noise, stage of sleep, individual exposed, and adaptation. Intermittent indoor sound levels (up to a few minutes duration) above 70 dBA have a significant probability of causing sleep interference. Intermittent levels of 40 to 70 dBA are generally considered to have some potential for causing sleep interference. Continuous sound (for example, from air conditioners or fans) causes sleep interference above 35 to 45 dBA. Sleep interference can also occur at lower sound levels, although the probability of sleep disturbance diminishes significantly at the lower levels. Adaptation to a particular sound level or noise source is a factor in determining sleep interference. This factor can generally not be simulated in laboratory studies. Age is also a factor, with the elderly and children in certain age groups being more susceptible to awakening. Intermittent indoor sound levels up to about 55 dBA are generally not considered to cause impact, based on collated data such as shown in Figure 10. More conservative data from studies conducted in schools and hospitals, as shown in Figure 11, indicate a sleep interference threshold of 40 dBA, with probabilities of awakening from maximum sound levels of 50 dBA as 10%, 60 dBA as 20%, and 70 dBA as 30%.

Motor vehicle noise is the primary cause of sleep interference in residential areas. In typical residential areas, there is a relatively steady background sound level from distant traffic. Higher sound levels from local traffic events are superimposed on this background. Typical intermittent sound levels at the 30- to 50-foot setback of a residence would be similar to those that have been identified in national surveys (USDOT, 1978). At 31 miles per hour (50 kph) and 49 feet (15 m), the "national energy mean emission levels" of various vehicle categories are as follows:

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TABLE 16

LAND USE COMPATIBILITY* WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS

Land Use	*Yearly Day-Night Average Sound Level (L_{dn}) in Decibels*					
	Below 65	*65-70*	*70-75*	*75-80*	*80-85*	*Over 85*
Residential						
Residential, other than mobile homes and transient lodgings	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
Public Use						
Schools, hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
Commercial Use						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
Manufacturing And Production						
Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
Recreational						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

(Numbers in parentheses refer to notes.)

* The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses remains with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

KEY TO TABLE

SLUCM	Standard Land Use Coding Manual.
Y (Yes)	Land Use and related structures compatible without restrictions.
N (No)	Land Use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30, or 35	Land used and related structures generally compatible; measures to achieve NLR or 25, 30, or 35 must be incorporated into design and construction of structure.

NOTES FOR TABLE

(1) Where the community determines that residential uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.

(2) Measures to achieve NLR of 25 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(3) Measures to achieve NLR of 30 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(4) Measures to achieve NLR of 35 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(5) Land use compatible provided special sound reinforcement systems are installed.

(6) Residential buildings require an NLR of 25.

(7) Residential buildings require an NLR of 30.

(8) Residential buildings not permitted.

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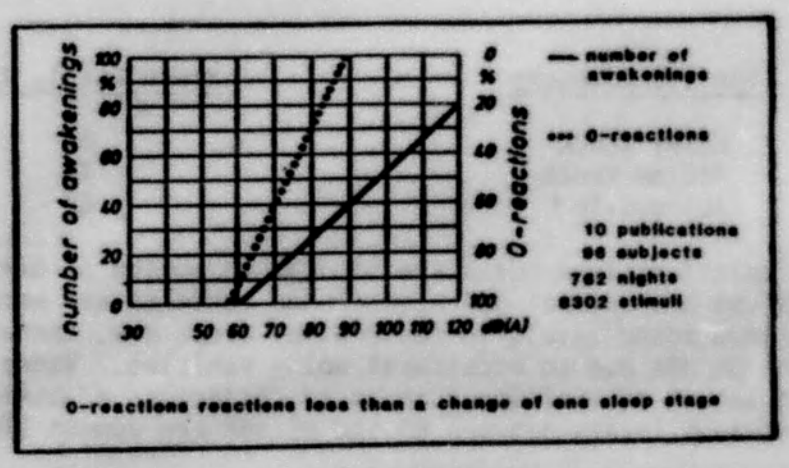

FIGURE 10 SLEEP DISTURBANCES BY NOISE – NUMBER OF REACTIONS AND NOISE LEVELS

Source: Griefahn, 1980

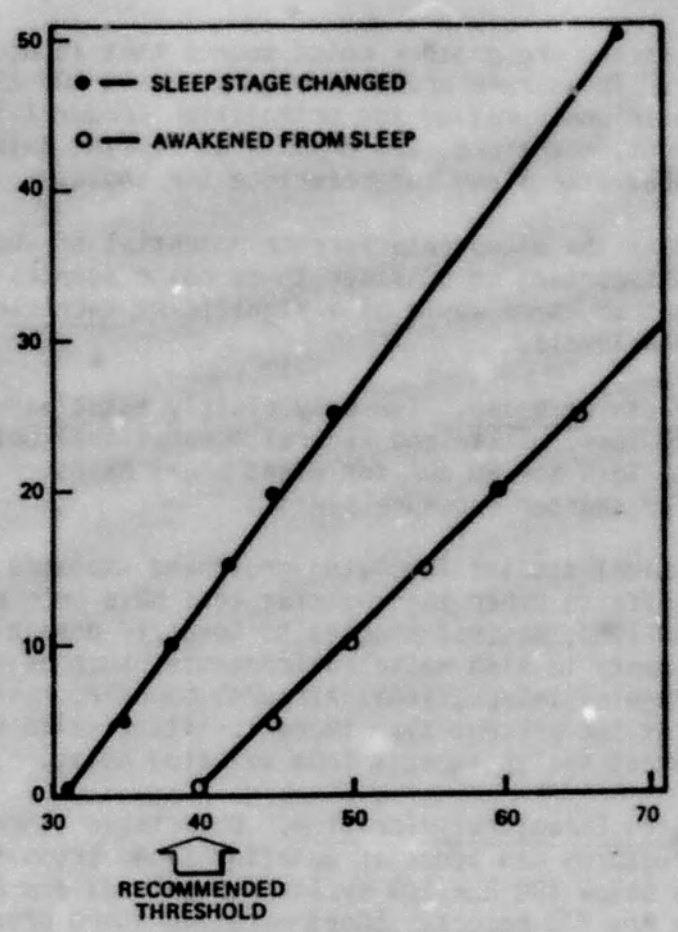

FIGURE 11 COMPOSITE OF LABORATORY DATA FOR SLEEP INTERFERENCE VERSUS MAXIMUM A-WEIGHTED NOISE LEVEL

Source: Wyle Laboratories, 1977

FIGURES 10 AND 11

SLEEP DISTURBANCE BY NOISE

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SHAPIRO & ASSOCIATES

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Vehicle Category	Sound Level, dBA
Heavy truck	80
Medium truck	74
Automobile	62

Noise emissions from buses are similar to medium or heavy trucks. Noise emissions are several dBA higher when vehicles are accelerating. Typical maximum sound levels in residential areas are, therefore, between about 75 and 85 dBA due to occasional noisy vehicles. Where there is a significant amount of traffic, such as at residences adjoining Sand Point Way N.E., maximum levels between 80 and 90 dBA are common (TRC, 1982).

Outside to inside sound level reductions are about 25 dBA in the Northwest. Residential interior maximum sound levels due to occasional motor vehicles are typically 50 to 60 dBA, which can cause occasional sleep interference. With windows partly open, interior sound levels are typically 10 dBA higher, or about 60 to 70 dBA, and there is greater probability of sleep interference.

Ambulance sirens are another noise source that is occasionally present near Children's. The sirens produce between 90 and 106 dBA at 50 feet, depending on their power rating and orientation (Federal Signal Corp., 1986). The sirens, therefore, are capable of causing interior sound levels significantly above the sleep intereference thresholds.

In evaluating the sleep interference potential of the Children's helistop, it is important to consider those noise sources that are already present, and whether there would be a significant increase in intermittent and average sound levels.

Health Effects of Noise. The only clearly established health hazard of noise is hearing loss. State and Federal occupational noise exposure limits based on hearing loss are 90 dBA for eight hours exposure, or higher levels up to 115 dBA for shorter exposure periods.

Based on animal studies involving prolonged exposure to high sound levels, health effects other than hearing loss have been postulated. Between 1977 and 1980, several studies to identify possible adverse health effects on residents in high noise environments, such as neighborhoods adjoining Los Angeles International Airport, however, have been inconclusive. At the present time there is little valid scientific basis for claiming direct health impacts from aviation noise.

Noise-Induced Structural Vibration. Detectable vibration of portions of building structures can occur if exterior sound pressure levels in the low frequencies below 100 Hz (100 cycles per second) are above 65 to 80 dB, as discussed in the SJO report. Short-duration sound pressure levels above approximately 120 dB are considered to cause annoying rattles and fright (U.S. Department of the Interior, 1980). Sound pressure levels from diesel truck drive-bys and general aviation aircraft flyovers are approximately in the 65 to 80 dB range, based on USEPA sound pressure level data (USEPA, 1971), but are well below 120 dB.

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The vibration response of a particular structure depends on the construction type and the window size and type. Residence vibration studies have generally been based on structures in southern California and other parts of the southern United States. It is likely that residences in the Northwest, which typically provide about 5 to 7 dB more outside to inside sound level reduction than residences in Southern California (based on airport acoustic insulation studies), are also less susceptible to structural vibration.

Detectable buzzing or rattling of windows due to structural vibration can result in increased annoyance, but is not damaging to the structure unless the outside sound pressure levels are above approximately 134 dB (U.S. Department of the Interior, 1980). Studies of historic building structures near airports with high sound pressure levels from aircraft noise, including 104 dBA from the Concorde supersonic jet transport (Hershey, Kevala and Burns, 1975), have shown that exposure to normal weather (such as thunder or wind loads) produces a higher probability of breakage than vibration from the noisiest aircraft, the Concorde. The contribution of aircraft to structural damage was found to be insignificant. Since the helicopter sound levels received at residences near Children's would be significantly lower than those measured for the Concorde, there is not expected to be any likelihood of structural damage from the noise.

Short-duration sound pressure of these levels can cause rattling and movement of dishes and other lightweight objects.

Helicopter Noise Sources

The Children's helistop would primarily be used by Airlift Northwest. Airlift Northwest uses the Agusta A109 Mark II helicopter, which is turbine-powered. The A109 represents near-current low-noise helicopter design. The helicopter has four blades per rotor instead of two, which results in less of the impulsive blade slap noise that is commonly associated with two-bladed helicopters. The Mark II has additional aerodynamic noise reduction features such as a cap on the rotor head to reduce the air flow angle into the blades and thereby reduce blade noise, and a vortex generator to control blade slap noise. Sound level data for this helicopter were obtained from measurements made by SJO at Children's, from FAA test data, and from measurements made at Harborview Medical Center (King County, 1986).

The MAST helicopters are two-bladed turbine-powered Bell UH-1Vs and have a more impulsive noise than the Agusta because of blade slap. A-weighted sound levels of the two helicopters are not significantly different, although because of the blade slap, the MAST is perceived as being considerably noisier. Sound level data for the MAST helicopter were obtained from measurements at Harborview Medical Center.

The loading of the helicopters (gross vehicular weight) has a negligible effect on their noise emission, because power settings, flight paths and blade speed are negligibly or unaffected (Hill, 1986).

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Affected Environment

Helicopter flight paths are described in detail in Section III of the DEIS. The primary approach to Children's would follow the N.E. 45th Street/Sand Point Way N.E. corridor east of Union Bay Place N.E., enter the Children's campus north of the main entrance, turn south approximately over the parking garage, and land at the helistop. Departures would follow a similar flight path, but at higher altitude.

The existing noise-sensitive land uses are single-family and multiple-family residences near the N.E. 45th Street/Sand Point Way N.E. corridor, including Laurelon Terrace apartments and Laurelhurst West; and single-family residences east of Children's, primarily along 44th Avenue N.E. between N.E. 47th and N.E. 50th Streets. Laurelhurst School, located 1,000 feet east of the helistop site, is also noise-sensitive.

Existing sound levels were described in the SJO report for five locations that had been selected in coordination with the Seattle/King County Department of Public Health and the City of Seattle Department of Construction and Land Use. The measurement locations (see Figure 3, Campus Map) and existing day-night average sound levels, Ldn, were as follows:

Location	Ldn, dBA
1. 4720-4724 44th Avenue N.E. (NE of Children's)	52
2. 4530 45th Avenue N.E. (E of Children's)	53
3. Laurelhurst West (near Sand Point Way N.E.)	68
4. Laurelon Terrace (set back from Sand Point Way N.E., W of helistop)	55
5. 4757 41st Avenue N.E. (near Sand Point Way N.E., near main entrance to Children's)	63

Existing maximum sound levels were not measured in the SJO study, due to the relatively small number of sound level readings taken at each location. As discussed previously, however, typical maximum levels in residential areas are between about 75 and 85 dBA due to occasional noisy vehicles. Near Sand Point Way N.E., maximum levels between 80 and 90 dBA occur from motor vehicle traffic. Along ambulance routes, sirens produce maximum levels between 90 and 106 dBA.

A secondary flight path to Children's would be from the northeast over a single-family residential area. This flight path would only have to be used during wind conditions that exist about 0.2% of the time.

The primary helicopter approach and departure paths to the Intramural Field are from the south over water, or from the southwest from the Montlake Cut. Noise-sensitive land uses include residences near the Montlake Cut. The secondary approach path to the Intramural Field is over the University of Washington campus and northeast campus dormitories, considered noise-sensitive land uses.

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The two approaches to the proposed University Hospital helistop are from the east and northeast, over the University of Washington sports facilities. The proposed helistop would be located across the Montlake Cut from a noise-sensitive residential area.

Impacts

Proposed Action - Children's Helistop

Noise impacts of the Children's helistop were described in the SJO report. The report assumed 20 patient transports or 40 round-trip flights per month, 29 during daytime hours of 7 a.m. to 10 p.m., and 11 during nighttime hours of 10 p.m. to 7 a.m. Each flight would consist of an approach, landing, takeoff, and departure. Impacts could in fact be less than those described in the SJO report, because of fewer flights. Current estimates are that initially ten patients per month would land at the helistop, with the number eventually increasing to 15 to 20 per month. It has been assumed that there would be two flights to Children's for each patient, the first to pick up the medical crew and the second to deliver the patient. The assumed 20 patients/40 flights per month is therefore a "worst case" assumption.

The number of nighttime flights is expected to be less than assumed by SJO. Current data (Airlift Northwest, 1986) indicate that between 19% and 25% of flights occur during nighttime hours of 10 p.m. to 7 a.m., versus 28% assumed by SJO.

The SJO report's comparison of monthly day-night average sound levels, Ldn, with and without the proposed helistop, based on noise tests of the Agusta helicopter at Children's, is shown in Table 17.

Table 17

SETON, JOHNSON & ODELL EXISTING AND PREDICTED Ldn

		Monthly Ldn, dBA			
	Location	Existing	Helicopter (40 flights)	Combined	Increase
1.	4720-4724 44th Ave. N.E.	52	55	57	+5
2.	4530 45th Ave. N.E.	53	48	54	+1
3.	Laurelhurst West	68	50	68	0
4.	Laurelon Terrace	55	56	59	+4
5.	Across from main entrance	63	52	63	0

Source: Seton, Johnson & Odell, 1985.

The projected worst case noise increase of 5 dBA in Ldn is considered a slight impact according to USEPA noise guidelines (USEPA, 1975).

The highest maximum sound level of the helicopter was measured by SJO to be 84 dBA at the closest receptor location, 4720-4724 44th Avenue N.E. Typical interior maximum sound levels from helicopters were estimated to be about 55 dBA, assuming typical outdoor maximum levels of 80 dBA and an

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outdoor to indoor sound level reduction of 25 dBA. This level was estimated to awaken 15% of a normal population sample. As indicated previously, intermittent levels up to about 55 dBA are generally not considered to cause impact. At the closest receptors, the maximum sound levels would be about 84 dBA exterior and 59 dBA interior. This 59 dBA level would cause about a 20% probability of awakening, based on Figure 11. With windows partly open, interior maximum levels would be about 10 dBA higher, or up to 69 dBA, causing a 30% probability of awakening according to Figure 11. This probability of awakening is about 5-10% higher than for the estimated existing condition without helicopters, which is maximum levels of 60 to 65 dBA interior with windows partly open. Significant impacts (interior levels above about 70 dBA and also significantly exceeding existing maximum levels) are not expected to occur.

Based on discussions with Airlift Northwest concerning noise considerations, the primary flight path for Children's has been modified to allow a more gradual and direct turn into Children's than was used in the SJO noise tests, instead of the sharp turn that was previously made north of the intersection of Sand Point Way N.E. and N.E. 50th Street. The portion of the new flight path near the helistop would also be farther east of the Laurelon Terrace apartments, resulting in about 7-9 dBA lower maximum levels from helicopters than for the current flight path.

Maximum and day-night average sound levels were calculated for the new flight path using FAA noise test data for the Agusta A109 Mark II (FAA, 1985). The FAA data provides Lmax and SEL readings at the centerline and several side distances for various approach, takeoff, level flyover and hover operations. In addition to an average monthly Ldn, a "worst one-day" Ldn was also calculated, assuming two daytime and two nighttime flights. Results of the calculations are shown in Table 18.

The helicopter Ldns shown in Table 18 are considered to represent the "worst case" cumulative impact condition, as discussed previously.

The calculated monthly Ldn from helicopters are relatively close to those of SJO (see Table 17) at Locations 2, 4 and 5, but are lower at Locations 1 and 3, presumably because of differences in the flight path (affecting distance and exposure time) and possibly a difference in the helicopter altitude used to calculate levels at Location 3, Laurelhurst West. The helicopter Ldns shown in Table 18 are consistent with a current measured helicopter Ldn of 48 dBA 450 feet from the helistop at Harborview Medical Center (King County, 1986).

The calculated highest Lmax of 84 dBA at the closest residences is identical to the level measured by SJO.

The predicted sound levels are not expected to cause significant impact (interior Lmax above 65 dBA with windows closed, Ldn above 65 dBA due to helicopters, or more than 5 dBA increase in overall monthly and worst one-day noise). At all locations, the calculated monthly Ldn from helicopters would be less than the existing Ldn, resulting in a 3 dBA or less noise increase. There would, however, be increased sleep interference affecting Laurelon Terrace, residences west of the Children's main entrance that are not near Sand Point Way N.E., and the closest residences northeast

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Table 18

COMPARISON OF EXISTING AND PREDICTED EXTERIOR SOUND LEVELS
FOR THE PROPOSED FLIGHT PATH

	Receptor Locations*				
	1	2	3	4	5
Lmax:					
Existing estimated	75-80	75-80	90	80	85
Helicopters	84	75	75	84	82
Increase	4-9	0	0	4	0
Monthly Ldn:					
Existing	52	53	68	55	63
Helicopters	51	47	43	54	50
Combined	55	54	68	58	63
Increase	3	1	0	3	0
Worst one-day Ldn:					
Existing**	55	56	71	58	66
Helicopters	58	54	50	61	57
Combined	60	58	71	63	67
Increase	5	2	0	5	1

*Locations: 1 - 4720-24 44th N.E.
2 - 4530 45th N.E.
3 - Laurelhurst West
4 - Laurelon Terrace
5 - Across from main Hospital entrance

**The "existing worst one-day Ldn" in Table 18 was assumed to be the existing Ldn measured by SJO plus 3 dBA, since the existing Ldn varies from day to day depending on the traffic conditions and local activities.

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of the proposed helistop site. At these locations, interior Lmax from helicopters are likely to be several dBA above the currently existing Lmax from motor vehicles (up to 59 dBA predicted versus 50 to 55 dBA estimated existing). Assuming about 25% of the flights occur at night, there would initially be about two nighttime flights per month (one patient being transported), increasing to 10 per month under the "worst case" assumptions.

Because the rise in noise would be gradual, startle effects associated with rapid noise increases from sources such as blasting or sonic booms would not occur.

There would be slight noise impacts affecting Laurelhurst School. During landings and takeoffs, there would be brief exterior sound levels (FAA, 1985) of up to 72 dBA at the second story and 62 dBA at the first story and playgrounds, which are shielded by residential structures. The interior maximum sound levels would be about 47 dBA with windows closed and 57 dBA with windows open at the second story, and 37 dBA with windows closed and 47 dBA with windows open at the first story. These levels are approximately similar to sound levels currently caused by motor vehicle drivebys.

There would be sleep interference impacts several times per month affecting hospital patients whose rooms are exposed to helicopter noise. Maximum exterior sound levels at the portion of buildings closest to the helistop would be about 94 dBA. Interior maximum sound levels would be about 69 dBA with windows closed, which is considered to be the typical nighttime condition. These levels would cause about a 30% probability of awakening, based on Figure 11. Maximum sound levels would, however, be less than for the Limited Landings Alternative, since the helistop would be farther from the hospital building.

Low-frequency sound pressure levels from helicopters were estimated in the SJO report and found to be approximately similar to the levels at which perceptible structural vibrations are considered possible. The levels are also, however, similar to those that typically occur from diesel trucks and general aviation aircraft flyovers, as discussed previously. The estimated levels are significantly below levels that are considered to cause fright or structural damage.

The probability of structural vibration would be less than for the current flight path required by the Limited Landings Alternative. The helicopters must currently approach and depart west of the Children's emergency entrance in order to avoid existing trees, and must therefore fly close to Laurelon Terrace. Under the Proposed Action, maximum sound pressure levels at Laurelon Terrace due to helicopters would be reduced by about 7-9 dB.

Flights by the MAST helicopters would produce A-weighted sound levels almost identical to those of the Agusta, based on measurements at Harborview Medical Center (King County, 1986). The MAST helicopter noise would, however, be more noticeable than that of the Agusta because of more blade slap, as discussed previously.

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There are no known adverse health effects associated with the predicted helicopter sound levels for the neighborhood around Children's.

There would be temporary noise impacts from intermittent construction noise during the two-month construction period, primarily affecting hospital patients whose rooms face the construction site. The noise would occur from trucks delivering about 400 cubic yards of fill material, grading and compaction of the site, and pouring of the Grasscrete surface. These activities would be limited to daytime hours. The Seattle Noise Ordinance (City of Seattle, 1977) contains stringent limits on construction noise received in residential areas during nighttime hours of 10 p.m. to 7 a.m. on weekdays and 10 p.m. to 9 a.m. on weekends. The daytime construction noise is not expected to affect residential areas because of the distance to these areas.

The following is a summary of impacts. The summary is consistent with the findings of the SJO report:

- Although the helicopter noise would be noticeable, it is not expected to cause significant impact during daytime hours due to its infrequent short-term nature and the relatively moderate sound levels that would be received at residences.

- Helicopter flights during sleeping periods could cause awakening probability of about 15-20% at the closest, line-of-sight residences and 30% at the closest hospital patient rooms.

- The impact of the monthly helicopter noise exposures as measured by Ldn would not be significant compared to the currently existing Ldn, although Ldn would increase by 3 to 5 dBA at residences closest to the helistop.

- Structural vibrations due to helicopter flights are not expected to be significant.

Intramural Field Helistop Alternative

The Intramural Field Alternative is not expected to result in noise impacts from helicopters when the primary approach and departure paths are used. There would, however, be impacts on student dormitory residents and possibly noise interference with class lectures on the few occasions when the secondary approach path over the University of Washington campus would be used.

This alternative would result in ambulance sirens occasionally being used between the Intramural Field and Children's. The sirens are approximately as loud as the helicopters, producing about 90 to 106 dBA at 50 feet and 86 dBA at 500 feet. Residences along Sand Point Way N.E., including the Laurel Village University of Washington housing, Laurelhurst West, portions of Laurelon Terrace, and several other single- and multiple-family residences, would experience higher maximum sound levels from ambulances than from the helicopters associated with the Proposed Action. The closest single-family residences to the east of Children's along 44th Avenue N.E., and patient rooms near the northern part of

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Children's, would experience lower maximum levels than under the Proposed Action, assuming that the ambulance sirens are not used within the hospital property.

University Hospital Helistop Alternative

The University Hospital alternative would result in slight helicopter noise impacts affecting residents south of the Montlake Cut. These impacts would be several dBA less than those described previously for residents closest t[illegible]he Children's helistop, because of greater distance from the flight pa[illegible]ch.

This alternative would also result in the occasional use of ambulance sirens during transport between University Hospital and Children's. As indicated above, the ambulance sirens would produce higher maximum sound levels at residences along Sand Point Way N.E. than would helicopters, but lower levels at single-family residences to the east of Children's and at the northern hospital rooms.

Limited Landings Alternative

Under the Limited Landings Alternative, helicopter flights to Children's are expected to continue as they currently do in response to critical care emergencies, resulting in occasional noise impacts. Although there would be fewer flights than under the Proposed Action, these current operations are potentially more disruptive per event than the Proposed Action for residents of the Laurelon Terrace apartments, since the helicopter must approach and depart west of the Children's emergency entrance in order to avoid existing trees. This flight path results in exterior maximum sound levels of about 91 to 93 dBA at the closest Laurelon Terrace a[illegible]rtments, based on FAA data (FAA, 1985) and measurements at Harb[illegible]w Medical Center (King County, 1986) versus 14 dBA for the Proposed Act[illegible]nterior sound levels would be up to about 68 dBA with windows cl[illegible]sed and 78 dBA with windows open, causing potentially significant sleep interference impacts.

This alternative would also result in the occasional use of ambulance sirens during transport from Boeing Field or Harborview Hospital.

No Action Alternative

Under the No Action Alternative, noise impacts associated with helicopter approaches and departures would be limited to the area around Harborview Hospital and Boeing Field. In addition, there would be occasional use of ambulance sirens during transport from Boeing Field or Harborview.

Mitigating Measures

The following are proposed mitigating measures that are incorporated into the Proposed Action:

. The helistop would primarily be used by a modern, multi-blade helicopter representing near-current low-noise technology.

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- The proposed flight paths would keep the helicopter at high altitude above Sand Point Way N.E.

- The helicopter would use a noise abatement approach and departure that minimizes disturbances to residences.

- The helistop location maximizes ground distances to residences, and is shielded on the south by the hospital structure.

The following additional mitigating measure is possible:

- The medical crew could be picked up at a location other than Children's, resulting in a 50% reduction in the number of flights to Children's. The monthly and worst-day Ldn from helicopters as shown in Table 17 would then be reduced by 3 dBA, resulting in slightly lower noise increases. This measure, however, could result in noise impacts from ambulance sirens as discussed previously, and from helicopters near the alternative pick-up location.

A concrete wall noise barrier around the helistop would not be effective, since it would not shield helicopters in flight, and could be a safety hazard. Such a barrier, therefore, is not recommended.

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CUMULATIVE IMPACTS

The potential for Children's helistop approval establishing a precedent for the siting of helistops at other Seattle-area hospitals was determined to be an issue through the scoping process.

There are several factors that discourage the improper use and proliferation of helicopter services in Seattle. First, the land use criteria used by the City of Seattle for the evaluation of applications for institutional helistops limit the use of helistops to those situations involving life-threatening emergencies. While local and community hospitals in the region are capable of treating most life-threatening emergencies, some patients with particularly complex or severe presenting conditions will need to be referred to the more sophisticated level of services and capabilities offered only at certain tertiary care hospitals and medial centers. As noted in Nicola's findings (1985), there are situations in which even seemingly minor delays in transporting a patient to Children's, one of these tertiary referral centers, could result in an adverse patient outcome. In Seattle, many hospitals are involved in treating critically ill patients who are facing life-threatening emergencies; however, only a few of these institutions serve as tertiary care centers that offer specialized services to the region and that are routinely and appropriately involved in treating specific life-threatening emergencies that generally cannot be treated by local hospitals. In Seattle, these referral centers and their areas of particular medical expertise are:

Children's - Neonatal/Pediatric Medical and Surgical Emergencies
Harborview - Trauma, Burn Emergencies
Providence - Adult Cardiac Emergencies
University - Neonatal and Adult Medical (including Cardiac) Emergencies

Harborview currently has a helistop; helicopters are landing at Children's and Harborview, with Children's having submitted an application for a helistop and University having received a Certificate of Need and being in the process of preparing an application for a helistop permit. No other Seattle hospitals are deemed likely candidates for helistops (Nicola, 1986). Based on a survey of Seattle-area medical institutions, Ballard Community Hospital, St. Cabrini Hospital, Group Health Cooperative, Northgate General Hospital, Northwest Hospital, Pacific Medical Center, Providence Medical Center (a member of the Airlift Consortium that shares the Harborview Helistop), Swedish Hospital and Medical Center, West Seattle Community Hospital, and Virginia Mason Clinic do not currently plan a helistop. These medical institutions represent all the major hospitals in the City of Seattle.

In order to receive a conditional use approval, any medical institution must demonstrate that the helicopter is needed to save lives. Although it is conceivable that the non-centrally located hospitals (Ballard, Northgate, West Seattle) could have occasion for patients to be transported from the hospital due to extraordinary circumstances (such as severe traffic congestion), it is unlikely that a dedicated helistop would be warranted.

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Approval of the Proposed Action is not expected to have an impact upon the number of helicopter services. Rather, the creation of Airlift Northwest by a consortium of specialty, regional referral medical institutions was designed to avoid the proliferation of air ambulance services and to provide critically ill patients with the appropriate level of medical service. Any new helicopter services used expressly for emergency medical transport would require Certificate of Need approval from the State Department of Health Services.

Under PSHSA's current policies, Children's would be included in a regional emergency helicopter transportation program (Thompson, 1986). The recognized need for coordinating helicopter ambulance service has prompted the Puget Sound Health Systems Agency (PSHSA) to propose the development of guidelines for the siting of helistops and to develop policy options for integrating helicopter services with statewide EMS planning efforts. The Airlift Northwest service is consistent with PSHSA's policy statement, and, in fact, probably served as the model for the "consortium" discussion in that position paper. The establishment and operation of helistops at Children's, Harborview and University Hospitals (the member institutions of the Airlift Northwest consortium) is a logical extension of the provision of this helicopter service to the tertiary care, referral centers located in Seattle.

The Washington State Medical Association's guidelines for patient transport are expected to be available by the end of the summer; these guidelines can assist decision-makers in assessing the need for a particular institution to be served by a helistop.

The State Department of Social and Health Services (DSHS) evaluates hospital proposals for substantial change in service, with helistops clearly defined in the regulations as a substantial change. The Certificate of Need process is the formal procedure used to evaluate the need of a proposed facility or helicopter service. Any Certificates of Need applied for by Seattle hospitals would be examined by PSHSA, consistent with its role as a (public) health systems agency with review authority. It is presumed that only those institutions with a demonstrated need for a helistop would be granted DSHS approval.

The City's land use review process, the Washington State Medical Association's guidelines for patient transport, the (probable) development of guidelines for integrating the helicopter service into the regional EMS system, and the State's Certificate of Need program are expected to prevent the inappropriate development of helistops and helicopter services.

Mitigating Measures

A conditional use permit could be granted for a defined period pending a defined relationship to the existing regional and state EMS system and final development of criteria by the Washington State Medical Association's EMS Committee. As proposed by Dr. Nicola, helistop use could be reviewed for appropriate medical use in six months (Nicola, 1985).

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SIGNIFICANT IMPACTS THAT CANNOT BE MITIGATED

The risk of helicopter accidents is a potentially significant impact that cannot be entirely mitigated. No matter what location a helicopter flies into or out of, there is an attendent risk of accident and potential for personal injury or physical damage. The probability of an accident at a helistop increases with the number of transports.

Noise and vibration is not a significant impact based on regulatory criteria; however, it is recognized that helicopter noise could and probably would be disruptive of some adjacent residents' lives.

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APPENDIX A

Dr. R.M. Nicola's Report
on Medical Need to the
Department of Construction
and Land Use

December 4, 1985

City of Seattle
Charles Royer, *Mayor*

King County
Randy Revelle, *Executive*

Seattle-King County Department of Public Health
R.M. Nicola, M.D., M.H.S.A., *Director*

RECEIVED
DEC 5 - 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

December 4, 1985

Beatrice Ryan, Interim Director
Department of Construction and Land Use
400 Municipal Bldg.
Seattle, WA 98104

Dear Ms. Ryan:

This letter is in response to your request of August 30, 1985 for an opinion about the medical need for the Children's Orthopedic Hospital (COH) to establish a helipad on hospital grounds.

In order to review the complete facts of this issue, I have spoken with numerous physicians, administrators, community residents, and former patients. I have reviewed the medical literature on emergency medical services delivered by helicopter, viewed a simulated transport/helicopter landing at Graves Field and near the COH proposed helipad site, examined helicopter and transport equipment, held a public hearing October 24, 1985 in the City Council chambers from 6:00 to 9:00 p.m., (written testimony attached), toured the COH facility, reviewed Airlift Northwest logs and individual patient charts.

Existing Pediatric Emergency Medical Services System in Seattle

Pediatric and neonatal emergencies within Seattle which are hospitalized are generally admitted at one of the 19 neonatal intensive care (NICU) beds or 17 pediatric intensive care beds (PICU) at Children's Orthopedic Hospital or one of the 19 neonatal intensive care unit beds at the University of Washington Medical School Hospital. The only other NICU beds in the region are the 12 beds at Mary Bridge Children's Hospital in Tacoma; the only other pediatric or neonatal intensive care beds in the State are located in Spokane. All pediatric surgery in the region is currently done at Children's. Pediatricians and neonatologists from within the State and from surrounding states (Alaska, Montana, Idaho) generally use COH and the UW as referral centers for the most seriously ill children or neonates requiring tertiary specialty care.

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Personal health care can, in general, be subdivided into three functional levels: a primary level, where the health care system is entered and basic services received and where all health services are mobilized and coordinated; a secondary level, represented by ambulatory services of a specialist nature and inpatient services provided in a community hospital-type facility; and the tertiary level, which includes the highly complex and sophisticated services available only at a "medical center" (Alberta Parker, "The Dimensions of Primary Care" in Primary Care: Where Medicine Fails, 1974, New York, John Wiley and Sons).

The University of Washington has a program which admits high-risk mothers so that low birth weight babies do not have to be transported between hospitals. This method of delivering high-risk mothers has been found to substantially reduce the morbidity and mortality associated with the delivery of low birth weight babies (Hickok, D. et al., "Decreased Mortality of Very Low Birthweight Infants After Maternal Transport," Department of Obstetrics and Gynecology, University of Washington School of Medicine, unpublished paper.)

But even with an excellent maternal transport program, there will still be individual patients who deliver small birthweight babies at small community hospitals throughout the State, where the infant needs to be stabilized and transported to a tertiary care hospital. Even though the UW is the hospital generally designated for the care of premature low-birthweight infants, its beds are frequently full and patients are referred to COH. The same pediatric medical staff, including interns and residents, deliver services at both COH and UW. In addition to small birthweight babies who have undeveloped lungs and intestines and require intensive support for survival and growth, there are transfers from hospitals around the State to COH for pediatric surgery or acute infection. Trauma patients generally go first to the region's trauma center, Harborview Medical Center, but may be transferred to COH for follow-up after surgery and stabilization.

This referral pattern exists regardless of transportation mode.

Helicopter Transport

There are existing guidelines and standards for patient care while being transported (Guidelines for Perinatal Care, "Interhospital Care of the Perinatal Patient," American Academic of Pediatrics and American College of Obstetricians and Gynecologists, 1985) but there are no standard published guidelines for which mode of transportation to use on a given patient or, for example, which criteria a patient should have to be transported by helicopter versus ambulance. The State Medical Society's EMS Committee is working on the delineation of medical necessity or medical reasonableness for medical transport and under Dr. Lothar Pinker's direction are hoping to have guidelines published in six months (see attached letter). There are some generalities that all the experts agree on.

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Over 150 miles it is most timely, stable and economic to use fixed-wing aircraft, so most interstate transports occur in fixed wing. Between 100 and 150 miles, rotary-wing aircraft or helicopters appear most appropriate, so regional out-of-County transfers appear to be the general rule. Less than 70 miles, depending on geography, ground transport is the generally agreed preference.

The key to any transportation of sick people is the stabilization of the patient, making sure that vital signs are stable and that the general physical condition is not deteriorating. One of the most important aspects in the case of the critically ill neonate is the transport of a specially trained medical team, the neonatologist/pediatrician and neonatal nurse to the community hospital to stabilize a deteriorating baby. Once stable, a baby can be transported much more safely; some pediatricians prefer ground transport to helicopter because it is possible to stop an ambulance by the side of the road and listen to a baby's heart and lungs, and check the stability of its condition. There appears to be a balance between amount of transport time required and possibility of deterioration.

There are several studies in the literature that assess the severity of illness and injury in pediatric air transport. In one study, Mayer and Wallie prospectively evaluated 636 patients transported over 79 months of service to a regional children's center. Of these patients, 57.5% were transported by helicopter. Eighty-one percent of patients were taken to surgery or admitted to the intensive care unit immediately on arrival at the regional children's hospital. Overall mortality was 9%; a trauma score was used to classify patients (Ann. Emerg. Med. 1984 Feb.; 13(2):108-11). At Johns Hopkins, Dr. Columbani et al reviewed 267 children over a one-year period; 46% of patients arriving directly from the injury scene were delivered by helicopter. Fourteen of seventeen deaths resulted from head injury; a more aggressive approach to the management of brain trauma was advocated (J. Pediatric Surg. 1985 Feb.; 20(1):8-13). Other areas reviewed include a Hawaiian MAST system (Hawaii Med. J. 1984 Jun.; 43(6):200,202,204); a Kansas perinatal system (Respir. Ther., Mar.-Apr. 1985, 15(2):47-50, ISSN 0048-7392.

Another study evaluating air transport in a rural EMS system looked at 569 patients with multisystemic injuries. The emergency helicopter service was rated, utilizing strict specific guidelines as either essential, helpful, or not a factor in the preservation of life. The helicopter was essential to 16.5% and helpful to 10.9% of patients. In spite of rapid evaluation and maximal intervention, 102 (17.9%) of the patients died. The group for which air transport was judged "not a factor" (54.7%) consisted of patients whose injuries would not have proven fatal had their transportation to the tertiary care center been delayed. Retrospective analysis of the data available to the tertiary care center at the time of the decision to transfer the patients by air revealed that it was not possible to differentiate those patients who did not benefit from the service from those for whom the service was judged essential or helpful (Am. Surg. 1984 Apr.; 3-1348:183-8).

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Baxt et al. looked at a group of 1,273 blunt trauma patients who were treated and transported from the site by seven different hospital-based rotorcraft aeromedical emergency care services and saw a 21% reduction in expected mortality ($p<.05$) in five of the seven services. There is some debate about methodologic errors in the study. An editorial in the same journal issue (Annals Em. Med. 1985 Sept.; 14:9; 859-61) states that

> The effectiveness of aeromedical evacuation of battlefield casualties is well established; the transfer of this technology to the civilian setting is a logical event. Its effectiveness for civilian trauma care should be based on the following three principles: 1) early field resuscitation; 2) rapid transport; and 3) delivery to the hospital best suited to admit and treat the patient definitely and without delay. As Baxt and colleagues point out, helicopter emergency medical service (HEMS) patients may benefit from a highly integrated team effort at the receiving trauma center that is the direct or indirect result of a program but for which the helicopter (unless distance is a factor) is the least important component. This is a strong argument for the concept of regional trauma care that concentrates multiply injured patients in trauma centers organized to best care for them. The potential role of HEMS in making regional trauma care a reality should be explored by EMS systems.

My conclusions from the literature review are that there are medical conditions (especially trauma) where time of transport is critical regardless of mode of transportation, that specific clinical criteria may be helpful in selecting helicopter versus ground ambulance transport but do not help in predicting patient outcome, and that the experience of other tertiary centers, while helpful in describing the seriousness of injury seen in the usual patient populations transported, do not clearly shed any statistical light on your question at issue, the current Graves field site versus the hospital site 3-5 minutes away.

Current Data

COH admits approximately 1,000 patients per month in 200 regular beds and 36 intensive care beds (previously described) In August of 1985 82 patient admissions were ambulance transports to the emergency room, 34 were prearranged newborn ground transports, 30 were prearranged fixed-wing transports, and 6 were prearranged rotary transports. On an annual basis, there are 400-450 ground neonatal transports through the neonatal team; 80-85% of these transports go to COH, the rest to UW. During fiscal 1985 (a one-year period ending June 31) 279 patients were transported by air: 148 into intensive care units (see Attachment 1). Thirty-nine percent of these patients were under one month of age; 16% were greater than five years of age (see Attachment 2). Seventy-one percent (197) had peripheral intravenous lines, 27% (76) were intubated, and 2% (6) were undergoing CPR (see Attachment 2).

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I also reviewed the detailed flight logs of Airlift Northwest for August, 1985. There were 52 fixed-wing flights with 859 average miles per flight; 18 (54%) flights were out of State; all flights were out of County; 30 flights were to (or from) COH. There were 34 rotary-wing flights from Airlift Northwest averaging 110 miles: no flights were out of state; all but one of the flights were out of County (a motor vehicle accident to Harborview from South King County); 6 flights to COH.

Recommendations

It is my professional opinion that there are hospital transfers to COH where 3 to 5 minutes are critical to a severely ill infant or youngster, but the actual number of such cases is small. The criteria for helicopter transport in these cases would include the previous comments on distance, stable clinical condition during transport, severe injury or illness requiring tertiary center treatment (rather than secondary or community hospital level), and a strong possibility of decompensation (severe clinical deterioration) during transport. The most important part of the transport, in most cases, will be in getting a specially trained team out to community hospitals around the State.

In most cases, one single site near Graves Field would be adequate for both the University of Washington and COH; however, there will be a small number of cases at each hospital where the ability to land at the hospital may be life-saving. From the transport physicians I have talked to, about 5-10% of all transported children might fall into that category.

The number of children transported by air into COH for any given month may be 30 to 40 and based on the above criteria and clinical estimates, 3 to 4 of these patients may have a medical need for helicopter transport to the doors of the hospital.

The literature review indicated that there are no definitive predictive clinical indicators of prognosis; that is, any number would have to include an additional number of patients whose condition at time of referral was appropriate for air transport but who over time were determined not to have need of helicopter transport as essential. There also needs to be some flexibility for seasonal variation in disease.

Taking into account these factors, I would estimate ten expected helicopter transports for critically ill pediatric patients per month as an upward bound for COH.

I would also recommend that the emergency transport of patients by helicopter be a planned part of a complete EMS transportation system, with specific criteria for use, rather than a hospital-by-hospital provided service. A consortium of hospitals providing helicopter services such as the one in Airlift Northwest is

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certainly a most sensible approach and will make it easier to establish a systematic approach to provision of these services. We are, however, just beginning to integrate helicopter transport into our EMS system. Once a technology is made available to the medical community, it quickly becomes a standard of care for medico-legal reasons.

Until there is a defined systematic integration of these services on a County-wide (or regional or State-wide) basis, I would recommend that the permit granted be a conditional use permit pending a defined relationship to our existing State EMS system and final development of criteria by the Washington State Medical Association's EMS Committee, and that helistop use be reviewed for appropriate medical need in six months. Appropriate use could be monitored by review of individual patient records by an outside panel which includes recognized EMS/pediatric experts as well, perhaps, as out-of-County reviewers. The Health Department would offer our consultation services for that purpose, and I believe it might also be useful to ask the Department of Social and Health Services, Division of Health's Emergency Medical Services Program, and the Washington State Medical Society's EMS Committee for consultation assistance. If a helistop were being used for purposes outside those expressly permitted, I believe it would be appropriate to revoke the permit at the end of the six months.

I hope that these observations and recommendations will assist you in your permit procedure deliberations; please let me know if any comments need further clarification. My thanks to your staff, to a wide variety of health professionals involved in delivery care, to the staff and administration at COH, to the community residents of Laurelhurst, and to a number of other interested individuals who helped me to reach a better understanding of the emergency medical services delivered to infants and children in our community and the many factors which affect those services.

Sincerely,

Bud Nicola MD

Bud Nicola, M.D.
Director

BN:nr
Attachments

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ATTACHMENT 1.

ADMITTING FLOOR - FISCAL 1985

Infant Intensive Care Unit	93	34%
Neonatal Intensive Care Unit	6	2%
Pediatric Intensive Care Unit	39	14%
Advanced Care Unit	37	13%
Infant Floor	16	6%
Surgical Floor	6	2%
Medical Floor	10	4%
Adolescent Floor	5	2%
HMC	9	3%
UH L&D	13	5%
Return Flights	38	14%

63% WERE ADMITTED TO INTENSIVE/ADVANCED CARE

14% WERE ADMITTED TO FLOORS

14% OF ALL FLIGHTS WERE RETURN FLIGHTS

2% OF FLIGHTS WERE PATIENT TRANSFERS

1% OF PATIENTS EXPIRED PRIOR TO ARRIVAL

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ATTACHMENT 2

AGE DISTRIBUTION - FISCAL 1985

Newborn to 1 Month	110	39%
1 to 6 Months	58	21%
6 Months to 5 Years	67	24%
Greater Than 5 Years	44	16%

PATIENT ACUITY - JANUARY TO SEPTEMBER 1985

Intubated	76	27%
Central Venous Lines	24	9%
Arterial Lines	25	9%
Peripheral IV	197	71%
Chest Tubes	9	3%
Vasopressor Drip	8	3%
Prostiglandins E-1	8	3%
CPR	6	2%

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Lothar H. Pinkers, M.D.

GENERAL SURGERY
TRAUMA

1201 - 116TH NORTHEAST
BELLEVUE WA 98004
206 - 454-5331

RECEIVED
OCT 28 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

24 October 1985

Dr. Bud Nicola
Director, Public Health, King County
7th Floor
400 Yesler Way
Seattle, Wa 98104

Dear Bud,

I'm enclosing copies of some correspondence dating 1983 dealing with pediatric transport costs and times. The last figures on the second page are difficult to read, but the actual amount is $1463. These are 1983 dollars and represent air to ground transportation and ground to hospital. The figures for the helicopter are grossly different and while as I understand it from Dr. Copass, they do not charge the full cost to the patient, somebody has to pay the $2 - $3000 actual costs for those transports. I'm also enclosing the guidelines for perinatal care Chapter 8. Lastly, the reference that I had made was the pamphlet published by the neonatologist at the University entitled, Immediate Care and Transport of the Sick Newborn by Bethany Farris,RN and William E Truog, MD.

As we discussed, the actual deliniation of medical necessity or medical resonableness for helicopter is very scarce. We have made a start of it, at a State level, and may succeed in this in the next six months or so. The next meeting of the WSMA committee on EMS Standards will be in December and dealing with this subject.

If the preponderance of evidence suggests to you that a helipad should be permitted at COH, May I make the following suggestion. Since data is so sparce and since the Children's personna is so aggressive and resistant to review, I really think we need more data. I suggest that individual patient records should be reviewed for medical necessity by an outside panel which includes some people well established in emergency medical services fields as well perhaps out of County reviewers. I would also suggest a conditional use permit, for six to nine months, that would enforce this kind of record keeping and permit a retrospective judgment about the medical necessity for helicopter transport as well as gathering data on frequency

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of use, etc. If these items all seem appropriate, then an additional conditional use permit would be issued. If the preponderance of data suggested inappropriate use, then denial of an extension might be a reasonable course of action in the future.

I do not envy you your King Solomon role in "dividing up the baby" but the results of your efforts will be quite helpful on a full State basis.

Sincerely yours,

L.H. Pinkers, M.D. FACS

LHP:ys
Enclosure

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CHILDREN'S ORTHOPEDIC HOSPITAL
AND MEDICAL CENTER
4800 Sand Point Way N.E.
Seattle, Wash. 98105 / Phone: 634-5000

UNIVERSITY OF WASHINGTON
School of Medicine
Department of Pediatrics / RD-20
Seattle, Wash. 98195 / Phone 543-3180

Oct. 14, 1983

To: Newborn Care Hotline Physicians

From: Craig Jackson

Re: INFANT TRANSPORTS: AIR VS. GROUND

While on call for the Hotline, I have been asked to arrange the transport of high risk infants to Seattle from hospitals that are outside the usual driving range of the COHMC-UW infant transport service, such as Bellingham (89 miles). I have found that the quickest way to move the patient to Seattle is for the referring hospital to assemble their own transport team (usually a nurse and respiratory therapist). Occasionally this is not possible and a ground or air transport team from Seattle is required. In the attached analysis, I have compared three modes of infant transport by compiling data from Sue Engman, Lori Kitchin, and some phone calls of my own. The total elapsed time required is given first. The second column is relevant when the patient requires stabilization by the Seattle team prior to leaving the referring hospital. The third column is relevant if the time "in transit" (outside either hospital) must be kept as brief as possible. Costs are included in the last column.

It is my hope that these data will help others who often wonder, "how long does it take?" and "how much does it cost?"

cc: Sue Engman, R.N.
Lori Kitchin, R.N.
Mike Copass, M.D.

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Time and Cost Analysis of Ground vs. Air Transports of Short Distances, eg. Bellingham

	Elapsed Time	Time for COH Transport to Arrive There	Time Patient is in Transit	Cost to Patient	
Ground Transport (Bellingham Team)				Hubbard Amb:	
Transfer patient to transport isolette	} 40'	0'		base chg	$100
Arrange for staff to go on transport				$3.30/mi x 180 mi	$594
Arrange ambulance				O_2 use	$ 15
Drive from Bellingham to COH (89 mi)	90'		– 90'	15% discnt	($106
	2°10'			St. Joe's: $30/hr x4 h	$120
					$723
Ground Transport (COHMC Team)				Shepard:	
Assemble team and equipment	(40')	} 130'		base chg	$112
Drive to Bellingham	90'			team pickup	$ 33
In-hospital care	60'			$3.50/mi x 180 mi	$630
Drive to COHMC	90'		– 90'	$45/hr wait x 1 hr	$ 45
	4°40'			COHMC: base chg	$211
					$1051
Airlift Northwest				Air NW:	
Assemble team & equipment @ Boeing	45'	} 85'		$3.63/mi x 180 mi	$653
Fly to Bellingham	25'			$169.60/mi x 3 hr	$509
Airport to hospital	15'			Hubbard Amb:	
In-hospital care	60'			base chg	$100
Hospital to airport	15'	} 65'		$3.30/mi x 10 mi	$ 33
Flight to Boeing	25'			$30/hr wait x 1 hr	$ 30
Boeing to COHMC	25'			15% discnt	($ 24
	3°30'			Shepard: base chg	$112
				$5/mi x 10 mi	$ 50
					$1463

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chapter 8

Interhospital Care of the Perinatal Patient

Guidelines for Perinatal Care, American Academy of Pediatrics and American College of Obstetricians and Gynecologists, 1983.

The transport of pregnant women, mothers, and neonates between hospitals is a recognized and essential component of modern perinatal care. As noted in Chapter 1, transportation is one of the systems approaches to obstetric and newborn care. There are three types of patient transport: maternal-fetal, neonatal, and return.

Maternal-fetal transports involve pregnant women who are to be admitted for delivery, unlike obstetric consultations, which involve ambulatory evaluation without admission. Neonatal transports usually employ a team to evaluate and stabilize the neonate's condition, as well as to provide care when indicated. Return transports take patients back to their original or local hospital for further care when the problems that required transport have been resolved. Return transports should be recognized as an important benefit to the individual patient and system.

The Committee on the Fetus and Newborn of the American Academy of Pediatrics has established a policy on Level II neonatal units, stating that "Level II neonatal units must have ongoing liaison with a Level III neonatal intensive care unit." That firm support for a network can logically be extended to all perinatal services. The referral of high-risk mothers, as well as sick newborns, to regional centers for care has a positive impact on local perinatal care and makes it necessary to set guidelines for regional perinatal networks. The rising costs of care, the ascending expectations of consumers, and the constraints on spending are relevant considerations in a movement toward firmer guidelines for interhospital care of the perinatal patient.

Interhospital transport and care of high-risk perinatal patients make it reasonable to expect that every patient in a region will be cared for in an appropriate manner. A successful program of interhospital care should incorporate the following components:

1. Risk identification, which includes active anticipation of needs that will require the movement of patients in order to provide optimum care
2. Recognition that patient care is a continuous process
3. Local physicians who know the resources that are available and how to gain access to them
4. Physicians at all levels who have the knowledge and skills needed to identify the high-risk patient, to evaluate the patient's condition, and to stabilize and prepare the patient for transfer
5. An organized, appropriate, and available interhospital transport service
6. A political and economic environment that provides support for the interhospital transport system
7. Data collection and analysis for purposes of monitoring and evaluating the program

From the moment a perinatal problem is recognized, to the point of its resolution and follow-up, there should be a continuum of care. Because disease processes do not become static while a patient is being transferred, management is necessary during transport. The objective of interhospital care thus becomes the provision of the maximum degree of care possible within the constraints imposed by a moving ambulance, its restricted space, and its lack of support facilities (e.g., laboratory, blood bank, and radiology services).

INDICATIONS FOR TRANSPORT

The circumstances in which patients are transported vary according to the distribution of care facilities in each region. The decision should be made by the initial physician and a consultant, both of whom should be well-informed of the resources at each center. In general, transport should be considered when the resources immediately available to the maternal, fetal, or neonatal patient are not adequate to deal with the patient's actual or predicted medical or surgical complications.

The following patient conditions require more specialized care and may require patient transfer. The specific values are to be considered guidelines only. They will vary with individual patient needs or institutional capabilities.

I. Maternal Conditions
   - A. Obstetric complications
     1. Premature rupture of membranes (at less than 34 weeks' gestation or less than 2000 g expected birth weight)
     2. Premature labor (at less than 34 weeks' gestation or less than 2000 g expected birth weight)
     3. Any condition creating the probability of birth at less than 34 weeks' gestation or less than 2000 g expected birth weight
        - a. Severe preeclampsia or other hypertensive complication
        - b. Multiple gestation
        - c. Intrauterine growth retardation
        - d. Third trimester bleeding
        - e. Rh isoimmunization
        - f. Premature dilation of the cervix
   - B. Medical complications
     1. Infections in which the degree or nature of maternal illness may result in premature birth
        - a. Hepatitis
        - b. Pyelonephritis
        - c. Influenza
        - d. Pneumonia
        - e. Other febrile or hypermetabolic conditions
     2. Severe organic heart disease, functional class III or IV
     3. Poorly controlled diabetes mellitus
     4. Thyrotoxicosis
     5. Renal disease with deteriorating function or increased hypertension
     6. Drug overdose
     7. Miscellaneous severe illnesses
   - C. Surgical complications
     1. Trauma requiring intensive care or surgical correction beyond the capabilities of local facilities or where the procedure may result in the onset of premature labor
     2. Acute abdominal emergencies at less than 34 weeks' gestation or with a fetus weighing less than 2000 g
     3. Thoracic emergencies requiring intensive care or surgical correction

II. Neonatal Conditions
   - A. Gestation less than 34 weeks or weight less than 2000 g
   - B. Neonatal sepsis or infection

C. Respiratory distress and metabolic acidosis persisting after 2 hours of age
D. Neonatal blood loss
E. Hypoglycemia
F. Hemolytic disease of the newborn
G. Neonates of mothers taking hazardous drugs
H. Neonates of diabetic mothers
I. Neonatal seizures
J. Sepsis or meningitis
K. Congenital malformations requiring surgical care or observation
L. Shock or asphyxia persisting beyond 2 hours
M. Neonatal cardiac disorders with persisting cyanosis
N. Progressive, increasing respiratory distress syndrome
O. Any neonatal condition requiring ventilatory support for more than 1 hour
P. Neonates needing more than routine observation or care

THE ORGANIZED APPROACH TO TRANSPORT

The provision of adequate life support during the transport of critically ill mothers and neonates requires considerable knowledge, skill, experience, and specialized equipment not readily available in all hospitals. Many perinatal centers that provide Level III services have developed transport systems for their service regions because only experience with a large number of patients can maintain the skills required for care during transport. The referring staff can help the mother and neonate most by calling for assistance as soon as the need for transport becomes apparent and by using the time before transport to stabilize the patients and prepare for transport. This practice ameliorates the immediate problems and reduces the time that the transport team must be in the referring hospital.

In certain circumstances, it is reasonable for the referring physician to manage the transfer personally. Maternal-fetal transports are frequently conducted in this fashion. The procedure whereby transport originates at the referring hospital, frequently termed one-way transport, functions effectively in some locations; however, two-way transport systems, which operate from a base at the center, are more common. Any transport procedure is acceptable if the guidelines given here are utilized and its goals and objectives are attained.

Informal, poorly organized interhospital care is hazardous. In order to avoid compromising the patient, to ensure a predictable response for transportation requests, and to provide the highest quality of care, the approach to transport must be logical and organized. When the number of patients who require interhospital care is small, efforts to monitor and maintain the skill levels of the team become even more important. It is advisable in such instances to consider the consolidation of care programs.

An interhospital care system has five identifiable components: (1) organization, (2) communications, (3) personnel, (4) equipment, and (5) transport vehicles.

Organization

Interhospital care should be available 24 hours/day, in a program with defined response time and minimum capabilities of personnel. The director should be a specialist in maternal-fetal medicine or neonatal medicine, or a board-certified pediatrician or obstetrician with a special interest in these subspecialty areas. The director's responsibilities are:

1. Quality control of patient care through regular case review
2. Personnel training and supervision
3. Development and utilization of patient care protocols
4. Development and utilization of record-keeping systems and subsequent collation and evaluation of data for analysis
5. Review of operational aspects, e.g., response times, effectiveness of communications, and equipment maintenance

Communications

The transfer of a patient from one hospital to another and from one care team to another requires a reliable communications system. It is essential that the referring physician provide the receiving physician with specific clinical information on the patient being referred. For a maternal patient, the following information should be included:

Reason for admission
Age
Date of last menstrual period
Estimated date of confinement
Gravida, para, and abortion
Relevant health problems
Perinatal history

Blood type
Results of amniocentesis
Reasons for transfer
Therapy administered, including drugs
Intake and output

For a neonatal patient, the following information should be included:

Gestational age and weight
Perinatal history
Temperature
Color
Hematocrit
Oxygen requirement and blood gas levels
Respiratory activity (particularly presence of apnea or need for assisted ventilation)
Blood glucose or Dextrostix
Pertinent radiologic findings
Reasons for transfer
Therapy administered, including drugs

This information allows the receiving facility to prepare for the patient's stabilization, transfer, and admission. Appendixes F and G contain sample record formats for information that can be provided conveniently by telephone. For large service areas, toll-free lines should be established by the referral center for referring physicians and families. In metropolitan areas or over short distances, direct hotlines may link referring obstetric units and nurseries to the center. These lines should be open 24 hours/day and should be well publicized throughout the service region. The liaison between the referring and the receiving centers should include telephone or radio communication during stabilization and transfer.

Appropriate historical data should accompany the patient. This information should include appropriate laboratory data and x-rays. In most neonatal transports, 10 ml clotted maternal blood to be used for cross-matching purposes should be obtained and should accompany the transport team. Cord blood and the placenta may be helpful in certain clinical situations, such as multiple gestation or intrauterine growth retardation.

Dispatching services should provide rapid coordination of vehicles and personnel, as well as communication links between referring

and receiving hospitals and the transfer team. Referring physicians should be given an estimated arrival time to allow them to arrange for laboratory studies on which to base therapy in transport and ensure their availability at the time of transport. The receiving hospital should also be given an estimated arrival time to allow the staff to prepare for the patient's arrival. When flights must connect with ground ambulances, it is desirable for a single dispatching center to coordinate the movements of all vehicles. The complexity and sophistication of the dispatching operation vary considerably with the nature of the service.

Personnel

The interhospital care team members should have the collective expertise sufficient to provide the necessary supportive care for a wide variety of emergency conditions in high-risk mothers and neonates. Team members may be drawn from appropriately trained physicians, registered nurses, respiratory therapists, and emergency medical technicians. One member should usually be a physician or registered nurse. Neonatal nurse-clinicians are often specifically identified with this role. In addition to being highly knowledgeable in care and procedures for perinatal patients, transport personnel should be thoroughly familiar with transport equipment; any malfunction en route must be managed without the assistance of hospital maintenance staff.

Equipment

Powered equipment should have "stand alone" capability, i.e., it should be battery-operated. Batteries should have sufficient power to operate the equipment for the duration of the transport if no alternative power source is available. Furthermore, critical equipment should be adaptable to 12- and 24-volt DC and 110-volt AC power for use in a hospital or ambulance.

In addition to equipment for monitoring, resuscitation, and support of both mother and neonate, a transport kit containing essential drugs and special supplies should be continuously available during stabilization and transfer of the patient. A list of equipment and drugs that should be included in a transport kit is found in Appendix H.

Transport Vehicles

The main concern during transport is to maintain optimum care. The choice of a ground or air ambulance is based on distance from one hospital to another and facilities available to support the patient during

the transfer. Ground ambulances are most useful for distances up to 80–100 miles of flat terrain in low traffic density areas. Beyond 100 miles, aircraft may be faster or less expensive, even though ground ambulances provide more direct transfer between regional centers. The pressurization of aircraft is an important consideration during management, since adequate oxygen levels of the mother and fetus or newborn must be ensured.

Helicopters are used in some areas to transport patients up to a few hundred miles or to reach patients in difficult terrain or high traffic density areas. Helicopters are not pressurized, are generally noisier and more confined, and have less range than fixed wing aircraft, however. These limitations should be considered whenever a helicopter is used.

TRANSPORT PROCEDURE

Evaluation

The patient's condition should be carefully evaluated at the referring hospital, both in regard to the primary diagnosis and the presence of complicating conditions. Steps should be taken to correct these conditions to the extent possible prior to transfer.

Stabilization

Transport of the maternal patient may require hemodynamic stabilization; the initiation of tocolytic agents, anticonvulsants, or antihypertension agents; or demonstrated arrest or diminution of active labor. Patients with active bleeding, rapidly progressive preeclampsia, and rapidly progressive labor should not be transported until appropriate medical management has been initiated and, in the opinion of the medical team, the possibility of acute crisis or delivery in transport is significantly diminished. In some situations, maternal transport may not be advisable; it may be preferable to coordinate neonate transport in such a fashion that the transport team arrives at the referring hospital immediately prior to or shortly after the birth. Transport teams may, by prior agreement between the referring physician and the dispatch center, participate in the initial stabilization at birth. In the fully stabilized neonate, temperature, blood gas levels, blood pressure, tissue perfusion, and blood glucose level are normal. Complete stabilization of a newborn is not always possible, but transport of an extremely unstable newborn is contraindicated.

Although there have been no controlled trials, experience indicates that stabilization prior to departure is probably the most critical aspect of interhospital care because it minimizes subsequent deterioration in an environment that may not permit detection or treatment of problems.

Medicolegal Concerns

There are many legal considerations in perinatal transport. Many details are not well defined, but all involved parties, including the referring hospital and personnel, the receiving hospital and personnel, and commercial ambulance and aircraft charter corporations, assume responsibilities. As spokesperson for the transport team, the physician should thoroughly explain to the patient or the parents of the newborn the patient's condition and reasons for transfer. Informed consent for transfer, admission, and care should be obtained. The newborn should be clearly identified.

Perinatal transport teams are involved in very special transport situations, and prior attention to potential legal problems is advised. In most situations, the institution that employs the team is responsible for its actions, and professional duties are performed under the direction and authority of a physician-director at the receiving hospital. Many hospitals consider neonates admitted to their institution while en route and under the care of the transport team. Physician-directors and hospital administrators should recognize the potential administrative or legal problems that may arise in certain situations, for example, when transport teams cross one or more state lines during a transport.

The referring physician preferably should remain at the hospital until the neonatal transport team arrives and should be there while the team is present in order to ensure complete communication. The patient must pass from the official care of the referring physician to that of the transport team at some point; the departure of the transport team from the physical premises of the referring hospital might be considered the official point of transfer of responsibility. Individual hospitals and regions should investigate the use of transfer agreements, which might include granting of emergency privileges to members of transport teams.

The referral center should receive a report on the patient's condition prior to departure. In the case of newborn transport, the mother and father should be offered the opportunity to see and touch the neonate before the transfer, even if the neonate is in a transport incubator or on a respirator. In addition, an instant picture of the

neonate may be taken for the family prior to transport. This has proved particularly helpful when parents and their neonates are to be separated for a long period or when the mother is recovering from a cesarean delivery and may not remember the time spent with the neonate prior to transport. The family of the patient should also receive written information about the receiving hospital, names of staff members, visiting hours, telephone numbers, and places to stay in the vicinity of the hospital. Brochures about the hospital can be helpful. A desire to breast-feed should be reinforced, and the mother should be taught how to express milk until nipple feeding becomes possible. Early attention to family needs and concerns at this critical time can reduce anxiety and ease the transition to a new medical center.

Records are essential for the continuing care of the patient and for the evaluation of the referral transport process. Records should include the following information:

- Patient's name
- Referring hospital
- Receiving hospital
- Referring physician
- Attendants' names and professional status
- Mode of transport
- Time data, including arrival at the referring hospital, departure, ground or air ambulance time, and arrival at the receiving hospital
- Patient's age, weight, gestational age, and sex
- Diagnosis and condition
- Procedures performed
- Medication administered
- Periodic vital signs
- Special comments

PATIENT CARE IN TRANSIT

A well-stabilized patient requires little or no intervention during transport. The patient should be under continuous observation, however. The key factors to be monitored in the maternal patient include blood pressure, uterine contractions, cervical dilation, fetal heart rate ultrasonography, deep tendon reflexes, infusion rate of intravenous fluids, and the administration of tocolytic agents or anticonvulsants. For the

newborn, temperature, respiration, heart rate, blood pressure, color, activity, and oxygen concentration should be monitored frequently by noninvasive means. A neutral thermal environment should be maintained. It may be necessary to monitor other parameters as well, such as the blood glucose level. Monitoring of blood gases during transport is feasible with the availability of portable transcutaneous monitoring.

The patient, attending personnel, and all equipment should be safely secured in the transport vehicle. Although it may be necessary to respond rapidly to an emergency, high-speed ground travel greatly increases the risk of accidents. In the majority of cases, there is little need for excessive speed if the patient is stabilized.

RECEIVING AND COMPLETING TRANSFER

The receiving staff should be prepared to deal with any unresolved problems or emergencies. The patient's history and clinical status, as well as all the plans for current management, should be communicated directly by the transport personnel. Therapies provided during transport should not be changed unless the transport team is consulted.

Family members are extremely anxious when a patient is transferred. If they have not been able to accompany or follow the patient, they should be called as soon as possible after the transfer and given a report on the patient's condition. The referring physician and the nursing staff at the referring hospital should also be informed about the patient's arrival at the receiving hospital and the patient's progress on a continuing basis thereafter.

The transfer is not complete until equipment on the transport vehicle has been restocked and prepared for the next call. Reusable equipment that has come into contact with the patient should be appropriately sterilized or decontaminated.

OUTREACH EDUCATION AND THE REGIONAL TRANSPORT SYSTEM

Since interhospital care of the high-risk perinatal patient requires the cooperation and coordination of many skilled persons, outreach education efforts should include discussions of the regional transport system. Outreach education can be used to reinforce that cooperation and coordination.

Outreach education related to transport should focus on the following objectives:

1. Informing perinatal care providers in the region of the specialized resources available to them through the perinatal network
2. Assisting primary physicians in developing their abilities to anticipate complications, to identify high-risk perinatal patients, and to stabilize these patients before transport
3. Facilitating effective quality assurance through the continuing education of perinatal care providers
4. Establishing 24-hour consultation and referral sources
5. Promoting a regionalized care system designed to ensure high-quality care to all patients in a cost-efficient fashion

PLANNING AND EVALUATION

The planning of the perinatal transport system requires the participation of both those who will use the service and those who will provide it. The creation of regional advisory councils with representatives from the various perinatal programs facilitates planning and evaluation, as such a group can identify and verify the particular region's needs for interhospital perinatal transport and the specific characteristics of the service that should be designed in response to those needs. The characteristics of the successful system, as described earlier, can be used as a guide for program development and subsequent evaluation. Other criteria should be considered in planning and evaluating the transport system:

1. Availability: Does the system provide all services that may be needed by the perinatal patient?
2. Accessibility: Is the capacity to "connect" the patient quickly and appropriately with the services needed ensured? Do those who will need the services know where to go to get them?
3. Responsiveness: Is there a mutual commitment from referring care providers and specialized care providers to honor and accommodate each other's special needs as they may arise?
4. Effectiveness: Are perinatal patients being given the appropriate care in the appropriate setting? Do care users, physicians and patients, and care providers regard the perinatal transport service as useful and effective?

As basic as these questions may appear, their answers are often assumed without testing. The purpose of the evaluation of the system is to collect the evidence that will confirm that the system provides high-quality care to high-risk mothers and neonates.

RESOURCES AND RECOMMENDED READING

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		COH Proposed Helipad (CC 84-022) Public Hearing on 10/24/85. Name/Address with Zip Code	D. Nicola beg. re medical need. Representing yourself? or which organization?	Will you speak tonight?	(1) For or against
	✓	John Neff M.D. 4800 Sand Point Way NE. Box C-5371 Seattle, WA. 98105	Children's Orthopedic Hospital & Medical Center	YES	FOR
	✓	Michael Copass M.D. Harborview	Airlift NW	YES	FOR
	✓	Earl D Furman MD 4416 54 NE Seattle 98105	Laurelhurst Resident COH Physician	Yes	FOR
	✓	Karen Olsen Rasmussen Ste 2300 4th & Blanchard Bldg Seattle, WA 98121	Laurelhurst Condominium	yes	again
	✓	Nancy Greenawalt 4800 Sand Pt. Way NE. Seattle WA. 98105	COHMC	YES	FOR
	✓	Susan Macek 4800 Sand Pt. Way N.E. Seattle, WA 98105	COHMC	No	FOR
	✓	Kathryn E Peterson 5007 44th NE Seattle WA 98107	Laurelhurst	No	again
	✓	PATRICK SHUMAKER 4800 SAND POINT WAY SEATTLE WA	COHMC	NO	FOR
	✓	TREUMAN KATZ	COHMC	NO	FOR
	✓	Karen Kilian	COHMC Airlift NW Flight-Nurse		FOR
	✓	Liz Anderson N746 45th N.E. SEA. 98105	Laurelhurst Community Club	Yes	Against

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COH Proposed Heliport
(CC 84-022)

		Name/Address with Zip Code	Representing yourself? or which organization?	Will you speak to-night?	(3) For or against
		Anita Francis 5003 45 NE Seattle, Wa 98105	Citizens concerned about Helicopter transport	Yes	Against
		HERBERT ABELSON 5530 60th Ave NE Seattle, WA 98105	UofWA COHMC	Yes	FOR
		Sue Harrison 7038 24th NE Sea Wa 98105	Flight Nurse ALNW	no	For
✓		Robb Childs 325 - 9th Ave Seattle, WA 98104	ALNW	No	For
✓		Michael K. Copass, M.D 325 - 9th Ave Seattle, WA 98104	ALNW	Yes	For
✓		Susan Engman 325 - 9th Ave. Seattle, WA 98104	ALNW	Yes	For
✓		Paul Mendelmann 4743 45th NE. Sea. 98105	myself	Yes	
✓		Mary Jo Heistand	self	Yes	against
✓		Albert A. Feldmann	Laurel Crest Condominium Owner Association & self	Yes	against

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(CC 84-022)

	Name/Address with Zip Code	Representing yourself? or which organization?	Will you speak tonight?	For or against
✓	Anne McBride 4232 Eastern Ave N Seattle 98103	Cothmc	No	FOR
✓	Steve Sheibe 8051 18th NE Seattle	Cothmc	No	FOR
✓	Jan Thompson 8056 18th NE Seattle	Cothmc	No	FOR
✓	Judy Huntington 9520 42nd Ave NE Seattle, WA 98115	Self	YES	FOR
✓	Jane C. Carew 5232 S.W Stevens Seattle Wa 98116	COHMC	No	For
✓	Charles R. Culver 7936 W. Mercer Wy Mercer Island WA	SELF	No	FOR
✓	Stephanie Axelrod 2416 N 43rd St Seattle WA 98103	Cothmc	No	FOR.
✓	Marjorie Kresge 4014 NE 46th St. Seattle, Wa 98105	Self	No	Against
✓	Helen Norman 4252 NE 50th Seattle Wa 98105		Yes	
✓	Kate Hemer	Self	Yes	Against

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COH Proposed Heliport
(CC 84-022)

	Name/Address with Zip Code	Representing yourself? or which organization? (1)	Will you speak today?	For or against
✓	EUGENE R. HILL 21045E223RD AVE KENT WA 98103	HOSPITAL AIRTRANPORT INC	NO	FOR
✓	DANIEL DAVIDSON ~~7004~~ PERIMETER Rd. S. Seattle WA 98108	HOSPITAL AIR TRANSPORT INC	NO	FOR
✓	BOB LAZEAR 7001 PERIMETER RD. S. SEATTLE. WA 98108	SEATTLE JET CENTER AIRLIFT NORTHWEST	NO	FOR
✓	Jerry B Schneider 5003 45 NE Seattle, WA 98105	Self.	NO	Against
✓	Sharon East 6677 NE Windermere Rd Seattle. Wa. 98115	Self	No	ainte

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COH Proposed Holroad
(CC 84-022)

	Name/Address with Zip Code	Representing yourself? or which organization?	Will you speak to-night?	For or again
✓	BOB KLUG 4326 NE 42ND ST SEATTLE, WA 98105	LAURELHURST COMMUNITY CLUB	Y	A
✓	GENE TURNER, MD	SELF/COH	YES	F.
✓	STEVEN WISNER MD.	SELF/COH	Yes	For
✓	David Tapper M.D.	COH	YES	FOR
✓	Linda Quan M.D.	COH	YES	FOR

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8-20-85

RECEIVED
AUG 20 1985
MAYOR'S OFFICE

Questions related to Medical Need

1. Which emergency transports require a helicopter transfer?

2. What, if any, would be the effect on the well-being of a patient transported by helicopter versus helicopter and ground transport as it is presently done?

3. Are direct flights versus air/ground transports medically significant in terms of patient morbidity and mortatlity?

4. What is the additional medical advantage if any of direct helicopter services versus the current air to group transport system? Do these outweigh the costs both financial and environmental?

5. What current proportion of neonatal emergencies are now transported by helicopters?

6. What data are available regarding the number of neonatal emergencies that are likely to be generated by the population within a 100 mile radius of COHMC? What proportion of these cases should be assumed to be assigned to COHMC as opposed to other hospitals within this geographic area?

7. Do you think a review procedure could be set up that would insure that helicopter service to COHMC and University Hospitals is used for emergency purposes only? If so, what would its characteristics have to be?

8. What emergency services does COHMC offer that are unique and unavailable elsewhere?

9. Does COHMC currently meet the standards established by the American College of Surgeons Committee on Trauma? If not, what would it have to do to meet these standards to establish a trauma center?

10. Will the Airlift Northwest helicopter have to come to COHMC to get an isolette and a medical team before flying to the patient? If so, will this mean 4 flights over the neighborhood for each patient brought in?

11. Airlift Northwest has been in existence a short time. Has this transport system been evaluated by an independent peer review group as to its effectiveness?

12. What will be the effect on MAST of the Airlift Northwest helicopter service? Similarly, what will be the impact on MEDIC 1 and other ambulance companies? It is generally acknowledged that we have an unusually fine ground ambulance transportation service.

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TOM BYERS
Mayor's Office

Hamia -
For file

RECEIVED
AUG 26 1985
Dept. of Construction & Land Use

Katy Chaney
DCLU

Katy -
Here are some draft questions from the Laurelhurst Community Council re: COH helipad. I hope they are helpful in drafting the letter to Buck.

Thanks
Tom

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10. Will the Airlift Northwest helicopter have to come to COHMC to get an isolette and a medical team before flying to the patient? If so, will this mean 4 flights over the neighborhood for each patient brought in?

11. Airlift Northwest has been in existence a short time. Has this transport system been evaluated by an independent peer review group as to its effectiveness?

12. What will be the effect on MAST of the Airlift Northwest helicopter service? Similarly, what will be the impact on MEDIC 1 and other ambulance companies? It is generally acknowledged that we have an unusually fine ground ambulance transportation service.

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cc Bradley 86-020

Seattle
Department of Construction and Land Use

August 30, 1985

Bud Nicola, Director
Health Department
7th Floor, Yesler Building

Dear Mr. Nicola:

I am writing to ask your help.

As you know, this Department has received an application from the Children's Orthopedic Hospital to establish a helipad on hospital grounds. The Land Use Code classifies the hospital as a Major Institution, and Major Institutions are permitted to establish helistops as a Council Conditional Use if the Council finds that:

a. The helistop is needed to save lives;
b. The helistop is located so as to minimize impacts upon surrounding residential property; and,
c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

We must make a recommendation to the City Council and our report must examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas as part of the analysis.

The question of medical need is beyond our area of expertise and this is where I am asking for your Department's assistance. In the past, helicopters have made emergency landings at the Graves athletic field and patients are then transported by ambulance to either Children's Orthopedic or to the University of Washington Medical Center. This request by Children's Orthopedic would mean those patients destined for Children's would instead land on hospital grounds with those destined for the University of Washington continuing to land at Graves field. The University of Washington may subsequently apply for a permit for a helistop on the grounds of the U. W. medical campus.

You have agreed to sponsor a public hearing and to give us your opinion on the question of medical need. The questions I would like your opinion on are:

1. What are existing emergency services in Seattle and how does the service fit into the existing services?
2. What emergency services does COH offer that are unique and unavailable elsewhere?
3. Is there a medical need for emergency helicopter service to serve the hospitals in this immediate area, (Children's and University of Washington primarily)? What, if any, would be the effect on the well-being of a patient transported by helicopter versus helicopter and ground transport as it is presently done? Are direct flights versus air/ground transports medically significant in terms of patient morbity and mortality?

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4. Is the current site at Graves athletic field adequate, or is there a medical need to locate such facilities on the hospital grounds? Or are there alternative sites? Would one such facility either at COH or U. W. be a preferred location?
5. What data are available regarding the number of emergencies that are likely to be generated by the population to be served by the helicopter services? How many landings per week will result?
6. If there is an established medical need, how would you define "occurrences involving life-threatening emergencies," as the use must be restricted to such occurrences? Are there other restrictions we should consider, based on existing medical care facilities capabilities?
7. How would you suggest we monitor the occurrences to ensure that the use is restricted to life-threatening emergencies should the use be permitted? Can we ensure that the service is used for emergency purposes only?

We have asked Children's Orthopedic Hospital for more information to support their application for the helistop (see attached). This information is necessary for your consideration of these questions. As soon as we receive it, we will send you a copy. As you know, we are happy to help with the scheduling and public notice of the hearing.

Thank you for your assistance. If you have questions, please call me at 625-2262 or Katy Chaney at 625-4274.

Sincerely,

Katy Chaney

FOR BEATRICE FARRAR RYAN
Interim Director

KC:vg

Attachment

cc: Truman Katz, Director, Children's Orthopedic Hospital

bcc: Tom Byers

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CITY OF SEATTLE

ZONING RECEIPT

DEPARTMENT OF CONSTRUCTION AND LAND USE RECEIPT

date 1-22 1985 payor CHILDREN'S ORTHOPEDIC HOSP

bldg. address 4800 SANDPOINT WY NE

owner

dollars $ 272.50

project no. CC-84-022

amt. received $ 272.50

letter inv. # (8405870)

check no. W-45337

	fee	org.	account	task	option	proj.	amount
Z1	lot boundary/ short plats	2138	34182		SO1		
Z2	cert. of land use	2138	34182		SO2		
Z3	design review/ departure	2138	34182		SO3		
Z4	rezone	2138	34182		ZO1		
Z5	council cond. use	2138	34182		ZO2		
Z6	cond. use & special exceptions	2138	34182		ZO3		
Z7	variance	2138	34182		ZO4		
Z8	use/zoning plan check	2138	32211				
Z9	shoreline subs. development	2138	32296		WO1		
Z10	SEPA check (DNS)	2138	34182		AO1		272.50
	street use (DCLU)	2138	34182		Z12		
	greenbelt	2138	34182		Z10		
	project specific technical asst.	2138	34182		SO4		

Please examine voucher and report errors at once

$ 272.50

by Glen Burke
Dept of Construction and Land Use

Z 9732

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TIMETABLE FOR CHILDREN'S
Conditional Use Permit Application

August 19	Camera-ready (3rd draft) DEIS submitted to DCLU for approval to print
August 25	Final recommended edits returned to SHAPIRO
September 2	100 copies DEIS submitted to DCLU
	DCLU issues document
	100 additional copies DEIS submitted to DCLU, with 50 additional copies to be provided within one week
September 23	Public Hearing on DEIS
October 2	Close of Comment Period
October 3	Meeting DCLU/EIS Author
October 16	Preliminary FEIS to DCLU
October 23	Review meeting
October 30	Second preliminary FEIS to DCLU
November 6	Review meeting
November 13	Camera-ready (3rd draft) FEIS submitted to DCLU for approval to print
November 17	Final recommended edits returned to SHAPIRO
November 24	FEIS issue date
December 8	DCLU Director's report issued
	Council consideration
January 5-9	Hearing Examiner Hearing
January 21-22	Hearing Examiner Decision

0324L

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ATTACHMENT 1

ADMITTING FLOOR - FISCAL 1985

Infant Intensive Care Unit	93	34%
Neonatal Intensive Care Unit	6	2%
Pediatric Intensive Care Unit	39	14%
Advanced Care Unit	37	13%
Infant Floor	16	6%
urgical Floor	6	2%
Medical Floor	10	4%
Adolescent Floor	5	2%
HMC	9	3%
UH L&D	13	5%
Return Flights	38	14%

63% WERE ADMITTED TO INTENSIVE/ADVANCED CARE

14% WERE ADMITTED TO FLOORS

14% OF ALL FLIGHTS WERE RETURN FLIGHTS

2% OF FLIGHTS WERE PATIENT TRANSFERS

1% OF PATIENTS EXPIRED PRIOR TO ARRIVAL

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ATTACHMENT 2

AGE DISTRIBUTION - FISCAL 1985

Newborn to 1 Month	110	39%
1 to 6 Months	58	21%
6 Months to 5 Years	67	24%
Greater Than 5 Years	44	16%

PATIENT ACUITY - JANUARY TO SEPTEMBER 1985

Intubated	76	27%
Central Venous Lines	24	9%
Arterial Lines	25	9%
Peripheral IV	197	71%
Chest Tubes	9	3%
Vasopressor Drip	8	3%
Prostiglandins E-1	8	3%
CPR	6	2%

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October 24, 1985

Public Hearing
Concerning Medical Need for Proposed Helipad
John M. Neff M.D.

My name is John Neff, Medical Director of The Children's Orthopedic Hospital and Medical Center. Thank you for giving me the opportunity to share with you the reasons why it is important for The Children's Orthopedic Hospital and Medical Center to have a helipad near the Emergency Room, within a short distance of the Intensive Care Units and the operating rooms. COHMC is a major referral resource for children in the Puget Sound area, and is an integral part of the regional network that provides medical care for critically ill children. We are a 200 bed hospital. Last year we admited 7,775 patients and provided 55,983 days of hospital care. Nearly half of our patients come from outside of the King County area. Twenty-seven percent of our patients excluding King County come from the counties immediately surrounding the Puget Sound and 21 percent of our patients come from outside the Puget Sound area. These figures reflect the regional nature of COHMC as a health care resource for children. We provide a full range of pediatric care for children and adolescents up to the age of 21. We have an active staff of 1050 physicians representing all aspects of specialty care for children. Our hospital has 200 beds and 36 of these, or 18 percent, are devoted to intensive care, both for newborn infants and for older children. We are the largest full service pediatric hospital for the Pacific Northwest and we coordinate our intensive care programs for children with Harborview, which provides care for children with trauma and burns, the University Hospital which has a 23 bed newborn intensive care unit filled mostly with children delivered in their high-risk pregnancy program. There are also a group of intensive care pediatricians and nurses representing the intensive care units in the hospitals in Spokane and Mary Bridge in Tacoma, as well as hospitals in the Seattle area. These intensive care specialists meet together frequently with a goal of providing better coordinated intensive care for children for the State of Washington.

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In recognition of the full range of services that COHMC has to offer for the northwest many physicians refer to COHMC their most critically ill children, including children who are difficult to handle in small, remote, rural areas which makes up a large part of the Puget Sound area.

In order to respond to this need, COHMC has joined with three other regional centers, the University, Harborview and Providence Hospitals, to form Airlift Northwest. This program was started with fixed wing transport to serve the large four-state area that represents our broader referral area. This year helicopter service was added to serve areas predominantly in the island water area of the Puget Sound which is not accessible to ground transport and often cannot be reached efficiently by fixed wing. This helicopter services has been necessary to provide a team of pediatrician and nurse intensivists to areas where it is essential to stabilize critically ill children and transport them directly to intensive care units without the additional transport from one vehicle to another. Most of these transports are used for very small, unstable and critically ill children who are connected to multiple essential life support mechanisms.

As an example, since the advent of the helicopter service from May 11 to September 17, 1985 we have transported 18 children by helicopter to COHMC, 4 of these have been newborns, 7 have been in the age group 1 day to one year, 2 have been one to two years of age, and only 5 have been over two years of age. These 18 transports represent 12 different diagnoses, all requiring intensive and full-service care. During the month of August, 1985, we transported by helicopter 6 patients to COHMC, 3 of whom were so unstable and critically ill in mid-flight that we needed to land them on an emergency basis in front of the COHMC Emergency Room.

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The three cases were:

1. The first transport occurred on August 3, 1985 from Bremerton, Wash. This was a one-day-old infant who developed acute necrosis of the intestines with perforation and intestinal obstruction. The child was placed in the helicopter in Bremerton and just before the child was transported, the intestines perforated and the child went into shock. The child survived a little more than 24 hours at COHMC, requiring two operations before he died.

2. The second transport which was discussed in the video tape you saw occurred on August 20, 1985. In this instance the transport team went to Forks to pick up a 30 week premature infant who weighed a little over two pounds. While the child was being placed in the helicopter the child had a catastrophic pulmonary event which resulted in the collapse of one lung requiring immediate expansion. The child was critically ill throughout the flight, was landed at COHMC and immediately placed in the Infant Intensive Care Unit and stabilized. That child survived and is doing well as you saw on the film strip.

3. The third landing occurred on August 27, 1985. In this instance the child was a four-week-old previously healthy child from Chehalis. who within 24 hours developed an inflamation of the brain, meningitis. This became a rapid progressive illness. The transport team arrived, and when they arrived 24 hours after the onset of the illness, the child was in shock and had signs of beginning brain damage as characterized by severe brain swelling. The child in the helicopter showed signs of progressive brain damage, was landed immediately at COHMC, rushed to the Intensive Care Unit, and stablized. That child is surviving, but does have sure evidence of persistent brain damage, the extent of which is not yet clear.

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4. On September 12, 1985 we had a tragic experience in which the outcome for that child might well have been improved by the transportation of a helicopter. This is a child who was born with herniation of the diaphragm with the intestinal contents in the child's chest. The child was in immediate distress, was intubated in the delivery room and stabilized in the nursery with ventilation by hand. The baby was stable during the flight across the mountains but when the child was moved from the airplane to the ambulance for the ride to COHMC, shortly after being placed in the ambulance, had a marked change in response to the mechanical respiration and had a continuous fall in the tissue level of oxygen during the trip to COHMC. Unfortunately, this ambulance transfer took 25 minutes at code red at 4:30 p.m. during rush hour traffic. When the child arrived at COHMC the child was extremely blue and had an extremely low oxygen level. The child was then taken immediately to surgery, but ultimately died the next day because of the continued problem associated with not being able to maintain an adequate oxygen level in the lungs. In this instance, because a helicopter would have been able to make the trip from the air field to COHMC in under 5 minutes, rather than the 25 minutes that occurred, the child could have arrived with a much higher level of oxygen in the tissue, and this emergency situation could have been dealt with in a much more expeditious fashion than having the child caught in rush-hour traffic as occurred. Whether helicopter transport would have made the difference in the child's ultimate outcome will never be known, but we are certain, however, that all attempts should be made with these babies to avoid any period of low oxygen, since when this occurs lung damage results which is often difficult or impossible to provide adequate respiration and a adequate tissue level of oxygen.

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There has been quite a bit of discussion about the issues concerning helicopter use and several concerns and questions have been raised. They are as follows:

1. This is a marketing tool.
2. Children could be transported as well by land or fixed wing.
3. It would be better to land in the soccer field at the University Graves Field and transported by ground to COHMC.
4. We could use the MAST military transport system.
5. The cost to the patient is too high.
6. The transportation has risk to the community.
7. We should wait for regional planning before instituting this service.

Let me respond to each one.

1. This is not a marketing tool. We are responding to the need of referring physicians to stabilize and transport critically ill children in the most expeditious way. We are not purchasing or contracting for our own helicopter with Children's name on it, but in fact have joined and coordinated the transport of children with three other hospitals and we do feel this service should be available to other hospitals as they might request it, thus preventing the proliferation of individual helicopters for individual hospital use.

2. In response to the comment that children could be transported as well by ambulance and fixed wing, let me speak as follows: I would concur that there are many situations where grand transport and fixed wing transport is more advantageous. These would include flights outside a radius of 100 miles, transportations from one hospital to another where the child's condition is stable and not a factor in the child's

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illness. On the other hand, in those areas where land transport and fixed wing are not available, such as the many island communities we serve, and where traffic congestion prohibits rapid transport, the helicopter is an important component in a balanced emergency transport system. Also, sometimes the most important factor in an emergency situation with a child is to send an intensive care team as rapidly as possible to the child so that stabilization and treatment can begin. Such a service in many areas of Puget Sound can be provided only by helicopter.

3. Another concern is that it would be better to land at Graves Field at the University and transport children from there by ambulance to COHMC. In some situations that might be possible, only if there is a dedicated landing space at the University playing fields. Conditions in wet weather often make a transfer from helicopter to ambulance difficult when one is moving an incubator and support mechanisms structures, which may weigh between 150-200 pounds. There is also the added cost to the patient for the ambulance, which is a minimum of $150. Finally, and more important, there is always the added risk that the child might become disconnected from the critical life support mechanisms thus diminishing the chance that that child will have for a positive outcome.

   On the other hand, if it were possible to use Graves Field to pick up the transport team and support equipment, in order to fly them to the child, I would favor this if there were a dedicated and safe landing site.

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4. There is a comment that we should use the MAST helicopter service, and by not using the MAST system, we undercut this excellent system that is offered to the public at no cost. My response is that the MAST helicopter is not suited to carrying small infants because it is not equipped or staffed like an infant intensive care unit. It has been designed for adult military transport and it is staffed by corpmen who are trained to handle adult emergency situations. The vibrations from the MAST system make infant monitoring almost impossible, and therefore, it is not surprising that this system has rarely been used in the past for small infant transports. COHMC has only used this system 10-14 times per year. We will still use it, when appropriate. However, using ALNW can hardly have an impact on the economic viability of this military transport system, since ALNW fills a void that was not addressed by the military Emergency Transport System.

5. The cost to the patient is too high. The answer to this remark is that the cost to the patient would be between $1000-$2000. This is not significantly different between land and fixed wing transport for comparable distances. The cost also is not much more than 1-2 days of full intensive care, and if we can improve a child's condition and decrease intensive care length of stay then we have made up the cost of the transportation by helicopter.

6. There is a concern that the transportation system would place an added risk for the community. It is not our intention to reduce one risk by increasing another. The fact is that the helicopter we plan to use is considered to be quite safe, and according to our consultants, given the number of hours of helicopter flight time, one might expect one accident in 95 years. This is far less than the ambulance going through the

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crowded streets of Seattle and surrounding areas on code red, or even at normal speed.

7. There has been a concern that COHMC should wait for a regional plan for helicopter services before we institute our helipad. My response to this is as follows: Most of the helicopter and transportation wars occur among hospitals for adult services. The need for emergency services for children is very, very small. In this region emergency services for children have been planned and well coordinated. This service also is available to other hospitals who would like to transport children with emergencies from one hospital to another. My plea to you is to not hold up the need to provide adequate emergency care for children because there are competitive situations that exist for adult care. We must stand up as advocates for the need of the child.

Finally, let me conclude by giving you a non-health care issue, concerning the helicopter and that is the relationship of COHMC to the Laurelhurst community. We are very proud of the community in which we live and do not wish in any way to degrade it. I truly do not believe that the institution of a helipad on the campus of COHMC, with the flight pattern of the helicopter coming along Sand Point Way, would degrade the community. Just the same, I commit myself as Medical Director of COHMC to monitor our use of the helicopter in order to eliminate unnecesary use.

I also hope that the community understands that COHMC is faced with emergency situations that are referred to our hospital where the best chance for a child would be to provide direct landing for the child at COHMC. We need a dedicated, well-lighted and protected space for us to provide that type of essential service.

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EXHIBIT A - 2

CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER
INPATIENT ORIGIN BY COUNTY
FY 1983, 1984
ALL SERVICES

SERVICE AREA/COUNTY	Number of Discharges 1983	Number of Discharges 1984*	% of Total Discharges 1983	% of Total Discharges 1984*	% Change in Number of Discharges 1983-1984
PRIMARY SERVICE AREA					
King	4,143	4,073	52.8	52.3	- 1.7
SECONDARY SERVICE AREA					
Snohomish	1,037	1,041	13.2	13.4	+ 0.4
Pierce	383	368	4.9	4.7	- 3.9
Kitsap	260	225	3.3	2.9	- 13.5
Subtotal	1,680	1,634	21.4	21.0	- 2.7
TOTAL SERVICE AREA	5,823	5,707	74.2	73.3	- 2.0
OTHER WASHINGTON					
Yakima	174	151	2.2	1.9	- 13.2
Clallam	105	148	1.3	1.9	+ 41.0
Gray's Harbor	102	133	1.3	1.7	+ 30.4
Whatcom	106	121	1.4	1.6	+ 14.2
Skagit	97	119	1.2	1.5	+ 22.7
Thurston	132	99	1.7	1.3	- 25.0
Benton	117	92	1.5	1.2	- 21.4
Remainder, Wash.	682	755	8.7	9.7	+ 10.7
TOTAL WASHINGTON	7,338	7,325	93.5	94.1	- 0.2
Alaska	249	243	3.2	3.1	- 2.4
Montana	108	93	1.4	1.2	- 13.9
Idaho	49	41	0.6	0.5	- 16.3
Subtotal, AMI	406	377	5.2	4.8	- 7.1
Other States/Countries	103	89	1.3	1.1	- 13.6
GRAND TOTAL	7,847	7,791	100.0	100.0	- 0.7

AMI = Alaska, Montana, Idaho.

*Annualized based upon data for the 9-month period of October, 1983 - June, 1984.

NOTE: Excludes short stay volume.

SOURCES: COHMC, Medical Records Department, 1984.
M. Bostin Associates, Inc., Analysis, 1984.

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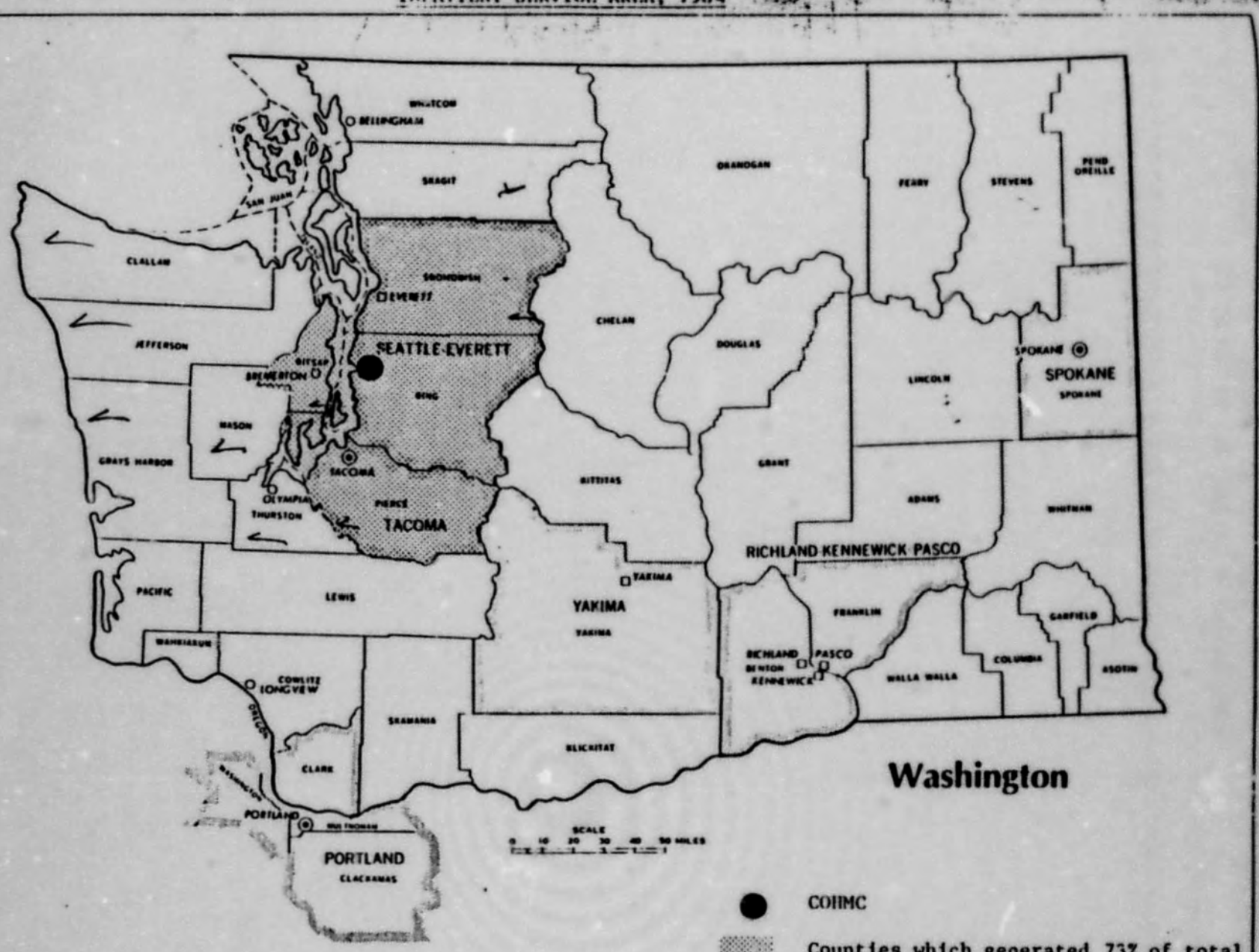
INPATIENT SERVICE AREA, 1984



COHMC

Counties which generated 73% of total discharges and 66% of total discharge days in 1984.

SOURCES: U.S. Department of Commerce, Bureau of the Census.
M. Bostin Associates, Inc., Analysis, 1984.

EXHIBIT A-1

SHAPIRO AND ASSOCIATES, INC.

COH Helipad - Additional Information

1. In the preliminary draft document, there were three figures. The third figure presented the locations of the noise monitoring sites. These sites are now included in Figure 2 and Figure 3 has been eliminated.

2. The kitchen garden offers a theraputic program since patients and their families can have access to some food growing and, when appropriate, help pick or select something fresh from the hospital's own garden. The hospital is not dependent upon this as a source of its food supply.

3. There currently are no constraints on the use of ambulance sirens, although ambulance drivers use some discretion in residential areas or when the sirens are unnecessary. The sound level of an ambulance siren at 50 feet is approximately 95 dBA (same as police). A helicopter is operating at about 84 dBA and drops immediately.

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THE
CHILDREN'S
ORTHOPEDIC
HOSPITAL
AND MEDICAL CENTER

November 19, 1985

Hermia Ip
Department of Construction and
Land Use
402 Municipal Building
Seattle, WA 98104

Dear Hermia:

Attached is the information you requested of Steve Scheibe. If you have additional questions, please contact me or Dorothy Teeter at 526-2004.

Sincerely,

Nancy

Nancy Greenawalt
Director of Government Affairs

dj
Enclosures

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P.O. BOX C5371 • 4800 SAND POINT WAY N.E. • SEATTLE, WASHINGTON 98105 • (206) 526-2000

4. The helicopter would not be used during adverse weather conditions. According to Airlift Northwest (Gene Hill, November 15, 1985), the ceiling visibility, and wind are all criteria for safety consideration. For daytime flights, the FAA minimum standards must be met; the helicopter is not used if there is less than a 300-foot ceiling and less than one mile visibility. For nighttime flights, the company's minimum standards of less than a 500-foot ceiling and less than two-mile visibility are used. The helicopter, as a company policy, does not fly in winds above 40 knots.

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LARGE SIGN INSTALLATION CERTIFICATION

Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Attention: Land Use Information Center

RECEIVED
JAN 22 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

On 16 January 1985 (date) an early project notice large sign was installed for the Proposed Land Use Action located at COH MC 4800 Sandpoint Way NE 98105 (address) and identified by application # CC 84-722. I hereby testify that the sign installed fully complies with the large sign layout specifications and installation standards of Director's Rule # 22-82, and that the sign will be maintained until the Final Decision or Permit is issued or denied, whichever comes first.

Dorothy J. Sutter
Applicant's Signature

DATE 17 Jan 1985

SEPA -
comment ends 1/30/85

SL:kao
5/25/82

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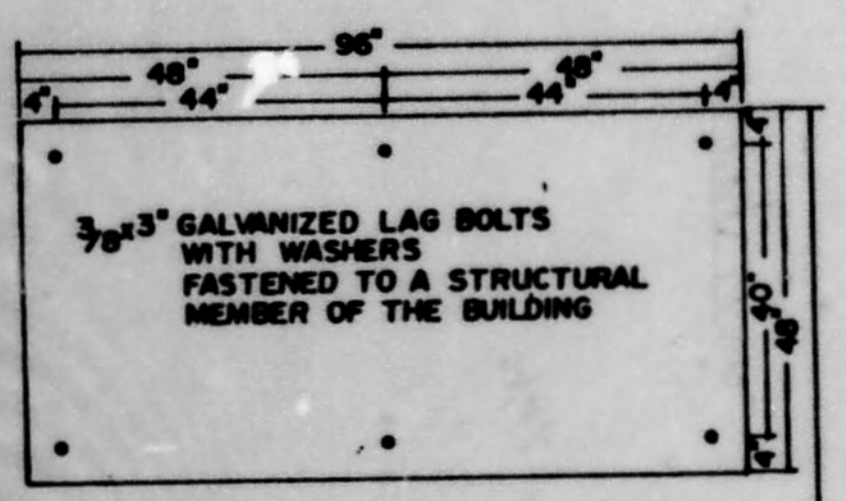

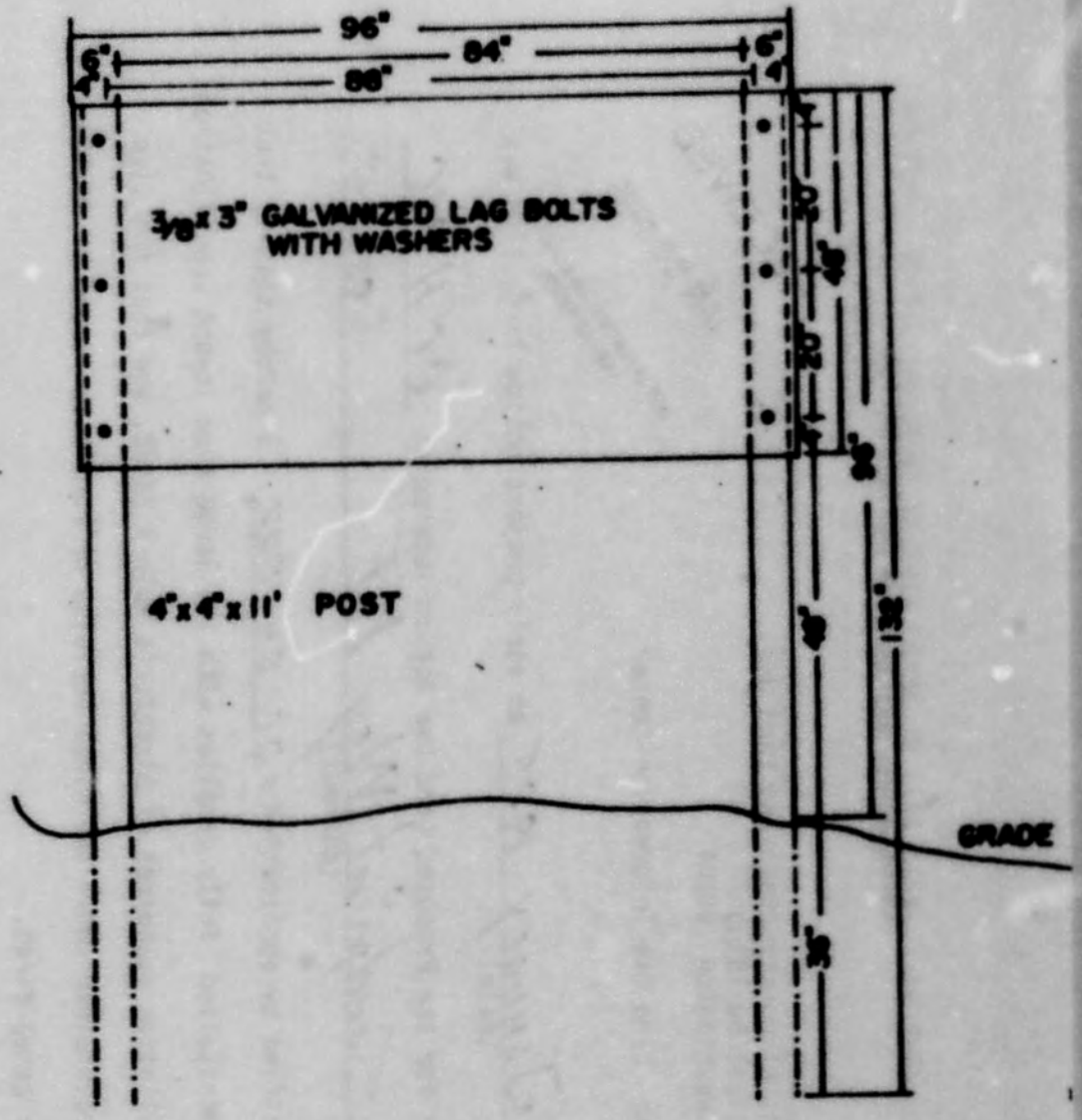

Attachment "B" to "8"

Seattle
Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

Phone 625-5200

NOTICE OF PUBLIC HEARING
File No. CC 84-022
(Master Use Permit No. 8402935)

The following public hearing will be held by Dr. Bud Nicola, Health Officer of the City of Seattle, to consider the medical need for the proposed helipad facility of the Children's Orthopedic Hospital at 4800 Sand Point Way N. E. in Seattle.

Hearing Date: October 24, 1985 (Thursday)
Time: 6:00 p.m. to 9:00 p.m.
Place: City Council Chambers
11th Floor, Municipal Building
600 4th Avenue, Seattle, WA 98104
(Use 5th Avenue entry after 6:00 p.m.)

This hearing will only address the question of medical justification for the helipad. Dr. Nicola will conduct a fact-finding study, including public input through a public hearing. Dr. Nicola's findings and report will form the basis of DCLU's recommendation regarding medical needs for the proposed facility.

Written representations on the medical need issues (either in support or protest) should be addressed to Dr. Nicola, Health Officer, 700 Yesler Building, Seattle, WA 98104, no later than the hearing date. For further details, please call 625-5200.

The Department of Construction and Land Use (DCLU) is responsible for the review of the Master Use Permit application for the helipad facility. The Land Use Code classifies the hospital as a Major Institution, and Major Institutions are permitted to establish helistops as a Council Conditional Use, if the Council finds that:

a. The helistop is needed to save lives;
b. The helistop is located so as to minimize impacts upon surrounding residential property; and,
c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

Based on these criteria, the Department of Construction and Land Use will make a recommendation to the Hearing Examiner, who will in turn make his recommendation to City Council. Again, the hearing on October 24 will only address item (a) above. All three items will be the subject of a public hearing before the Hearing Examiner at a later date.

Date of Notice: October 10, 1985.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

We the undersigned, are opposed to the construction and operation of a helipad at Childrens Orthopedic Hospital because of its adverse environmental impact, particularly noise and safety, o.. area residents. Further, we believe that COH has not proven the need for this facility and that reasonable alternatives to the construction and use of this helipad already exist.

	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Herald L Kurtz	Harold L Kurtz	5043 Sand Point Pl NE 98105	524-7778
2.		Mildred D. Kurtz	Mildred D. Kurtz	5043 Sand Point Place N.E. Seattle 98105	524-7778
3.		Anna Gold	ANNA GOLD	5047 Sand Pt. Place N.E. Seattle 98105	523-3573
4.		Richard W. Walsh Richard W. Walsh	Richard W. Walsh	Seattle 98115 5311 N.E. 62 St	523-5648
5.		Evelyn A Walsh	Evelyn A Walsh	5311 N E 62nd St	523-5648
6.		Tillie Protteas	TILLIE PROTTAS	5048 SAND PT. WAY N.E	525-7186
7.		Helen M. Rogers	HELEN H. ROGERS	5042 Sand Pt Place	525-8766
8.		Jack R. Mickkila	Jack R. Mickkila	5042 Sand Point Pl	525 8766
9.		Mary A. Nadeau	Mary A. Nadeau	5056 Sand Pt Pl. NE	525-4873
10.			T C DAESBE	5049 Sandpoint Pl NE	525-7610
11.		Susan Headley	MARIET SUSAN HEADLEY	5040 SANDPOINT PLACE	778829
12.		Leo C Johnston	LEO C. JOHNSTON	4200 NE 50th	525-4741
13.		Kathleen Johnston	Kathleen Johnston	4200 NE 50	525-4741
14.		Geraldine H Meissner	GERALDINE H MEISSNER	3115 - N.E. 84th	524-6296
15.		James J Stone	James J. Stone	6841 42nd NE	524-2068
16.			PETER NEWMAN	2405 32nd Ave E	324-1365
17.		Vija Rekevics	VIJA REKEVICS	4312 37 NE	524 7777
18.				4145 - 42 Ave	521 5
19.			James T.	4166 42nd Ave	524-4399
20.		Gary Tomlinson	GARY TOMLINSON	4181 42nd NE	527 5308

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Eleanor R. Emery	ELEANOR R EMERY	4814 N.E 44th St Seattle 98105	525-1692
2.		Elizabeth Anderson	ELIZABETH ANDERSON	4746 45th NE	522 2944
3.		Ron Reichter	Ron Reichter	4738 17th NE #1	522-9885
4.		Judith K Rudow	Judith K. Rudow	4831 NE 44th	524-6081
5.		janeen mount	JANEEN MOUNT	4823 NE 44TH	523-6355
6.		Jeannette Carter	Jeannette Carter	4821 NE 44	523-8247
7.		Edith Nielsen	Edith Nielsen	4948 NE 43rd	53-6781
8.		Mary Wright	Mary Wright	4830 N.E 43rd	524-5349
9.		Marian E. Murphy	MARIAN MURPHY	4820 NE 43	522-5262
10.		Edna Lincoln	EDNA LINCOLN	4708 41 NE	525-5911
11.		Mrs. C.W. Frankland	JEAN FRANKLAND	4811 NE 43rd	525-6814
12.		Patricia Frankland	PATRICIA FRANKLAND	"	"
13.		Donna Fey	Donna Fey	4823 NE 43rd	523-0918
14.		Kluehne C. Counter	Kluehne C. Counter	4827 NE 43rd	522-1576
15.		Dick Crowth	DICK CROWTH	"	"
16.		Carolyn Prince	Carolyn Prince	4747 46th NE	523-3450
17.		Catherine M Redecker	Catherine M. Redecker	4845 N.E 43rd	522-8822
18.		Anne Weber	Anne Weber	4217 50th NE.	524-3311
19.		Rose Perrino	Rose Perrino	4844 NE 42nd	527-9319
20.		Katherine A Horrigan	KATHERINE A HORRIGAN	5402 NE 58	527-2666

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Return to Anita Francis
5003 45 NE
98105

A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Betylynn Sherrow	Betylynn Sherrow	4715 47th NE 98105	523 1480
2.		Lorene M. Sherman	Lorene M Sherman	4738-47th NE	523-8760
3.		Mr & Mrs Mikal Dyrness	Nathalie Mikal	4740-47th NE	524-4281
4.		Kathy Gilliland	Kathy Gilliland	4760 47th ave NE	527-8727
5.		Carolyn T. Dunham	Carolyn T. Dunham	5002 47th Avenue NE	524 1453
6.		Kenneth S Husby	Kenneth S Husby	5002 47th N.E.	524 1453
7.	B	Priscilla N. Crittenden	Priscilla N. Crittenden	5014 47th	524.4245
8.		Charles C. Crittenden	CHARLES C. CRITTENDEN	5014 47th NE	524 4245
9.		Lauretta Macdonald	LAURETTA MACDONALD	5028 47th N.E.	523-6172
10.		Alice Peterson	4802 NE 45	A. Peterson	525-5485
11.		Richard Greiner	5116 47th NE	Richard Greiner	524-6643
12.		Sarah W Rice	Sarah G Rice 5122 47th NE	5122 47th NE	527-4515
13.		Frances H. Rice	Frances H. Rice	"	"
14.		Larry Swetnam	Larry T. Swetnam	5222 47th NE 98105	527-4515
15.		W.F. Bryce	W.F. BRYCE	4741-47th NE	523-2491.
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17.					
18.					
19.					
20.					

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Janet Woody	Janet Woody	4520 NE 38 Seattle, Wa.	523-8553
2.		Jennifer Yates	Jennifer Yates	7326 22nd NW	789-4350
3.		Kenneth A. Yates	Kenneth A. Yates	7326 22d Ave NW	789-4350
4.		Howard B Woody	Howard B. Woody	4520 NE 38TH 98105	523-8553
5.		F.M. Draper	F.M. DRAPER	3801 46TH NE.	523-9773
6.		Sally R. Draper	Sally R. Draper	3801 46th NE	523-9773
7.		Lisa A. Draper	Lisa A. Draper	3801 46th NE.	523-9773
8.		Jenny Carlson	JENNY CARLSON	4516 NE 38th ST	523-2853
9.		Eric F. Carlson	Eric F. Carlson	4516 NE 38th ST.	523-2853
10.		Frances M. Pocock	FRANCES M POCOCK	3608-43rd NE	522-6391
11.		Mary L Vanecek	MARY L. VANECEK	2424 W. LAURELHURST DR	522-7389
12.		Catherine Johnson	CATHERINE JOHNSON	3861-45th NE.	522 6766
13.		Sara Jane Johnson	Sara Jane Johnson	4221 43rd NE	525 9117
14.		Marie Glasse Tapp	MARIE GLASSE TAPP	4334 51 NE	527-2231
15.		Anne C. Morrow	ANNE C. MORROW 6300 Sand Point Way NE 98115		524 0505
16.		Ronald J Vanecek	Ronald J Vanecek	3524 W Laurelhurst Dr	522-7389
17.		Mary L Vanecek	Mary Vanecek	4724 41st NE	525-7277
18.		Jody L. Draper	JODY L. DRAPER	3801 46th N.E	523-9773
19.		Tom Draper	TOM DRAPER	3801 46th NE.	523 9773
20.		Maureen A Hadley	Maureen A Hadley	3717 43rd Ave NE	522.3280

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Rita G Deggerger	RITA G. DEGGINGER	4721 45th NE 98105	523-3674
2.		Ellen D. Rubin	ELLEN D. RUBIN	7520 42nd NE 98115	522-2237
3.		Wendy C Deggingel	WENDY C. DEGGINGER	4721 45th NE 98105	523-3674
4.		Craig P. Deggingel	Craig P. Deggingel	4721 45th NE 98105	523-3674
5.		Kathleen W Harley	KATHLEEN W. HARLEY	4725-45th NE 98105	524-[illegible]64
6.		Jennie S. Savage	JENNIE S. SAVAGE	5017-44th N.E. SEATTLE, WA.	524-6576
7.		Barbara Coppin	BARBARA COPPIN	4729 45th N.E. SEATTLE, WA.	523-6347
8.		Kinne D. McCabe	KINNE D. McCABE	4745 45th Ave, NE SEATTLE, WASH	522-0450
9.		Barbara M. Scott	Barbara M. SCOTT	4747-45 N.E Seattle, Wa.	523-6390
10.		Arnold L Scott	ARNOLD L SCOTT	4747 45 NE. SEATTLE WA	523 6390
11.		Helen B. Belvin	Helen B. Belvin	4757-45th NE Seattle Wa 98105	525-6160
12.		Betsy Mellins	Betsy Mellins	4736 45th Ave NE Seattle, Wa 98105	523 6831
13.		Paul M Mendelman	PAUL MENDELMAN	4736 45th NE 98105	523 6831
14.		Fred R. Farr	Fred R Farr	4732 45th NE Seattle Wash 98105	522-2122
15.		Susan L Doughton	SUSAN Doughton	4716 45th Ave NE Seattle WA 98105	524-6651
16.		Gisela H. Schimmelbusch	Gisela H. Schimmelbusch	4702-45th Ave in Seattle	525-5774
17.		Pat F Waddington	PAT F WADDINGTON	4711-45th NE	523-3711
18.		Judith A Bruner	Judith A. Bruner	4701-45th N.E.	523-3727
19.		Vance Burton	VANCE BURTON	4705 45TH AVE	522-2562
20.		Juanita Bunch	Juanita Bunch	4715 45th NE	523-0407

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APR 16 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

April 15, 1986

Ms. Gibb,

I have collected the names & address of people from my work & church who are in favor of the Helicopter stop at C.O.H.M.C. Everyone I asked was in favor of this proposal, there was no one who was against it. My husband and I lived in a RV in the parking lot of COH for 10 weeks. Our son was terminally ill. The helicopters that landed during that time did not bother us as the people who live in that area said it bothered them. We can't understand why hearing a helicopter for 5 or 10 minutes would matter when the life of a child could be saved landing at C.O.H. Thankyou for taking a serious look at this proposed landing at C.O.H. It is worth it.

Sincerely
Mrs Kathy Muller
19518 Winesap Ln.
Bothell, Wash.
98012

483-9307

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APR 16 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Dept. of Construction and
Land use
400 Municipal Building
Seattle, Wash.
98104

Ms.Gibb,

I have collected signatures and addresses of people who are in favor of the proposed helicopter stop at Children's Orthopedic Hospital and Medical Center for medical emergencies.

1. Kathy & Pat Muller
19578 Winesap Ln-
Bothell, Wash. 98012
2. Richard E Nelson
14509 Whitman Ave N
Seattle Wa 98133
3. Steve Crowley
21806 4th Ave SE
Bothell, WA. 98021
4. Pasquale D Ambrosio
2344-28th Ave So
Seattle Wa. 98144
5. Mike Headley
23808 90th Pl
Edmonds
6. Sue Lochrie
11050 Dayton Ave
Seattle Wash 98133
7. [illegible]
19024 48th W.
Lynnwood WA 98036
8. Pete Coffin
435 128th N.E.
Marysville, WA 98270
9. Cynthia Wiebke
9002 Palatine Ave N
Seattle, Wa. 98103
10. Gladys Tsunoda
23702 Locust Way
Bothell Wa. 98021
11. Dorothy Muller
0524 Ashworth N
Seattle, Wa. 98103
12. Peadee Goudy
1539 NE 166th Seattle Wash.
98155
13. [illegible]
1736 N 143
Seattle 98133
14. Sean Hard
115 124th SE Everett
WA 98204 APT#G8
15. Chuck Holmes
2300 44th S.W.
Mt Lake Terrace, Wa. 98043
16. [illegible]
1745 N.E. 175th
Seattle, Wa 98125
17. [illegible]
7315 128th N.E.
Kirkland. Wash 98033
18. Pam & Dan Trainer
9849 4th Ave nw.
Seattle Wash, 98177
19. Becky Malone
P.O Box 17436
Seattle Wa 98107
20. James R Harris
1086 Rupert Ln
Seattle, Wa 98102

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21	Agikes Isla	1154. Phinney Ave N	3647938
22	Pat Zenk	4403-216th SW. Mount Lake Terr. WA	7713662
23	Helen O. Anton	8220. Densmore Ave N. Seattle, Wa.	
24	Josephw Anton	8220 Densmore aven " "	
25	Ruth Taylor	18603 80th W. Edmonds Wa. 98020	
26	Crystal Rice	11551-17 DE Seattle 98125	
27	Lloyd A. Negrais	5603 240th SW Mt.-Terrace 98043	
28	Ronda K. Pisk	6232 34th NE Seattle 98115	
29	Chris Frondo	1312 Pt St. Kirkland 98003	
30	Shari Jasper	6619 210th #103B. Lynwood. 98036	
31	Carlie Gocking	1110 NE 200th Sea. 98155	
32.	Gwen Zenk	7008 mary aven. NSea 98117	
33	Joel Sapp	2801 14th west Apt. 6 Seattle Wa. 98119	
34	Kara Schenker	532 N. 71st Seattle 98103	783-8490
35	Linda Wangsness	5411 30th S.W Seattle 98126	938-3918
36	Ann Pedersen	9801-27th N.W. Seattle Wa. 98117	782-2225
37	Carl Pedersen	9801-27th NW Seattle Wa 98117	782-2225
38	DeEtte Moser	14041 Hallingford N. Sea. Wa. 98133	365-7322
39.	Collette Anderson	11601 2nd NW. Seattle Wa. 98177	365-1941
40.	Paula Anderson	22107 31th W Mountlake Terr Wa 98043	774-3043
41.	Mary Swineheart	22504 Pontius Rd Bothell, WA. 98021	481-0742
42	John H. Swineheart	22504 Pontius Rd. Bothell Wash. 98021	481-0742
43	Jacqueline J. Brown	19301 Falls Rd Snohomish 98290	453-3839
44.	Brian & Diane Griffin	22007 paradise LK. RD. Snohomish 98290	
45.	Dan Datmeyer	16308 Market St Snohomish wa 98290	668-2362
46	Esther Reasey	2603 196th SE Bothell wa 98012	
47	Dave Taylor	4121 228th St SE Bothell 98021	

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48	Teresa + Stephen Pudley	2601 106th PL SE Everett		337-7978
49	Mike & Jenna Catheg	16606 4th DRSE Bothell		742-6043
50	[redacted] Janet Dunkmeyer	16308 MARKET	Snohomish	668-2362
51	Dan W McNealy	2133 185th PL SE.	Bothell 98012	483 857
52	Victoria McNealy	19926 York Rd	Bothell, Wa 98012	483-6533
53	James S Osborne	18408 59 AVE SE	Snohomish 98290	488-8538
54	Thora O Osborne	18408 59th Ave SE	Snohomish	483-8338
55	Glenn Gross	23912 75th Ave SE	Woodinville WA 98072	4830185
56	William To	19722, 133rd DR SE	Sno. Wa. 98290	668-3701
57	Carol To	19722 133 Wdist SE	Sno Wa	
58	Gloria Nunes	2126-168th St, S.E.,	Bothell, Wa. 98012	481-3541
59	[redacted] Gross	23912 75th ave SE	Woodinville Wa. 98072	4830185
60	Ron Howe	2224 105 st S.E.	Everett Wa. 98204	
61	Ken Gilbertson	17316 E. Riverside Pl.	Bothell, WA. 98011	
62	[redacted] Schaake	4305 212th St. SE.	Bothell WA 98021	
63	Patty Cartwright	16226 3rd Ave. S.E.	Bothell, 98012	
64	Debra Gray	22705 13th pl. W	Bothell, 98021	
65	Jim Erickson	9613 WOODS PL. SE.	Snoh 98290	
66	Kathy Gilmore	2232 184 Pl. S.E.	Bothell WASH. 98012	
67	Jim Grady	21525 161st Ave SE	Monroe, WA. 98272	
68	Judy Heyting	19521 Wiresap Ln.	Bothell, WA 98012	4814182
69	James R. Heyting	SAME		
70	Mark Slyamkoff	13615 42nd ave SE	Snoh. WA. 98290	
71	Carol Slyamkoff	13615 42ND Ave S.E.	Snoh. 98290	
72	Cheryl Landis	20406 Little Br. Cr. Rd. #148	Woodenville 98072	4856494
73	ED McNamera	1809 191ST SW	Lynnwood WASH 98036	
74	Loretta McNamera	SAME		

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et.al.

RECEIVED

JUL 10 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Wa. 98104

Dear Ms. Gibb:

We, the undersigned, are concerned parents in support of C.O.H.M.C.'s request for a conditional land use permit to build a helistop outside their emergency room.

As residents of South King County, we are especially interested in the helipad service, as it guarantees the most efficient means of transport for emergency care facilitated by C.O.H.M.C.

We understand the concerns of those who are objecting, but we want to know that if our children need to come to C.O.H.M.C. in a hurry, the helicopter can land directly at the hospital.

The route that the helicopter would use seems very direct, logical, and in the best interest of the local residents. Why, then, must we argue over what should be our #1 concern---those children whose lives can be saved? In our opinion this need far outweighs those concerns of noise and safety--hopefully they won't have to experience a tragedy first before coming to this realization.

Thank you for the opportunity to comment. Please convey our opinions to the Seattle City Council.

Sincerely,

NAME	ADDRESS
Denice Svenning	15307 SE 178 Street Renton
Patricia Marcum	2419 NE 9th Pl. Renton
Donna Hennig	13804 S.E. Fairwood Renton
Diane Whitlock	14922 134th ave SE Renton
Donna Hefner	16522 121st S.E - Renton
Cindy Taylor	19736 - 143PLS E - Renton
Dana M. Brownie	826 S. 31st - Renton
Cindy M. Simpson	10931 SE. 183RD Ct. Renton, Wa 9805
Steven Hoffman	10933 SE 183rd PLACE RENTON, WA. 98055

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NAME	ADDRESS
Wendy J. Matetich	10812 SE 232 Place Kent, Wa 98031
Carol M Baker	17318- 163 Pl SE Renton, Wa 98058
Sandra Wright	16410 139 Pl SE Renton 9805-8
Polly H. Rae	13800 SE 161ST Pl. Renton 98058
Luella E Paull	1642 113th Ave SE Renton 98055
Judy Liess	11862 SE 157 Pl Renton 98058
Lora Kennedy	24006 204th Ave SE 98038 Maple Valley WA
christe walkley	15007 SE 183rd Ct Renton, WA 98058
Sandra Pelstock	16014 159 Pl. S.E. Renton, Wa 98058
Linda Opstad	11833 S.E. 164th Renton, WA. 98058
Joyce Catt	21036 142nd S.E. Kent, Wa. 98042
Audrey Bontrager	924 S. 26th Ave. Yakima, Wa. 98902
Mark Bontrager	924. S. 26th Ave Yakima Wa.

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RECEIVED
NOV 19 1984
Dept. of Construction & Land Use

5003 45th N.E.
Seattle, Wash. 98105
November 19, 1984

Mr. William Justen, Director
Department of Construction and Land Use
600 4th Ave.
Seattle, Washington 98104

Dear Mr. Justen:

Enclosed are petitions which express opposition to a proposal by Childrens Orthopedic Hospital for a new helipad which they plan to locate in a residential neighborhood. There will be many more petitions filed with you in the next week or two. We hope that your department will find this project to be environmentally significant and will require COH to file an environmental impact statement. We also hope that your study of alternatives as required by the major institutions code will be conducted by an experienced analyst and be carefully and thoroughly done.

The neighbors of COH feel that we must somehow contain the further expansion of COH, as it is inappropriate for a Level III hospital to be located in a residential neighborhood. Decontralization of COH facilities and services is our preferred long-range solution to this recurring problem.

Sincerely,

Jerry Schneider

Jerry B. Schneider

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A PETITION
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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Maryann E. Spangler	Maryann E. Spangler	4013 N.E. 46th St. 98105	524-4151
2.		Dorothy S Murphy	Dorothy S Murphy	3821-46th NE 98105	523-7176
3.		Joyce M. Woody	Joyce M. Woody	4520 NE 38 St, 98105	523-8553
4.		Damaris Rice MD	DAMARIS RICE	3815-46th NE	522-1305
5.		Lucy Krause	LUCY KRAUSE	4666 [redacted] 41st Ave NE	527-9194
6.		John Mendenhall	JOHN MENDENHALL	5033-44th N.E.	523-4148
7.		Davids Bellan	DAVIDS BELLAN	4757-45th	525-6160
8.		Hugo W. Schimmelbusch	HUGO W. SCHIMMELBUSCH	4702-45th NE	525-5774
9.		Norma D. Baker	Norma D Baker	3851-44th NE	525-4870
10.		W Hennings Jr.	L.R. Hennings Ti.	4314 54 NE.	527-8903
11.		S.W. Baker	S.W. BAKER	3851 44TH NE	525-4870
12.		Brian Fenske	BRIAN FENSKE	4625 41st NE	527-0402
13.		Iola Sells	Iola Sells	4620 41st Ave N.E	522-3865
14.		Lucille Conrad	LUCILLE CONRAD	4656-41st Ave NE	524-7128
15.		Scott Cobb	SCOTT COBB	4654-41 NE	527-2118
16.		Richard S. Moody	RICHARD S. MOODY	4720 47th Ave NE	525-6228
17.		Charles B Jennings	Charles B Jennings	4724-44th NE	523-3980
18.		Patricia S Jennings	PATRICIA S. Jennings	4724-44th Ave N.E.	523-3980
19.		Sally D Maiden	Sally D Maiden	3832 48th NE	524 7728
20.		Alice N. Sweigert	Alice N. Sweigert	3812 45 NE	525 4472

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A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

We the undersigned, are opposed to the construction and operation of a helipad at Childrens Orthopedic Hospital because of its adverse environmental impact, particularly noise and safety, on area residents. Further, we believe that COH has not proven the need for this facility and that reasonable alternatives to the construction and use of this helipad already exist.

	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Mrs. Harlan Dean	MRS HARLAN DEAN	4001-NE SURBER Dr.	525-9705
2.		Rolfe Turnure	ROLFE TURNURE	3959 NE SURBER DRIVE	525-5573
3.		Nancy Turnure	NANCY TURNURE	3959 N.E. Surber Dr.	523-5593
4.		William D. Cameron	William D Cameron	3949 N.E. Surber Dr	522-1396
5.		Karl E. Hellstrom	Karl E. Hellstrom	3925-NE Surber Dr	525-9968
6.		Leonard Gerber	Leonard Gerber	3921 NE Surber Dr	523-5485
7.		Marlys Gerber	MARlys Gerber	3921 NE Surber Dr	523-5485
8.		Stanley Jones	STANLEY JONES	3915 NE SURBER	522-2171
9.		Jane Kippenham	JAINE KIPPENHAM	3908 NE 38	535-6604
10.		Daryl & Doris	DARYL DAHLGREN	3904 NE Belvoir	523-6378
11.		Alma E. Grevstad	ALMA E GREVSTAD	3830 SURBER	522-8811
12.		Paul G. Codman	PAUL G. Michael Codman	3535 Sarker DRIVE	5252503
13.		Frances Orton	FRANCES ORTON	3852 SURBER DR NE	524-3966
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A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Joy Scott	Joy Scott	4339 NE 45 98105	523-2941
2.		Annie T. Warsinske	ANNIE T. WARSINSKE	4515-52nd Ave NE	524-0739
3.		Ernestine J. Roulbouts	ERNESTINE J. ROULBOUTS	4675 41st AVE. N.E.	524-1770
4.		E. L. Sharpe	Stan + Bea Sharpe	5013 Sand Point NE	522-8247
5.		Lucille Rowley	LUCILLE ROWLEY	5040-44th NE	524 8663
6.		Claire A. Marston	Claire A Marston	4230 N.E. 50th	523-9896
7.		Marjorie Kresge	Marjorie Kresge	4014 NE 46th	523-3519
8.		Juanita Bunch	Juanita Bunch	4715 45th NE	523-0407
9.		Mark W. Bunch	Mark Bunch	4715 45th N.E.	"
10.		Kinne D. McCabe	KINNE McCABE	4745 45th NE	522-0450
11.		Kathryn F. Peterson	Kathryn F. Peterson	5007-44th NE	525 4408
12.		Jean Phillips	JEAN B PHILLIPS	4728-41st NE	526-8430
13.		Carolyn W. Corson	CAROLYN W. CORSON	3854-42NE	525-3787
14.		H. H. Corson	H.H. CORSON	3854-42NE	
15.		Dorothy A. Perlman	Dorothy A. Perlman	4520 NE 60th	5274587
16.		Keith F. Prince	Keith F. Prince	4747 46th N.E	523-3450
17.		Esther MacKillop	ESTHER MACKILLOP	5011-45th NE	525-1166
18.		Anita M. Francis	Anita Francis	5003-45th NE	524-9340
19.		John McMaloff	JOHN McMALOFF, JR	3638 42nd Ave	525-7149
20.					

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A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.	11-14		DALE E SHERLOW	4715 47 Ave NE 98134	523-4430
2.		Helen Senseney	HELEN SENSENEY	3335 W Laurelhurst Dr	522-8297 NE
3.		Richard Senseney	RICHARD SENSENEY	3335 W. LAURELHURST DR. NE.	522-8297
4.		Patricia Ann Wood	Patricia Ann Wood	4036 NE 45	524-2724
5.		Marilyn Morrow	MARILYN MORROW	3656 42NE	524-3168
6.		William Branch	WILLIAM BRANCH	5011-45NE	525-1166
7.		Carolyn Margon	CAROLYN MARGON	3650 42NE	525-1193
8.		Frances Ottmar	FRANCES OTTMAR	5019-44 AVE NE	522-7551
9.		Kenneth R Boyle	Kenneth R. Boyle	4211 50th Ave NE	524-1486
10.		Carolyn Corson	CAROLYN CORSON	3854 42NE	525-3707
11.		Otto Rombouts	OTTO ROMBOUTS	4675-41 AVE	
12.		C. Patrick Mahony	C Patrick Mahony	3657 42nd NE	524-0385
13.		Anne Johnson	Anne Johnson	3649-42 NE.	525-3613
14.		Ralph W Johnson	Ralph W Johnson	3649 42 NE	525-3613
15.		Joan Schultz	Joan Schultz	3614 41-NE	525-66[illegible]
16.		Beth Morrison	Beth Morrison	3643 42WO NE	524-44[illegible]
17.		R.D. Swenson	R.D. SWENSON	3808-42W. Ave. N.E	525-4943
18.		Phyllis E. Swenson	PHYLLIS E. SWENSON	3808-42nd N.E.	525-4943
19.		Thomas G. Swanson	THOMAS G. SWANSON	4120 NE, SUMMER DR	524-9174
20.		Elizabeth Swanson	Elizabeth Swanson	4120 NE Summer	524-9174

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5003 45th N.E.
Seattle, Wash. 98105
December 5, 1984

Mr. William Justen, Director
Department of Construction and Land Use
600 4th Avenue
Seattle, Washington 98104

Dear Mr. Justen:

Enclosed are additional petitions of people who live near Childrens Orthopedic Hospital and are opposed to the placement of a helipad in the midst of a residential neighborhood. I have reviewed the application filed by COH on November 13, 1984 (CC-84-22) and am very surprised that it does not include an environmental checklist. I hope you will insure that one is added to the application so that you will have the information you need to decide that this proposal is environmentally significant.

I am particularly concerned that the scope of the DCLU study of alternatives (as required by the Major Institutions Code) include (1) the continued use of the UW Intramural field, (2) joint use of proposed helistop on top of the new wing of the UW hospital and (3) use of the Sand Point Naval Air Station. There may be other alternatives that should also be considered

Thank you for your attention to this matter.

Sincerely,

Anita Francis
Anita M. Francis

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DEC 05 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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DEC 03 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.			[illegible] Scott	4338 NE 43rd St 98105	527-2781
2.			LILLIAN O. WARNER	4338 NE 43	524-7888
3.			Fredericа Sulzbacher	4323 NE 43rd St.	522-7921
4.			Elcanor Morse	4319 N.E. 43rd St	522 3957
5.			Wm C. MORSE SR	"	"
6.			John B. Martin	4315 NE 43rd	5238084
7.			NANCY KONIKOW	4314 NE 42nd	523-6323
8.			JOEL KONIKOW	"	"
9.			Marjorie Hanson	4318 NE 42	525-5872
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LAND USE DIVISION

A PETITION
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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Robert H Klug	ROBERT H. KLUG	4326 NE 42nd St Seattle, WA 98105	527-4092
2.		Margaret Brooks	Margaret BROOKS	4339 NE 42nd Seattle WA 98105	523-7369
3.		David Brooks	DAVID BROOKS	"	"
4.		Winifred L. Raymond	Winifred L. RAYMOND	98105 4319 NE 42nd	525-3033
5.		Laura Greene	Laura Greene	4109 43rd NE	523 7198
6.		Richard Acarregui	Richard Acarregui	4107 43rd NE	524-6547
7.		Madelyne Case	MADELYNE CASE	4111 - 43rd Ave NE	522 4622
8.		Ward Haldane	WARD HALDANE	4123 43 rd E.	524-4510
9.		Elizabeth Beder	ELIZABETH BEDER	4407 43 NE	525-8126
10.		Oscar E. Beder	OSCAR E. BEDER	4407 43rd NE	525 F126
11.		Winston A. Johnson	WINSTON A. JOHNSON	4411 - 43rd Ave N.E.	523-2300
12.		Irma G. Johnson	IRMA G. JOHNSON	4411 - 43rd Ave NE	523-2300
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A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Huda Giddens	HUDA GIDDENS	4338 N.E. 44th Seattle, 98105	524-8565
2.		Sarah Scott	SARAH SCOTT	4339 NE 45th Seattle 98105	523-2941
3.		Kathryn Anderson	Kathryn Anderson	4327 N.E. 45th Seattle, 98105	522-1005
4.		Edwin F. Anderson	Edwin F. Anderson	4327 N.E. 45th ST. Seattle, 98105	522-1005
5.		Judi Jacobsen	Judi Jacobsen	4315 N.E. 45th	525-3422
6.		Conrad W. Jacobsen	CONRAD JACOBSEN	435 NE 45th	525-3422
7.		Marilyn Smith	Marilyn Smith	4412-43rd NE	523-0843
8.			Irving Soska	4324 44th	523-9110
9.		Alan Howland	Alan Howland	4326 NE 44	522-5016
10.		Diana Howland	Diana Howland	4326 NE 44th	522-5016
11.		Mrs. J. F. Sherrard	Mrs. J.F. Sherrard	4339 NE 44th	522-7749
12.		Jackie Kelly	Jackie Kelly	4335 NE 44th	5245141
13.		Dale Watkins	Dale Watkins	4331 NE 44th	523-4489
14.		Ruth Lewarch	Ruth Lewarch	4316 NE 44th	524-0817
15.		Mrs. M. J. Verretto	MRS. M.S. VERRETTO	4334 N.E. 44th	524-1533
16.		Irene Robinson	Irene Robinson	4327 NE 44th	524-0249
17.		Emma Birkvold	Emma Birkvold	4319 NE 44th	524-0148
18.		Kristy Wall	Kristy Wall	431643 NE	5292358
19.		Paul Grant	Paul Grant	4302-43rd NE	522-4266
20.		Marilyn R. Phillips	Marilyn Phillips	4322 NE 43rd	525-2959

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L. Conrad 2

A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

RECEIVED
DEC 03 1984
DEVELOPMENT SERVICES
LAND USE DIVISION

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Ariel D Nelson	Ariel Nelson	4652 - 41st Ave NE 98105	525-6363
2.		Lucille A. Conrad	LUCILLE A. CONRAD	4656 - 41st AVENE 98105	524-7128
3.		Temple E Cobb	TEMPLE E COBB	7320 45NE	628-8057 52
4.		William R Cobb	WILLIAM R COBB	SAME	SAME
5.		Jayne Brown	Jayne Brown	6023 NE 61st	524-4137
6.		Rosemary Forbey	ROSEMARY FORBEY	4622 41st NE.	525-6212
7.		Susan Marcotte	Susan Marcotte	4644 41st NE	524-7168
8.		Jann Blackburn	Jann Blackburn	3024 NW 95th	782 4480
9.		Steve Blackbourn	Steve Blackbourn	3024 NW 95th	782-4480
10.		Elsie N Marcotte	Elsie Marcotte	4644 - 41st NE	524-7168
11.		Gerald L Marcotte	GERALD L MARCOTTE	4644 - 41st AveNE	524-7168
12.		Margaret M. Impett	Margaret M. Impett	4629 - 41st Ave NE	522-7930
13.		Mary Virginia Ballard	Mary Virginia Ballard	4613 41st Ave NE	522-4393
14.		Helen S Randles	Helen S Randles	5757 11E 61st	523-4953
15.		Raymond W Brown	RAYMOND W BROWN	6023 NE 61st	524-4137
16.		H. Eileen Miller	H. Eileen Miller	4742-38th NE	522-4235
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DEC 03 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Jane L Johnson	JANE L. JOHNSON	4323 NE 45th 98105	523-7178
2.		Dale E Fisher	DALE E. FISHER	4319-43rd N.E	523-7105
3.		Kathleen G Fisher	KATHLEENG FISHER	"	"
4.		S E Solberg	S E Solberg	11311 43rd Ave NE	524-9677
5.		B. L Carver	Barbara L. Carver	A305-43rd NE	525-7779
6.		Nancy L Grant	Nancy L Grant	4302-43rd NE	522-9266
7.		Shirley Gay	Shirley Gay	4406-43rd NE	525-6458
8.		M Leach	Michael A Leach	4319-NE 45th St	S
9.		G O Leach	Gail O Leach	4319 NE 45th St	
10.		Jason Leach	Jason Leach	4319 NE 45th St	
11.		Julie Pai	JULIE PAI	4331 NE 45th St	523-4214
12.		Ayesha Pai	Ayesha Pai	4331 NE 45 St	523 4214
13.		Skenneth Pai	Skenneth Pai	4331 NE 45 St	
14.		Rae F Waddingham	RAE F. Waddingham	4701-45th Ave NE	523 3727
15.		Tony Bruner	Tony Bruner	4701 45th Ave NE	523-3727
16.		Judith A. Bruner	Judith A. Bruner	4701-45th NE	523-3727
17.		Linda World	Linda World	4516-45th NE	526-9057
18.		Mark Ahlness	Mark Ahlness	4512 45th NE	523-2495
19.		Jerry Schneider	Jerry Schneider	5003 45th Ave NE	524-9340
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DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

SEP 14 1984

Denita Frances
5003 45 NE
Seattle
98105

A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Robert D McGoskey	ROBERT D. McGOSKEY	3329 W Laurelhurst Dr NE	524-6193
2.		David M Perry	David M Perry	5307 NE 43rd	525-5201
3.		Hugh C Sobottka	HUGH C. SOBOTTKA	4403 54th Ave NE	522-9113
4.		Bertha M Perry	Bertha M Perry	5307 NE 43rd	525-5201
5.		Joan M. Sobottka	JOAN M. SOBOTTKA	4403 54th NE	522-9113
6.		Eleanor R Leithead	ELEANOR LEITHEAD	4402-54th NE	523-8980
7.		Robert C Leithead	ROBERT LEITHEAD	4402 54th NE	✓
8.		Deanna B. Fraker	Deanna Fraker	4510 54 Ave NE	522-7469
9.		P. Scott Pollock	Scott Pollock	4427 55th NE	5272412
10.		Kathleen J. Shaw	Kathleen J Shaw	4421 55th NE	523-5136
11.		Lillian Mickel	Lillian Mickel	4300-54th NE	525-6397
12.		Gloria Hennings	Gloria Hennings	4314 54th NE	527-5803
13.		Mary Murray	MARY MURRAY	4315 54 NE	524-8361
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42nd Ave NE
- between 45th St + 41st St.

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DEPT OF CONSTRUCTION AND LAND USE
LAND USE DIVISION

SEP 14 1991

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Jill Loveland	JILL LOVELAND	4110-42nd NE	523-8369
2.		Janet Thomson	Janet Thomson	4130-42nd N.E.	523-6383
3.		Alan C. Hess	Alan C. Hess	4142 42nd NE 98105	524-6919
4.		Jane Hess	JANE HESS	"	"
5.		Lauren A. Druby	Lauren A. Druby	4152 42ND AVE NE	522-1937
6.		Margery S. Hellmann	Margery S. Hellmann	4154 42nd Ave NE	525-6955
7.		Donald C. Hellmann	Donald C. Hellmann	4154 42nd Ave NE	525-6955
8.		Irene L. Kelso	IRENE L. KELSO	4160-42ND N.E.	524-0482
9.		James Lo	James Lo	4166 42d N.E.	524-4399
10.		Rusty Palmer	Rusty Palmer	4180 42 NE	5243323
11.		Susan Short	Susan Short	4186 42nd N.E.	522-6024
12.		R J Matters	RUDOLPH J MATTERS	4191-42NE	522-8242
13.		Kathleen Bryan	Kathleen Bryan	4141-42NE	5269350
14.		Morgan Bryan	Morgan Bryan	4141-42 NE	526 9350
15.		Richard B. Counts	Richard B. Counts	4131 42nd NE	522-0666
16.		Bonnie Nelson	Bonnie Nelson	4127-42nd NE	523-4768
17.		Tim Fishel	Tim Fishel	4107 42 NE	524-3188
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DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Glenn E. Dexter	GLENN E. DEXTER	5151-47th N.E. 98105	524-1594
2.		Marge Rice	MARGE RICE	5017-47 NE	522-4589
3.		Olivette E. Geer	Olivette E Geer	5036-49th	NE 522-2647
4.		Rachel Fucella	Rachel Fucella	5022 47th Ave	NE 522-7529
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DEVELOPMENT & LAND USE
LAND USE DIVISION

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Edith A. Klassen	EDITH A KLASSEN	5011-45 LANE NE 98105	525-1364
2.		Eileen Peterson	Eileen Peterson	5003-47 NE	524-3439
3.		Mary Alice Sanguinetti	Mary Alice Sanguinetti	5103 47th Av NE	524-5201
4.		Nancy M. Robert	Nancy M Robert	5126-47th NE	5240239
5.		Julio Conarduran	Julio CONADURAN	5136 47th NE	522-0178
6.		Adrienne Borg	Adrienne Borg	5136 47th NE	522-0178
7.		Jack F. Robert	Jack F. Robert	5126 47th	524-0239
8.		Michelle Duggan	Michelle Duggan	5139 47th AVE NE	523-3395
9.		Kay Lansverk	KAY LANSVERK	5127 47th AVE NE	525-1613
10.		Kenneth R Bell	Kenneth R Bell	5123-47th Ave NE	524-6827
11.		Kathryn Kight	Kathryn Kight	5123-47th AVE NE	524-6827
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LAND USE DIVISION

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A PETITION
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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Gwendolyn Lawrence	GWENDOLY LAWRENCE	4316-37 N.E (98105)	525 4885
2.		Jane Keyes	Jane Keyes	4304 37th N.E. (98105)	523-9466
3.		Susan M Garske	SUSAN M GARSKE	3717 NE 43rd 98105	522-0259
4.		Dan Faubert	DAN FAUBERT	3707 NE 43rd	5224249
5.		Geraldine Chang	GERALDINE CHANG	4212 37 AVE NE	527-0483
6.		Jen-Ching Chang	"	"	"
7.		Louise M. Jarkow	Louise Jarkow	3717 NE 42ND St	524-6195
8.		Marc Jarkow	Marc Jarkow	" "	" "
9.		Jean B. Robins	Jean B. Robins	4114-37th NE	523-7410
10.		Thomas Robins III	THOMAS ROBINS III	4114 37th N.E.	523-7410
11.		Isabella M. Hirchson	ISABELLA M. HIRCHSON	4100-36 NE	522-4381
12.		Mark M. Nolting MARK & LINDA NOLTING	MARK & LINDA NOLTING	3518 NE 42nd St	527-8751
13.		Markham Harris	MARKHAM HARRIS	3507 N.E. 43rd	524-2959
14.		Kevin Carrabine	KEVIN CARRABINE	3508 N.E. 43rd	522-7381
15.		Vevette Gordon	Vevette Gordon	3612 NE 43rd	522-0055
16.					
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RECEIVED
DEC 05 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

(5)

A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

We the undersigned, are opposed to the construction and operation of a helipad at Childrens Orthopedic Hospital because of its adverse environmental impact, particularly noise and safety, on area residents. Further, we believe that COH has not proven the need for this facility and that reasonable alternatives to the construction and use of this helipad already exist.

	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Lynda Smith	LYNDA SMITH	3608 42NE Seattle 98105	524-2757
2.		Joan Hannah	JOAN HANNAH	3502 43rd Ave NE SEATTLE	527-0732
3.		Judith Thornton	Judith Thornton	3338-43rd Ave 98105	
4.		Sue A. Tong	Sue A. Tong	3333 43rd Ave 98105	525-8664
5.		Christy M. Timberlake	Christy Timberlake	3335-43rd NE Seattle	523-9473
6.		[illegible]	JIM RADWICK	3302 43rd Ave NE Seattle 98105	523-8285
7.		Shari L. Treadwell	SHARI L. RADWICK	"	"
8.		Peggy Demarest	Peggy Demarest	3323 43rd N.E.	523-1153
9.		W.D. Demarest	W.D. DEMAREST	3323 43rd NE	523 1153
10.		K.L. McGary	K.L. McGary	3950 NE Surber Dr.	522-3727
11.		John A McGary	John A McGary	"	"
12.		Gregory B. Davis	GREGORY B. DAVIS	3940 NE Surber Dr. Seattle, WA	522-0986
13.		I. Hjellstrom	IKE Hellstrom	3925 NE Surber Dr Seattle WA	525-9968
14.		W Hellstrom	— " —	— " —	525-9968
15.		Mary Benson	MARY BENSON	3900 NE 38th	523 4744
16.		Norman Johnston	Norman J. Johnston	3905 NE Belvoir Pl.	525-6399
17.		Marilyn L. Goux	Marilyn L. Goux	8001 Sand Pt. Hy. N.E.	523-9778
18.		Hugo W. Schimmel	HUGO W. SCHIMMEL	4702-45th AVE BOSLEY SEATTLE 98105	525-5774
19.		Anneliese Schimmelbusch	Anneliese Schimmelbusch	842-NE 55th Seattle, 98105	525-2840
20.		Ruth B. Legg	RUTH B LEGG	3711 NE 44 Seattle WA 98105	523-7989

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File cc 84-022

5003 45 N.E.
Seattle, Wash. 98105
January 23, 1984

Hand Delivered

RECEIVED
JAN 23 1985
Dept. of Construction & Land Use

Mr. William Justen, Director
Dept. of Construction and Land Use
600 4th Avenue
Seattle, Washington 98104

Dear Mr. Justen:

Enclosed are petitions opposing the Childrens Orthopedic Hospital helipad proposal that contain 100 names. We have so far submitted petitions that together contain about 500 names on this issue. We strongly urge you to find that this proposal is environmentally significant which would require that an Environmental Impact Statement would be prepared.

Without an Environmental Impact Statement the information needed to debate the substantive aspects of this issue will be impossible to obtain since Childrens Orthopedic Hospital has not been forthcoming in this regard.

Sincerely,

Anita Francis

Anita M. Francis
Jerry B. Schneider

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Donald C Kaufman	Donald C Kaufman	4545 Sand Pt Wy	523-8579
2.		DOE Kaufman	DOE Kaufman	4545 Sd Pt Wy	
3.		Esther M. Bowen	ESTHER P BOWN	4545 Sd. Wy	
4.		Janet a. Wilkie	JANET A. WILKIE	4545 SAND PT WAY NE	524-7131
5.		Paula L. Douglas	PAULA P. DOUGLAS	4545 Sand Pt Way NE	524-4233
6.		Bess Silverman	BESS SILVERMAN	4545 Sand Pt Way NE	526-0192
7.		Frances Wolfstone	FRANCES WOLFSTONE	4545 Sand Pt Way	522-4833
8.		Patricia Merrill	Patricia Merrill	4545 Sand Pt Way NE	523-4406
9.		Myrtle M. Robbee	MYRTLE M. ROBBEE	4545 Sand Pt Way NE	522-0213
10.		Robert T. Potter	Robert T. Potter	4545 Sand Pt Way NE	524-3620
11.		Norma Monson	Norma Monson	"	"
12.		Marguerite M. Shay	Marguerite Shay	4545 Sand Pt Way NE	523-9875
13.		Peet Sugnet	JEEF SUGNET	4545 Sd. Pt Way NE	523-3054
14.		Bess Anderson	BESS ANDERSON	Apt. 303	523-5209
15.		Isabel R Fleming		Apt 302	525-7410
16.		Flora L Ruggles	Flora L. Ruggles	" 408	522-0738
17.		Marion B. Terry	Marion Terry	Apt 208	5249733
18.		Frances Gerber	FRANCES GERBER	4545 Sand Pt Way NE #406	526 1605
19.		Glen Juel	Glen L Juel	"	5238963
20.		Elsie Espe Stro	ELSIE ESPE STRO	"	521-5192

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.			DOUGLAS RICHTER	4004 NE 46th St.	527-5165
2.			DIANE WADELICH	4002 NE 46th	527-2659
3.			Mary Wheeler	4517½ 40th NE 98105	527-4448
4.			PAULINE VESSELRING	5146-46-NE	524-2294
5.			E. Adaline Muzzy	4001 N.E. 46th	525-7130
6.			Rosamond Powell	3218 78th	282 8692
7.			Peter Hewitt	4004 NE 46th St.	523 1591
8.			LINDA JANSON	4310 40th NE	526-0581
9.			Craig Timberlake	8612 29th NE	522-4596
10.			W. J. Timberlake	3335 43rd Ave NE	523 9413
11.			Sharon Lustig	10015-46th NE	523-7670
12.			ROLAND S. PATTERSON JR	1202 NE 105th Pl	524-6409
13.		~~1837 E Shelby~~	CAROL WILKINSON	1837 E Shelby Seattle	322-2638
14.			Adelle Scarvie	3175 GA Kirkland Hurst NE	523-5441
15.			Alsea LaRose	4002-50th NE	522-114
16.			Alberta R. Chaput	4515½-40th N.E.	524-1223
17.			Georgia Loverud	4511-40th NE	4511-40th NE
18.			HELEN ELZEY	4519-40th NE	LA25865
19.			Ruth Osborn	4627-41st NE	641-1535
20.			EVONNE SULLIVAN	6037-37th SW	9377734

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Marion P. MacMartin	MARION P. MacMartin	4036 NE 45th St Seattle, 98105	524-2721
2.		W Buenemann	Buenemann	4026 14 E	522-0177
3.		Nella Buenema	Buenemann	4026 14 E	" "
4.		Eric Ziegler	ZIEGLER	4014 NE 45th St	525-0906
5.		Gladys Clifton	GLADYS CLIFTON	4009 NE 46	524-5467
6.		Thelma Christis	THELMA CHRISTIS	4006 N.E 46th	524-5068
7.		R Rzcinski	OWNER E.R. RZLINSKI	4014 N.E. 45th St	522-8310
8.		M. Owais Jafrey	M. OWAIS JAFREY	4012 NE 45th	523-1338
9.		Masarrat Jafrey	MASARRAT JAFREY	" "	" "
10.		Holly E Herrick	HOLLY E HERRICK	4008 NE 45th	527 5168
11.		Jeanne Snodgrass	Jeanne Snodgrass	3026 12th West	282-6237
12.		Delores I Hyatt	DELORES I. HYATT	4614-41st AVE NE	522 7639
13.		Ellen Tobin	ELLEN M. TOBIN	4610-41st PL NE	525-6231
14.		Neva Fulcher	NEVA FULCHER	4604-41st NE	523-336
15.		Eileen Wilson	EILEEN W. LSON	4624 41 NE	524 2660
16.		June L. Crawford	JUNE CRAWFORD	4601-41st Ave	526-2835
17.		Patsy M. Sawa	Patsy M. Sawa	4612-41st NE	522-5476
18.		Tina Jo Norwalk	TINA JO NORWALK	4003 NE 46th Ave	527-50
19.		Grace H. Malson	GRACE H. MALSON	4011 N.E. 46th	527-0699
20.		Virginia Sherrow	Virginia Sherrow	4004 NE 46th NE	527-5165

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Alice Scherner	ALICE SCHERNER	4545 SAND PT WAY	522-7298
2.		H. Scherner	H. SCHERNER	" "	" "
3.		Ronald C. Kinsey Jr.	RONALD C. KINSEY, JR.	4346 NE 55th #305	524-5629
4.		Vernon E. Toney	VERNON E. TONEY	4745 N.E. 45th #105	522-0658
5.		Carol Schenning	CAROL SCHENNINGER	4545 SAND PT WAY NE #105	523-[illegible]
6.		Ila Kinsey	ILA KINSEY	4545 SAND PT WAY #505	523-8549
7.		H C Kaisserwicz	H C KAISERWICZ	4545 Sand Pt. Wy NE	
8.		Tom Cornils	TOM CORNILS	4545 SAND PT WAY N.E.	523-4765
9.		Hilda Cornell	HILDA CORNELL	4545 SAND Point Way N.E.	527-0625
10.		Frank H. Morris	FRANK H. MORRIS	" "	525-9918
11.		Edwin T. Lewis	EDWIN T. LEWIS	4619-41st AVE NE	524-2811
12.		Sandra Lewis	SANDRA LEWIS	4017 NE 46th	522-8645
13.		Richard Dallam	RICHARD DALLAM	3914 E. GARFIELD	329-8736
14.		John T.S. Keeler	JOHN T.S. KEELER	4015 NE 46th	523-5990
15.		Margaret A. Beaver	Margaret A Beaver	3001-NE 91st	525-7030
16.		Kathleen E. Moore	KATHLEEN E. MOORE	2310 N.W. 95th	783-7583
17.		Lars G. Carlson	LARS G. CARLSON	3426 NE 45th	522 6159
18.		Rudolf Newman	RUDOLF NEWMAN	4252 NE 50	525-4817
19.		Helen Newman	HELEN NEWMAN	4252 NE 50	525-4817
20.					

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1.		Emma Spitzer	EMMA SPITZER	5018 Sand Point Pl. NE	5256729
2.		Cynthia McFalls	Cynthia McFalls	4204 NE 50th ST	522-2528
3.		John McFalls	John McFalls	4204 NE 50th St	525-7502
4.		Gizella Seidelhuber	GIZELLA SEIDELHUBER	5027 Sandpt Pl. NE	522-3810
5.		Alma K. Bacon	Alma K. Bacon	5055 Sand Point Pl NE 98105 #2	525-1269
6.		Jane B Gallup	Jane B Gallup	5208 sand pt pl NE 98105	524-0647
7.		John C Gallup	John C Gallup	98105 5208 Sand Pt Pl NE	524-0647
8.		Jack V. Denton	JACK V. DENTON	5201 SAND POINT PLACE, NE 98105	522-8800
9.		Ramy W Hough	Ramy W Hough	5054 44th NE Seattle Wa 98105	527-1622
10.		Charles R. Hough	CHARLES R. Hough	SEATTLE WA 98105 5054 44th AVE NE	527-1822
11.		Lucille Rowley	LUCILLE Rowley	5040-44th NE	524-8463
12.		Mr. Mrs. Fi Talbert		5044-44th NE	522-4713
13.		J M Kramer		5035 44	527-5426
14.		John Mendenhall	JOHN MENDENHALL	5033-44th NE	523-4148
15.		Helen C Pommering	HELEN C Pommering	5234-44 NE	523-2342
16.		Alwine Torbert	ALWINE TERBERT	5029-44th NE	525 3759
17.		Frances C Ottmar	FRANCES C TTMAR	5019-44 NE.	522-7551
18.		Lee Shulman	LEE SHOLMAN	5015-44 N.E.	524-0623
19.		Colleen O'Leary	Colleen L. O'LEARY 4276 NE 56	4276 NE. 57th	525-7628
20.		E.A. Large	5013 Sandpoint	Sea 98105	527

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A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

We, the undersigned, believe that an Environmental Impact Study should be made before there is any consideration of the building of a helipad at Children's Orthopedic Hospital.

	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Dorothy Peterson	Dorothy Peterson	4800 N.E. 44th St.	525-5065
2.		L. Alan Howland	L. Alan Howland	4326 NE 44	522-5016
3.		Diana Howland	Diana Howland	4326 N.E. 44th	522-5016
4.		Jerry Sherrard	Jerry Sherrard	4339 NE 44th	522-7747
5.		Michael C. Kelly	MICHAEL C. KELLY	4335 NE 44	524-5141
6.		Dale Hickman	Dale Hickman	4331 NE 44	323-4489
7.		Irene Robinson		4327 1/2 E 44	524-0249
8.		Alla Tulchinsky	ALLA TULCHINSKY	4323 N E 44 ST	524-0915
9.		Emma Birkwood	EMMA BIRKWOLD	4319 NE 44 ST.	524-0198
10.		Mrs. Charles A Barrett	Charles A Barrett	4315 N. E 44th	524-0578
11.		Charles A Barrett		4315 N. E. 44th	524-0578
12.		Paul Grant	Paul Grant	4302 - 43rd Ave NE	522-9266
13.		Ann Masnik	Ann MASNIK	10801 27th NE	367-0779
14.		Barbara Linklater	BARBARA LINKLATER	4116 50th NE	523-7332
15.		Debbie Caplan	Debbie Caplan	7727 33rd N.E.	523-3795
16.		Sarah Scott	SARAH SCOTT	4339 NE 45th	523-2941
17.		Jane Johnson	JANE JOHNSON	4323 NE 45th	523-7178
18.		Judi Jacobsen	Judi Jacobsen	4315 NE 45th	525-3422
19.		Marilyn Smith	Marilyn Smith	4412 43rd NE	523-0843
20.			William E Morse Jr	4316 NE 45th St	522 3952

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Joy Scott	Joy Scott	4339 NE 45 → 98105	523-2941
2.		Jim Figec	Jim Figec	4518 NE 42nd	5225864
3.		Marilyn Phillips	Marilyn Phillips	4322 NE 43rd	525-2959
4.		Dan Phillips	DAN PHILLIPS	"	"
5.		Susan Moe	Susan Moe	4328 NE 43rd	523-4450
6.		Frederica Sulzbacher	Frederica Sulzbacher	4323 NE 43rd	522-7921
7.		Lillian Ommer	LILLIAN OMMER	4338 NE 43	524-7888
8.		Ellen Harris	Ellen Harris	4325 NE 43rd	522-9329
9.		Margaret Gander	MARGARET GANDER	4331 N.E. 43	5272057
10.		John B. Martin	John B. Martin	4315 NE 43	523 8087
11.		Jane Piehl	Jane Piehl	4202 43rd NE	522-8208
12.		Nancy Konikow	NANCY KONIKOW	4314 NE 42nd	528-6303
13.		Joel Konikow	JOEL KONIKOW	"	"
14.		Margaret Brooks	MARGARET BROOKS	4339 NE 42nd St.	523-7369
15.		Dorine Erb	DORINE ERB	8001 Smokey Point Blvd NE	5237776
16.		Sylvia Newell	Sylvia Newell	2232 Warren Ave E	523-5734
17.		Marjorie Rogers	MARJORIE ROGERS	7512 55th N.E.	523-8372
18.		Anne Hartley	ANNE HARTLEY	8052 - Forest Dr.	524-1856
19.		Marion Hamilton	MARION HAMILTON	4514 51st AVE NE	524-3292
20.		Lillian Martiner	Lillian Martiner	6249 Princeton Ave N.E.	528-7734

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Albert Feldmann	ALBERT FELDMANN	4873 TERRACE DR NE 98105	525-5610 (EVES)
2.		Marci Catanzaro	MARCI L. CATANZARO	4801 Terrace DR NE 98105	522-8336 (H) 543-8256 (O)
3.		Elizabeth Spaethe	Elizabeth Spaethe	4807 Terrace Dr NE 98105	527-7063 543-3679
4.		Myron Fishman	MYRON FISHMAN	4875 Terrace Dr NE 98105	633-0166
5.		Vick VerRooic	VICK HERSKOVIC	4838 TERRACE DR NE	525-3667
6.		Ger Herskovic	G. HERSKOVIC	— " —	— " —
1.		Connie D'Angelo	Connie D'Angelo	5058 Dickman Rd NE	524-2461 ✓
2.		David J Rohrbaugh	DAVID ROHRBAUGH	4533 ELAINE DR NE	527-4027 ✓
3.		Pamela McClaran	PAMELA MCCLARAN	3836 42nd NE	525-8413 ✓
4.		Robert A. Bohrer	Robert A. Bohrer	4557 55th NE	525-1999 ✓
3.		Mrs. Charles A Barrett	Charles A. Barrett	4315 N.E. 44th Pl	524-0578 ✓
4.		Jean Bolton	JEAN BOLTON	98115 4054 50 NE	523-1469 ✓
5.		Carol MacLeod	CAROL MACLEOD	4524-50th NE	522-5813 ✓
6.		Ruth B Dunn	RUTH B DUNN	4531 52nd NE	525-6926 ✓
7.		Lila Gilbert	LILA GILBERT	3555-41st NE	363 4021 ✓
1.		Trude R. Hirschmann	TRUDE R. HIRSCHMANN	98115 6427 SandPt Wy NE.	525-4335. ✓
2.		Fritz Hirschmann	FRITZ HIRSCHMANN	98115 6427 SandPt Way NE	" " 4335 ✓
19.					
20.					

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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.	12/5	Sally Tonkin	Sally Tonkin	4833 NE 42nd St	524 9113
2.		Margaret Dwyer McCall	Margaret Dwyer McCall	4843 N.E. 42nd	
3.		Barbara M Linklater	BARBARA M LINKLATER	4116 50th NE	523-7332
4.		Sheila McCarry	S M'CARRY	100 S/E 62nd St	583 6428
5.		Marvie Aspelund	MARVIE ASPIUND	4120 50th AV NE	522-8116
6.		James R Anderson	JAMES R. ANDERSON	4746 45 NE	522 2944
7.		Ruth Engelberg	RUTH ENGELBERG	4717 45 NE	524-1231
.		B.A. Almvig Jr	B.A. Almvig, Jr.	5824 59 N.E.	523-1044
.		J O Gunderson	JAMES O GUNDERSON	3914 47th NE 98105	527-1855
.		R.F Miller	MILLER ELIZABETH	4508 NE 54th	524 0662
.		Joan W Scheidler	JOAN W. Scheidler	5226 Saint Peter Way	522 3984 NE
1.		Debbie Caplan	Debbie Caplan	7727 33rd NE Seattle	523-3795
2.		Elizabeth Scott	Elizabeth Scott	4339 NE 45th Seattle	523-[illegible]41
3.		Huda Giddens	HUDA GIDDENS	4336 N.E. 44th Seattle, 98105	524-8565
4.		[illegible]	John Jones	4851 NE 39th Seattle 6454 Wash Pk Rd Bainbridge	842 5041
5.		Dorothy Peterson	Dorothy Peterson	4300 N.E. 44th	525-5065
17.					
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	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.		Lula Fulmer	Lula B. Fulmer	7208-57th NE, (98115)	LA3-7140
2.		Barbara Babb	BARBARA G. BABB	4752-44 NE	522-7728
3.		J Babb	Jeff Babb	" "	" "
4.		Jim Baker	JIM BAKER	4743 48th N.E	524-6825
5.		Marguerite O Dannenmiller	Marguerite O. Dannenmiller	7020-17 AVE NE	522-1628
6.		Dorothy W. Marlowe	Dorothy W. MARLOW	4603-N.E. 40th	522-7294
7.		James Cline	JAMES CLINE	300 Roy St A-10 98109	284-1833
8.		Cynthia Marshall	CYNTHIA MARSHALL	4006 NE 45 98105	524-2827
9.		Gail Gordon	GAIL GORDON	4002 NE 45th	526-2699
10.		Joyce J Frey	Joyce J Frey	4714 41st NE	522-4200
11.		Ruth M Cheever	RUTH M. CHEEVER	4710-41st NE	523-0446
12.		Borghild C Lee	Borghild C. Lee	4706-41st NE	522-7764
13.		G J. Sequeiana	Sequeiana	4702-41st	5240351
14.		Peggy Pettengill	Peggy Pettengill	11670-41st NE 98105	522-6166
15.		Lucy Krause	LUCY KRAUSE	4400 41st Ave NE	527-9194
16.		Linnea S Holmstrom	LINNEA S. HOLMSTROM	12725 Meridian N.	363-4915
17.		Marilyn P Sloan	Marilyn P. Sloan	3627-42 NE	525-3722
18.					
19.					
20.					

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

A PETITION
TO THE MAYOR, CITY COUNCIL AND COH BOARD OF TRUSTEES

We the undersigned, are opposed to the construction and operation of a helipad at Childrens Orthopedic Hospital because of its adverse environmental impact, particularly noise and safety, on area residents. Further, we believe that COH has not proven the need for this facility and that reasonable alternatives to the construction and use of this helipad already exist.

	DATE	SIGNATURE	PRINTED NAME	ADDRESS & ZIP	PHONE #
1.	11-9-8	Mrs. Ernest M. Lotz	MRS. ERNEST M LOTZ	2316 N.W. 95th St.	783-1216
2.		via Samuelson	LIDA SAMUELSON	2317 N.W. 95th	783-3855
3.		Maria Hicks	MARIA HICKS	4705 NE 54th	522-2149
4.		Grace Davis	GRACE DAVIS	7524-19 NE	523-8814
5.		James L. Hicks	JAMES L. HICKS	4705 NE 54th	522-2149
6.		Katherine L Simpson	Katherine L Simpson	22326-98th W	776-9882
7.		Richard Rice	RICHARD RICE	11328 Sand Point Way NE	362-8735
8.		Hugh S. Davis	HUGH S. DAVIS	7524-19 Ave NE 98115	523-8814
9.		Hilmer Samuelson	HILMER SAMUELSON	2317-N.W. 95th St	783-3855
10.		Mae D Olson	MAE D. OLSON	524 Harvard Ave E	325-7199
11.		Veryl G Toms	Veryl G. Toms	1909 NE Northgate	363-6931
12.					
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COH PROPOSED HELIPAD

Medical and related Agencies for
Public Hearing Notification

Representative Joanne Brekke
State House Committee on Social and Health Services
House Office Building, 2nd Floor
Olympia, WA 98504

Larry Thompson, Executive Director
Puget Sound Health Systems Agency
601 Valley Street
Seattle, WA 98109

Frank Chestnut, Director
Certificate of Need Program HB-31
State Department of Social and Health Services
Olympia, WA 98504

King County Medical Society
200 Broadway
Seattle, WA 98122

Washington State Medical Association
2033 6th Avenue
Seattle, WA 98101

Seattle-King County Hospital Society
2161 E. Hamlin
Seattle, WA 98102

Seattle Area Hospital Council
419 Occidental South, 5th Floor
Seattle, WA 98104

Dr. Michael Copass, Medical Director
Airlift Northwest
325 9th Avenue
Seattle, WA 98104

Helen M. Shawcroft
Director of Planning
University Hospital RC-34
1959 N.E. Pacific Street
Seattle, WA 98195

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1991

PETITION AGAINST HELIPADS IN RESIDENTIAL NEIGHBORHOODS

1-17-92
FLL

We, the undersigned, petition the Seattle City Council to ban helicopter landings and take offs in residential neighborhoods (e.g., at Children's Hospital and Medical Center surrounded by a residential neighborhood). We further petition that a city-wide ordinance be enacted to prohibit the location of helistops in residential neighborhoods.

Name (Written)	(Printed)	Address	Phone
Ola Mae Olson	OLA MAE OLSON	4420-50th NE	524-1650
Clarence Olson	CLARENCE OLSON	4420-50th NE	524-1650
Mary T. Robertson	Mary T Robertson	5031 NE Laurelcrest Ln	524-4983
Duncan Robertson	Duncan Robertson	5031 NE Laurelcrest Ln	5244983
Mark Baerwaldt	MARK BAERWALDT	5005 NE LAURELCREST LANE	206/524-[illegible]
Janis Rogers	JANIS ROGERS	5045 NE LAURELCREST LANE	206/524-1115
Doris P. Ulrich	Doris P. Ulrich	5017 NE LAUREL CT LANE	524-4211
Delmont M. Ulrich	Delmont M. Ulrich	5017 N.E. Laurelcrest LN	524-4211
Betsey Pettingill Ballou	Betsey Pettingill Ballou	5025 NE Laurelcrest lane	522-2890
William H. Ballou	WILLIAM H. BALLOU	5025 NE Laurelcrest lane	522-2890
Mary J. Gehrig	MARY J. GEHRIG	5818-45th NE	523-1104
Helen H. Ragan	Helen H. RAGAN	114 Roanoke E.	City
Dorothy L. Bulmer	DOROTHY L. BULMER	18324 SUNNYSIDE N	362-7084
Karen Gibbons	KAREN GIBBONS	5025 25 NE	525-4840
Barbara H. Smith	Barbara H. Smith	5169 NE Laurelcrest	98105
Benjamin J. Smith Jr	BENJAMIN J. SMITH JR	5169-NE LAURELCREST LANE	98105
Barbara Story	Barbara STORY	22200 PR. Rd. Edmonds	95020
Sylvia Moren	Sylvia Moren	1437 NW 186th Seattle	98177
Margaret J. Graham	MARGARET J. GRAHAM	5143 NE LAUREL CREST	98105
Dixie J. Porter	DIXIE J. PORTER	5032 N.E. LAUREL CREST LN	98105
Shirley Malloy Kennaugh	Shirley Malloy Kennaugh	5114 NE Laurelcrest Ln	522-4020
Marian Ford Hinea	MARIAN FORD HINEA	4814 STAFFORD AV. NE	522-2550
Jane M. Miller	JANE M. MILLER	3933 NE Belvoir	522-5348
Diane Whittle	Diane Whittle	7503-57th NE	524-4982
Elizabeth C Amick	Elizabeth C Amick	4911 NE Laurelcrest Ln	522-25[illegible]
Don Amick	Don Amick	4911 N.E. Laurelcrest Ln	522-25[illegible]

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Name (Written)	(Printed)	Address	Phone
Patricia O. Wright	PATRICIA O. WRIGHT	3925 48th Ave NE	522-0871
Phyllis Fadie	Phyllis Fadie	6[illegible] 18th NE	522 4795
Claudia C. Deibert	Claudia C. Deibert	2025 Boyer E	
Lois R. Bark	LOIS R. BARK	9520-44th NE	525-9943
Ruth A Bobbitt	RUTH A. BOBBITT	3855-51 NE	522-7915
Ruthanna Fountain	RUTHANNA FOUNTAIN	7537-11th AVE N.E	522-6877
Elizabeth Jean Lewis	ELIZABETH JEAN LEWIS	7050-51 N.E	5236222
Mary Anne Fleck	MARY ANNE FLECK	6702 N.E. 61st	526-0596
Barbara C. Peterson	Barbara C. Peterson	4101-36th Ave NE	
Rita T. Gill	RITA T. GILL	4700 NE 40th	523-4277
C. Clara Gill	C. CLARA GILL	4700 NE 40	523-4277
Suad S. Ziadeh	Suad S. ZIADEH	3919-48th N.E	523-209[illegible]
Farhat J. Ziadeh	Farhat J. Ziadeh	3919 48 N.E.	523.2093
John Frykholm	JOHN FRYKHOLM	4712 NE 40th St.	523 3367
Helen Frykholm	HELEN FRYKHOLM	4712 NE 40th St.	523-3367
Fred M. Wright	FRED M WRIGHT	3925 8th NE	522-0871
Elaine Gromar	ELAINE GROMAR	4805 NE 40	525-5077
Neil Gromar	NEIL GROMAR	4805 NE 40th	525 5077
Wendy Livesley	Wendy Livesley	4545-46 Ave NE	523-8339
Joy P. Smith	JOY P. SMITH	4667-41st NE.	522-5843
Shirley G Schultz	Shirley G. Schultz	7013 43rd NE	524-1050

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Name (Written)	(Printed)	Address	Phone
Maryann E. Spangler	Maryann E. Spangler	4013 N.E. 46th St. 98105	524-4151
Cynthia Korg	CYNTHIA KORG	6530-51st AVE NE 98115	525-2275
E Adaline Muzzy	E Adaline Muzzy	900 University St 3N	382-3719
Lovey Hubbard	4016-41st Ave NE	Seattle Wa.	523-0587
Kathleen E. Moore	KATHLEEN E. MOORE	2310 N.W. 85th ST	723-7583
Lucille A. Conrad	LUCILLE A. CONRAD	4656-41st N.E.	524-7125
Rosemary H. Forkey	ROSEMARY H. FORKEY	4622 41st NE	525-6212
Anna Gold	ANNA GOLD	5047 Sand Pt. Pl. N.E.	523-3573
Dorothy Bogdan	DOROTHY BOGDAN	5054 Sandpoint Pl NE.	524-5312
Miriam Sereberin	MIRIAM SEREBRIN	4736 44 NE	525-3817
Patricia S. Jennings	PATRICIA S. JENNINGS	4724-44 N.E.	523-3980
Charles B. Jennings	Charles B. Jennings	4724-44th N.E.	523-3980
Lola Goetz	Lola Goetz	4708-44th NE.	523-5010
David K. Robbins	[illegible]	4736 44th NE	522-5547
Ramy N Hough	Ramy N Hough	5054 44th NE	527-1822
Charles R. Hough	CHARLES R. HOUGH	5054 44th AVE NE	527-1822
Lucille H. Rowley	LUCILLE H. ROWLEY	5040-44th NE	524-8663
John Mendenhall	JOHN MENDENHALL	5033-44th NE	525-9148
Merle B Anderson	MERLE B ANDERSON	5037-44th Ave NE	524-3340
Frances R. Ottmar	FRANCES R. OTTMAR	5019-44 AVE N.E.	522-7551
Stephen J. Land	Stephen J. Land	5028 44th Ave NE	524-7886
Ken Fukuchi	Ken Fukuchi	5214 SANDPOINT WAY NE	523-6030
Tim Sage	Tim Sage	5230 Sandpoint Way NE	527-6266
S Slaikeus	S LAIKEUS	5035 Sandpoint Pl	527-9088
Wilma Flaherty	Wilma Flaherty	5000 SANDPOINT PL NE	522-6884
Stephen J Flaherty	STEPHEN FLAHERTY	5000 Sandpoint Pl NE	522-6884

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Name (Written)	(Printed)	Address	Phone
Emmr Spitzer	EMMR SPITZER	5014 Sand Point	PO 523617
John McDaniel	JOHN MCDANIEL	4364 NE 50th St.	522-2627
	LUCILLE K WOOD	5001 - 44th AV NE	524-3259
Joan Walton	Joan Walton	4206-50th NE	522-4077
Ellen Sharpe	5013 Sand Pt PL NE	5013 - B. SHARP	522-8247
Harold L Kurtz	HAROLD L KURTZ	5093 SANDPT PL NE	524-7778
Mildred D. Kurtz	MILDRED D KURTZ	5093 Sand Pt. Pl. N.E	524-7778
Beatrice Sylvester	BEATRICE SYLVESTER	4250 - N.E. 50th	523-2342
Mary E. MacKay	MARYE MACKAY	5022 Sp. Pl. NE	522-8334
Susan Headley	SUSAN HEADLEY	5042 Sp PL NE.	524-5970
Mary Nadeau	Mary Nadeau	5055 Sp Pl NE	525-4373
Anne N. Campbell	ANNE N CAMPBELL	5065 Sandpoint Pl NE	525-2062
Joan Rund	Joan Rund	5048 44th NE	5247298
Leslie Lee	Leslie Lee	4202 NE 50th	525-8465
Colleen O'Leary	COLLEEN O'LEARY	4270 NE 50th	525-7688
E.W. Scott	E. W. SCOTT	5069 44 ave	
Kevin Praska	Kevin Praska	4262 NE 50th	525-2470
Kate Praska	Kate Praska	"	"
Gisela H. Schimmelbusch	Gisela H. Schimmelbusch	4702-45th Av. NE	525-5774
Hugo W. Schimmelbusch	HUGO W. SCHIMMELBUSCH	4702-45th Av. NE.	525-5774
Marilyn L Goux	Marilyn L. Goux	14816 Bothell Way	365-4729
Sally R. Draper	Sally R. Draper	3201 NE 41st	523-5773
Jean M. Wiegenstein	JEAN M. WIEGENSTEIN	4515 NE 38th	525-1715
Ethel D Smith	Ethel D Smith	21 W. Lee St #301	283-7732
Pauline J. Boyd	PAULINE J. BOYD	2721 53rd Ave SW	932-4174
Lorraine Wynn Jackson	LORRAINE WYNN JACKSON	1350 Taylor Ave No #406	284-3573

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Name (Written)	(Printed)	Address	Phone
Patricia Ann Wood	PATRICIA ANN Wood	4036 NE 45th	524-2721
Marion P. MacMartin	Marion P. MacMartin	4036 NE 45th	524-2721
Muriel M. Donaldson	Muriel M. Donaldson	4015 N.E. 46th	524 792
MK Kootnekoff	MK. KOOTNEKOFF	4033 NE 45th	5270218
Doris G. Butler	DORIS G. BUTLER	6045 45th Ave NE	524-5583
Joseph P. Butler	JOSEPH P. BUTLER	6045 45TH AVE NE	524-5583
Albert J Rundle	Albert J Rundle	7732 21 NW	782-5458
Marguerite O. Dannenmiller	Marguerite O. Dannenmiller	900 Universal St	382-365
Didra Holland	Didra HOLLAND	4326 N.E. 44th	522-5016
Leif Alan Holland	Leif Alan Holland	4326 NE 44th	522-5016
Edwin T. Lewis	EDWIN T. LEWIS	4619 - 41ST AVE NE	—
Deborah Lisa Raymond	Deborah Lisa Raymond	4662-41st Ne	5251339
Marguerite V. Arthurs	MARGUERITE V. ARTHURS	4727-34th Ave NE	522-3794
Alberta R. Chaput	Alberta R. Chaput	4515-1/2 - 40th Ave NE	524 1223
Debra L. Lewis	Debra L. Lewis	4665 - 41st N.E.	522-7097
Sidney Hallam	Sidney Hallam	3606 NE 41st St.	525-9028
Richard Barnum	RICHARD BARNUM	" " "	" "
John P Lyecthe III	John P. Lyecthe III	4178 41st Ave NE	524-7313
Lucille A Conrad	LUCILLE A CONRAD	4656 - 41st N E	524-7125
John Morishita	JOHN MORISHITA	4020 41st AVE NE	525-4609
Jeanne Powell	JEANNE H. POWELL	3302 E. Lowell Hurst	525-4166 NE NE
Gordon Powell	GORDON S POWELL	" "	" "
Beth Morrison	Beth Morrison	3003 - 42nd Ave NE	524-4483
Scott Cobb	Scott Cobb	4654 - 41 Ave NE	
Grace M Malson	GRACE MALSON	4019 NE 46th St.	5270699

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Name (Written)	(Printed)	Address	Phone
HELEN NEWMAN	Helen Newman	4252 - NE 50th	525-4817
Anna Lou Rogerson	ANNA LOU ROGERSON	5047 44th Ave N.E.	522-3327
Francis L. Rogerson	FRANCIS L. ROGERSON	"	"
Violet A Wallace	VIOLET A. WALLACE	5214 [illegible] NE	[illegible]
Delbert E Wallace	DELBERT E WALLACE	[illegible]	[illegible]
Jennie Savage	JENNIE SAVAGE	[illegible]	
Esther Mae Kilcup	ESTHER MAE KILCUP	5011-45th Ave NE	98105
William A. Branch	WILLIAM A. BRANCH	5011-45th Ave NE	98105
Brian Branch	BRIAN BRANCH	1205 N.E 88th	98115
Lee Hwa Tien	LEE HWA TIEN	5021-45th Ave N.E.	98105
Jerry Schneider	Jerry Schneider	5003 45th Ave NE	98105
Anita Francis	ANITA FRANCIS	5003 45th Ave NE	98105
Michael O. Perlman	MICHAEL O. PERLMAN	4500 NE 50th	98105
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Ruth C. Frost	RUTH C. FROST	[illegible]	
Pascale Heinrich	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	5117 46th Ave NE	98105
Cath. J. Schmitz-Robinson	Cath. Schmitz-Robinson	5133 46th NE	98105
Linda Del Bundy	LINDA DEL BUNDY	4516 NE 54	98105
Lillian McKenna	LILLIAN MCKENNA	5136-45 NE	98105
[illegible]	[illegible]	[illegible]	[illegible]
Dixie Jo Porter	DIXIE JO PORTER	5183 N.E LAURELCREST LN	98105
[illegible]	LEE W. BRILLHART III	4758 45th Ave NE	98105
Kimberlee Porter Brillhart	Kimberlee Porter Brillhart	4758 45th Ave NE	98105

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Name (Written)	(Printed)	Address	Phone
Kay Stimson	KAY STIMSON	4715 45th NE	523-2705
John Stimson	John Stimson	4715 45th NE	523-2705
Rita C. Deggnger	RITA G. DEGGINGER	4721-45th N.E.	523-3674
Wendy C. Deggnger	Wendy C. Deggnger	4721 45th NE	523-3674
Paul M Mendelman	PAUL M. MENDELMAN	4736 45th NE	523-6831
Geoffrey W. Harris	Geoffrey W Harris	4750 45 NE	5250941
Elizabeth D Mellins	Elizabeth Mellins	4736 45th NE	523-6831
Kinne D. McCabe	KINNE D. McCABE	4745 45th NE	522-0450
Barbara M Scott	Barbara M Scott	4747-45th N.E.	523-6390
Ardell L Scott	ARDELL L SCOTT	4747-45TH NE	523-6390
Susan Doughtie	Susan Doughtie	4716 45th Ave NE	524-6661
Marian McNally	MARIAN McNally	4729 45 NE	527-9249
Susanne B. Simpson	Susanne B. Simpson	4746-45th Ave NE	526-0260
Thomas C Simpson	Thomas C. Simpson	4746-45th Ave	[illegible]
Carol M Larson	Carol M. Larson	4717 45th Ave NE	5231039
Laura Hungate	Laura Hungate	5733 29NE	5243061
John L Sandland	JOHN SANDLAND	4722 45th NE	523-0102
Barbara Shafer	Barbara Shafer	4706 45th NE	524-5976
Richard G Shafer	RICHARD G SHAFER	4706 45th NE	524-5976
Judy Bruner	Judy Bruner	4701-45th NE	523-3727
Rae Waddingham	Rae Waddingham	4701-45th NE	523-3727
Marvel Nickenburg	MARVEL NICKENBURG	4705-45th NE	5222562
Lola Goetz	Lola Goetz	4708-44th NE	523-5010
Shaun Beth Dennehy	Shaun + Beth Dennehy	4714 44th NE	525-4114

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Name (Written)	(Printed)	Address	Phone
Gerald L Marcotte	GERALD L. MARCOTTE	4644 41st Ave NE	524-7168
Elsie Marcotte	ELSIE N. MARCOTTE	4644 41st Ave NE	524-7168
Lucille A Conrad	LUCILLE A. CONRAD	4656-41st Ave.	524-7128
Gwen A Williams	Gwen A. Williams	4646-41st N.E.	523-0729
Beverly Shimmin	BEVERLY SHIMMIN	4640 41st N.E.	524-6615
Pat Lundquist	PAT LUNDQUIST	4685 41st NE	525-5153
Dale E Shroeder	Dale E Shroeder	4715 42nd Ave N.E	522-4430
Kent G Mettler	Kent G Mettler	4310 48th AVE NE	525-2221
	LARRY PYNE	4717 42nd Ave NE	524-5016
Emily Marie Wilson	Emily Marie Wilson	4417 54th Ave NE	5238552
Barbara Zalee	BARBARA ZALEE	3607 NE 42 Ave	524-4094
Cornelia Hull	Cornelia Hull	3508 N.E. 45th	522-2951
Luaime Johnson	Luaime Johnson	4103 - 37th Ave NE	524-9736
Kathryn I Anderson	Kathryn I Anderson	4327 N.E. 45th St	522-1005
Edwin F. Anderson	Edwin F. Anderson	4327 N.E. 45th ST.	522-1005
James Johnson	JAMES. JOHNSON	4323 NE 45th ST	523-7178
David S Belvin	DAVID S BELVIN	4757-45NE	525-0160
Kate W Hemer	KATE W. HEMER	4537-55 NE	523-2720

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Name (Written)	(Printed)	Address	Phone
Jean Phillips	Jean B. Phillips	4728-41st NE	526-8430
[illegible]	B. Sherron	4715 47th NE	523-4430
Cathy A Cozart	Cathy A Cozart	4606 NE 47th St	524-0133
Ruth Gould	Ruth Gould	4554 46 NE	
Kenneth Fairchild	Kenneth Fairchild	4527 46 NE	524-5417
Judith J. Platt	JUDITH J. PLATT	4526-45th NE	527-1617
Clark W. Sorensen	Clark W. Sorensen	4530-45th Ave NE	522-6389
Cheryl L. Kitchin	Cheryl L. Kitchin	4702 44 Ave NE	524-8332
Lola Goetz	Lola Goetz	4708-44 Ave NE	523-5010
Miriam Serebrin	MIRIAM SEREBRIN	4736 44 NE	525-3817
David Serebrin	DAVID "	" " "	" "
Dorothy M Rowe	Dorothy M. Rowe	4754 44th Ave NE	527-8380
Gary L Schieven	Gary L. Schieven	4754 44th Ave NE	527-8180
Kimberlee Brillhart	Kimberlee Brillhart	4758 45th Ave NE	527-6077

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We, the undersigned, petition the Seattle City Council to ban helicopter landings and take offs in residential neighborhoods (e.g., at Children's Hospital and Medical Center surrounded by a high-density residential neighborhood).

Name (Written)	(Printed)	Address	Phone
Dana Houland	DIANA Houland	4326 NE 44	684 4951
Bettie Henry	BETTIE HENRY	3155 W. LAURELHURST DR. NE	523 6548
Sally Fiorini	SALLY FIORINI	3132 "	522-5802
Frank C. Henry	FRANK C. HENRY	3155 W. LAURELHURST DR. NE	523 6548
Priscilla Thompson	Priscilla Thompson	4320 N.E. 44th	523-4842
Ralph Thompson	Ralph Thompson	"	"
Alan Houland	Alan Houland	4326 NE 44th	522 5016
Kathryn Parks	KATHRYN PARKS	4330 NE 44th	523-7411
Lettie I. Verretto	LETTIE I VERRETTO	4334 N.E 44th	524-1523
Jerry P Shurrard	Jerry P Shurrard	4339 N.E 44th	522-7749
Alla Tuchinsky	ALLA TUCHINSKY	4323 N.E 44th	524 0915
Ruth Lewarch	Ruth M Lewarch	4316	
Jackie Kelly	Jackie Kelly	4335 NE 44th	527-5285
Michael C. Kelly	Michael C. Kelly	4335 NE 44	527-5285
Lynne E. Bush	LYNNE E. BUSH	3858 43rd NE	525-3077
Michael Robert Bush	MICHAEL ROBERT BUSH	3858 43rd N.E.	525-3078
Jeffrey Fiorini	JEFFREY FIORINI	3132 W LAURELHURST DR	522-5802

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1991

PETITION AGAINST HELIPADS IN RESIDENTIAL NEIGHBORHOODS

We, the undersigned, petition the Seattle City Council to ban helicopter landings and take offs in residential neighborhoods (e.g., at Children's Hospital and Medical Center surrounded by a residential neighborhood). We further petition that a city-wide ordinance be enacted to prohibit the location of helistops in residential neighborhoods.

Name (Written)	(Printed)	Address	Phone
Cheri Wilson	Cheri Wilson	4823 Terrace Dr. NE	523-8886
Khin T Nu	KHIN T NU	4720 40th Ave NE	523-8062
Elizabeth Donaldson	Elizabeth Donaldson	4845 Terrace Dr. NE.	523-7685
Robert Beymer	Robert D Beymer	4861 Terrace Dr NE	527-6792
Marci Catanzaro	MARCI CATANZARO	4801 Terrace Dr NE	522-8336
Claire A	CLAIRE PETERSON	4819 TERRACE DR NE	524-8606
Myron Fishman	MYRON FISHMAN	4875 TERRACE DR NE	523-2585
M Elizabeth Spaethe	M Elizabeth Spaethe	4807 Terrace Dr NE	527-2763
James H. Hurd	JAMES H. HURD	10007 VALMAY AV NW	783-3785
Christine Barrett	CHRISTINE BARRETT	4645 41 AVE NE	524-3746

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Name (Written)	(Printed)	Address	Phone
Joy P Smith	JOY P. SMITH	4667 41ST NE.	522-5843
Barbara A Scott	Barbara A. Scott	4661-41st NE	522-7989
Susan Hamilton	Susan Hamilton	4673 41ST NE	523 4192
Neva Fulcher	NEVA FULCNER	4677-41ST NE	523-3361
Hilary Howarth	HILARY HOWARTH	4659 41ST NE	522-1555
Debra L. Lewis	Debra L. Lewis	4665-41 NE	522-8977
KENDRA ROUX	Kendra	4710 41ST AVE NE	525-0730
Verna E. Fredrickson	VERNA E. FREDRICKSON	4531 49th Ave NE	523-2905

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Name (Written)	(Printed)	Address	Phone
Marvin D. Christmen	MARVIN O. CHRISTMEN	4350 53rd Ave NE Seattle WA 98105	525-6946
Paula Douglas	PAULA DOUGLAS	4545 Sandpoint NE	524-4233
Ruth B. Dunn	RUTH B DUNN	4545 Sandpoint NE.	525-6926
Daniel Kim	Daniel Kim	4545 Sandpoint Way N.E. #209	523-4595
Ila Kinsey	ILA N. KINSEY	4545 Sand Point Way NE #305	523-8549
Lillian J. Mills	Lillian J. Mills	4545 Sd Pt Way NE	543-0209

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Name (Written)	(Printed)	Address	Phone
Marjorie Kreege	Marjorie Kreege	4014 NE 46th St.	523-3519
Madeline Kreege	Madeline Kreege	3601 23rd Ave W	283-9676

Patients Transported by Airlift Northwest Helicopter
Landing at Children's Hospital and Medical Center
June through December 1989

Date	Time	Transported From	Age	Admitting Diagnosis	Receiving Unit	Outcome (as of 2/89)
June						
4	4:35 pm	St. Joseph Hospital, Bellingham	Newborn	Congenital heart defect	Infant Intensive Care Unit	Still in hospital
17	4:43 am	Harrison Memorial Hospital, Bremerton	Newborn	Congenital diaphragmatic hernia *	Emergency Room	Died
20	2:55 pm	King County Medic 4, Sea-Tac	Preschool-age	Respiratory arrest (history of asthma)	Emergency Room	Hospitalized 2 days
28	1:04 pm	Central Washington Hospital, Wenatchee	Newborn	Infant respiratory distress syndrome	Infant Intensive Care Unit	Died
July						
5	10:06 pm	Stevens Memorial Hospital, Edmonds	Adolescent	Cardiac arrest	Pediatric Intensive Care Unit	Hospitalized 42 days
22	6:00 pm	King County Medic 6, Auburn	School-age	Near drowning	Emergency Room	Hospitalized 40 days
28	3:09 pm	Harrison Memorial Hospital, Bremerton	Toddler	Near drowning	Emergency Room	Died
30	3:50 pm	Olympic Memorial Hospital, Port Angeles	Adolescent	Sepsis (life-threatening infection)	Pediatric Intensive Care Unit	Died
30	6:05 pm	King County Medic 4, Burien	Preschool-age	Airway obstruction (foreign object–beauty bark)	Emergency Room	Hospitalized 1 day
August						
1	10:45 pm	Providence Hospital, Everett	Toddler	Epiglottitis *	Emergency Room	Hospitalized 5 days
6	7:42 pm	Overlake Hospital Medical Center, Bellevue	Preschool-age	Epiglottitis *	Pediatric Intensive Care Unit	Hospitalized 2 days
12	3:25 pm	St. Joseph Hospital, Bellingham	Adolescent	Asthma	Pediatric Intensive Care Unit	Hospitalized 17 days
22	8:40 pm	Highline Hospital, Burien	Infant	Airway obstruction (foreign object–safety pin)	Emergency Room	Hospitalized 1 day
September						
15	7:43 pm	King County Medic 6, Kent	School-age	Amitriptyline ingestion (antidepressant)	Emergency Room	Hospitalized 4 days
21	9:30 pm	Skagit Valley Hospital, Mt. Vernon	Newborn	Multiple birth defects	Infant Intensive Care Unit	Died
October						
8	6:45 pm	King County Medic 8, Federal Way	Infant	Airway obstruction (foreign object–turkey)	Emergency Department	Hospitalized 1 day
13	9:25 pm	Valley Medical Center, Renton	School-age	Respiratory arrest (history of asthma)	Pediatric Intensive Care Unit	Hospitalized 11 days
November						
3	11:30 am	Valley Medical Center, Renton	Infant	Sudden Infant Death Syndrome	Emergency Room	Died
18	5:50 pm	Snoqualmie Valley Hospital, Snoqualmie	Infant	Bacterial meningitis	Infant Intensive Care Unit	Died
26	7:50 pm	St. Joseph Hospital, Bellingham	Infant	Sepsis, chronic heart disease	Infant Intensive Care Unit	Still in hospital
29	8:15 am	Harrison Memorial Hospital, Bremerton	Adolescent	Doxepin overdose (antidepressant)	Emergency Room	Still in hospital
December						
4	9:50 am	King County Medic 4, Renton	Preschool-age	Seizures	Emergency Room	Hospitalized 3 days
17	4:40 pm	Group Health, Olympia	Toddler	Airway obstruction (foreign object–peanut)	Emergency Room	Hospitalized 1 day
23	4:20 pm	St. Joseph Hospital, Bellingham	Infant	Cardiac arrest	Infant Intensive Care Unit	Hospitalized 40 days

** Definition of diagnosis on back panel.*

Children's
Hospital & Medical Center

March 1990

To Our Neighbors,

As I'm sure you are all aware, the most critically ill patients admitted to Children's Hospital and Medical Center, particularly those from outside the city, are transported via the emergency medical helicopter operated by Airlift Northwest to the Emergency Room entrance at Children's.

In an effort to keep you informed about the number and types of cases landing at the hospital, we plan to send you periodic reports about medical airlift activity at the hospital. This report will indicate the date, time and origination of the airlift; the age range and admitting diagnosis of each child; where the child went within Children's; and his or her outcome. We have been careful to protect patient confidentiality in our attempt to share with you as much information as possible about these life-threatening cases.

If you have any questions about this report of about emergency medical helicopter landings at Children's, please direct them to Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write to her at Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98105.

Sincerely,

Truman Katz
President and Chief Executive Officer

*** Definition of Diagnosis**

Congenital diaphragmatic hernia: *A condition at birth in which the abdominal contents are displaced into the chest cavity causing respiratory distress and usually requiring immediate surgery.*

Epiglottitis: *Swelling in the back of the throat due to bacterial infection that can rapidly block the airway. Treated by a pediatric anesthesiologist or otolaryngologist (ENT) who inserts a tube to bypass the swelling to allow the patient to breathe.*

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center: A summary of Airlift Northwest flight activity is published quarterly by the Communications Department at Children's Hospital and Medical Center, Seattle, WA. If you have comments or questions, please call Suzanne Petersen, Director of Government Affairs, at (206) 526-2530.

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of Airlift Northwest flight activity, June through December 1989

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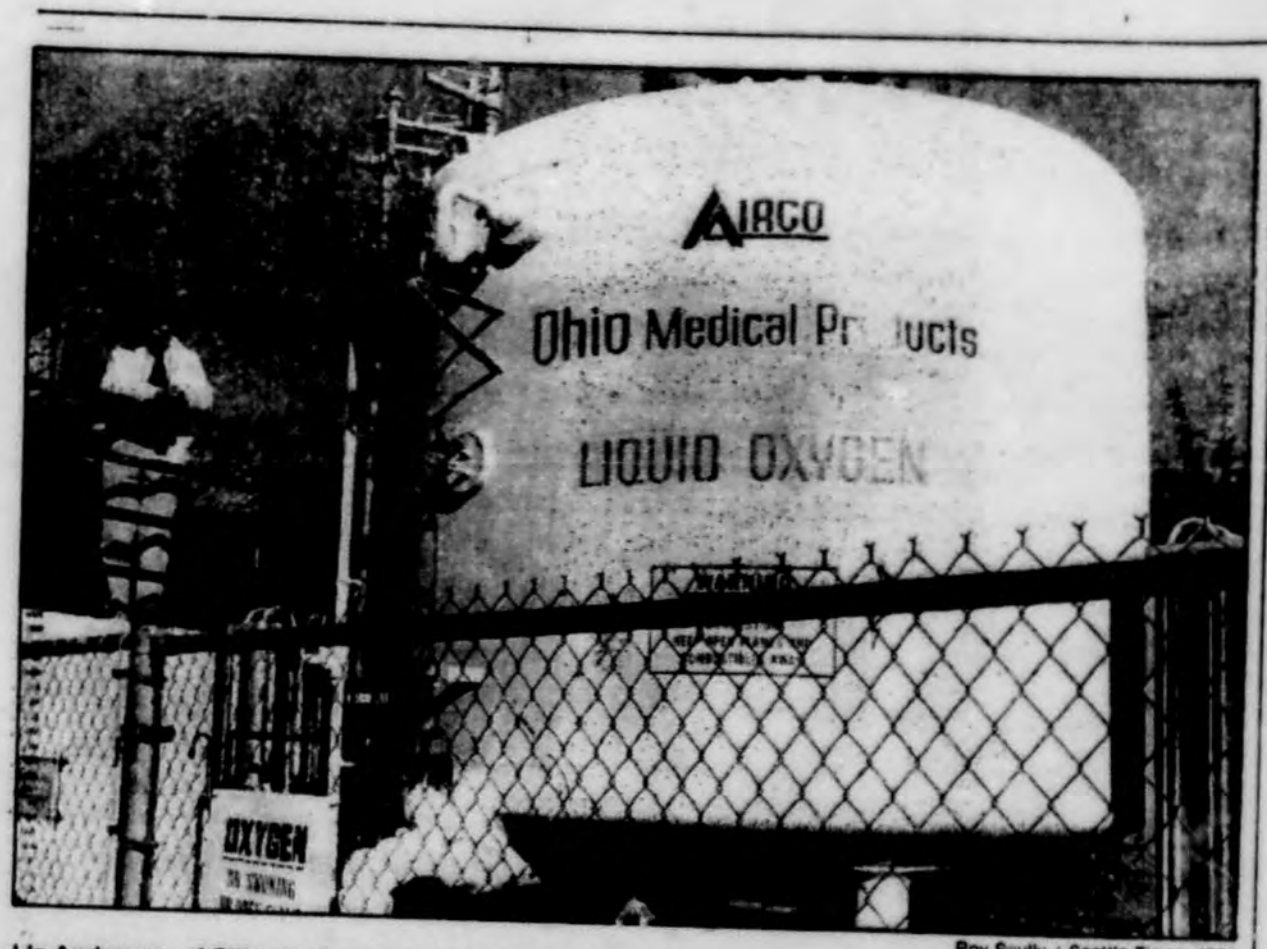
DEPT OF ... DIVISION

Children's
Hospital & Medical Center
4800 Sand Point Way N.E. P.O. Box C5371 Seattle, Washington 98105

Suzanne Petersen
Director of Government Affairs
(206) 526-2530

SEATTLE TIMES 2/13/86



Roy Scully / Seattle Times, 1985

Liz Anderson, of Citizens Concerned About Helicopter Transport, worries about an oxygen tank adjacent to the proposed site of a helipad at Children's Orthopedic Hospital.

Bill to regulate hospital copters appears stalled in committee

by Lyle Burt
Times Olympia bureau

OLYMPIA — Legislation to impose state control over helicopters used as air ambulances, which seemed to be flying high a few months ago, now appears to be grounded in the powerful House Rules Committee.

House Speaker Wayne Ehlers, D-Spanaway, said several members of the Rules Committee, including himself, are opposed to the measure, HB 1389.

"I don't like the bill; it's not good public policy," said Ehlers, chairman of the committee.

The legislation would require any hospital that proposes to lease or buy a helicopter or construct a helicopter pad to first demonstrate need for the service and obtain state approval.

Although the initial push for state control grew out of protests by residents of Seattle's Laurelhurst neighborhood against plans of Children's Orthopedic Hospital to construct a helicopter pad adjacent to the hospital, controversies also have arisen in Bellingham and Spokane.

Laurelhurst opponents have complained of the noise helicopters circulating over the residential area would cause. They contend that a new helipad is not needed, saying a facility is available a few blocks away from the hospital on University of Washington property.

In Bellingham and Spokane the conflicts center on use of helicopters by two hospitals in each city, each seeking to offset a decline in patient population.

Rep. Ken Jacobsen, D-Seattle and sponsor of the control legislation, said one of his chief concerns is the cost of helicopter service.

"It costs about $2,000 a trip to transport a patient by helicopter," Jacobsen said.

In many cases, he said, a patient can be transported just as safely and at much less cost in a regular ambulance.

"When a hospital is under contract to use the service and has made a commitment to bear the cost, we may see people on that helicopter who don't need to be there," Jacobsen said. "The patient's insurance company will pay the $2,000, and the net result will eventually be increased insurance premiums and higher hospital costs for all of us."

The only visible opponent to the bill has been Children's Orthopedic.

At a recent hearing on the bill by the House Social and Health Services Committee, a hospital representative said the opposition would be withdrawn if the bill were amended to exempt the hospital's helipad project. The committee, however, rejected a proposed amendment to that effect.

Asked what he was doing to get his bill out of the Rules Committee, Jacobsen replied, "I'm trying, I'm trying."

He said none of the committee members have told him the bill would die where it is, but added, "They don't usually tell that to bill sponsors."

Meanwhile, time is growing short. Under session rules each chamber has only until 5 p.m. Tuesday to consider its own bills.

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COH HELIPAD PROPOSAL NEWS

Legislature Considers Limiting Helicopters

House Bill 1389, sponsored by Representatives Jacobsen, Appelwick, Lux and Ballard, was introduced recently at the House of Representatives. H.B. 1389 received solid bipartisan support from the House Committee on Social and Health Services, chaired by Rep. Joanne Brekke of Wallingford. The committee voted 13-0 to give the bill a "do pass" recommendation and sent it on to the House Rules Committee.

The bill requires that a statewide plan be prepared that would insure coordination between both ground and air emergency transport services. It also would set up a monitoring and periodic review procedure that would help prevent overuse of helicopters. A third provision would require all hospitals to prepare a certificate of need application before introducing any new ground or air transport service.

In testimony before the House Committee, strong support was presented by the ground transport providers, the Health Care Purchasers Association, the Montlake and Laurelhurst Community Clubs, and Airlift Northwest. The only opposition voiced at the hearing came from Children's Orthopedic Hospital. COH, operating through Representative Leonard from Renton, tried to amend the bill to exclude themselves from coverage. The amendment was soundly beaten in the Committee but will undoubtedly surface again on the House floor.

Several persons from the Laurelhurst and Montlake communities traveled to Olympia a second time to talk with several members of the House and found a great deal of support for the bill among the members of the House they spoke with. Bill Burns, President of the Montlake Community Club was especially helpful in making this lobbying effort effective. Liz Anderson presented our testimony to the House Committee and was very well received.

The bill reached the House floor on February 17 and was passed. Unfortunately, it included an amendment that exempts Children's Hospital from coverage by the bill! It now goes to the Senate where a version could be passed that would not have the amendment excluding COH from coverage. COH has used the services of lobbyists to get their amendment into the bill and so may escape the certificate of need requirement for the 3rd time.

If you wish to express your interest in this bill as it moves through the Senate, please call the (toll free) legislative hotline: 1-800-562-6000, for Senate Bill 1389.

Our very great appreciation goes to Rep. Ken Jacobsen who sponsored HB 1389 and helped move it along. Many community residents called the legislative hotline and left messages of support for the bill, also. But, we are naturally quite disappointed once again by the contrary actions of COH in this matter. Public acceptance of the helicopter service would be much more likely if the certificate of need were done.



Representative Ken Jacobsen
46th District

CITY REQUIRES COH TO PREPARE HELIPAD EIS

After revieving the issue for several months, the city's Department of Construction and Land Use, issued a declaration of significance on the application from COH for a helipad on their campus. This means that COH will now have to prepare a full Environmental Impact Statement that will involve a much more detailed study of safety, noise and vibration impacts as well as a full analysis of several alternatives to landing on their campus. COH will probably hire a consultant to prepare the EIS and it may be completed in a few months. It will be published in draft form first and circulated to all interested persons for comment. The responses to comments received will be included in the final EIS which is then used by DCLU to make their recommendation to the Hearing Examiner. This may happen as soon as June. Additional noise and vibration tests will probably be conducted to gather data for the EIS and persons interested in this part of the issue should be alert and prepared to monitor the testing activities so they will be better informed when it comes time to comment on the Draft EIS.

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SEPTEMBER 5, 1986

NE



John Irwin/Chicago

Hospital helicopter accidents such as this one in Chicago in April have led experts to voice serious safety concerns.

Air rescue threatened by chopper crash rate

Hospital-based helicopters crash far more frequently than other helicopters or civil fixed wing aircraft, according to aeromedical experts at a meeting of emergency medical personnel in San Diego.

The efficacy of hospital-based helicopters also was questioned at the conference, with some expressing doubt that the popular aeromedical rescue teams are any more effective at saving lives than ground ambulance crews.

New group for EMS MDs.—page 33

"We have a long way to go in justifying the need for these programs in terms of patient outcome, cost, and, most importantly, safety," said Ronald D. Stewart, MD, the president of the conference's sponsor, the National Assn. of EMS Physicians. Dr. Stewart is also a professor at the U of Pittsburgh, and president and director of the Center for Emergency Medicine of Western Pennsylvania.

The use of hospital helicopters has grown quickly in the past 10 years. There are now 150 hospital aeromedical programs, and some predict that there will be 500 by 1996.

A stinging indictment of hospital helicopter safety came from Tom Einhorn, vice president of a recently formed association of hospital helicopter pilots, the National EMS Pilots Assn. "Hospital-based aeromedical helicopters have the worst accident rate in modern aviation history," Einhorn said.

According to the private, Columbus, Ohio-based Aviation Safety Institute, through 1985, the fatal accident rate for aeromedical flights was 6.5 lives

Continued on page 33

Easing i

MDs must re-e to avoid higher

Physicians who have used tax shelters in the past to protect their earnings will have to retool their investments if they want to outwit the taxman under reforms now pending before Congress.

That is the message from attorneys and investment counselors who say physicians, as well as other high wage earners who have relied on various tax preferences to reduce the bounty they pay to the federal government, must begin now to restructure their financial strategies.

"People who have tried to take a tage of tax deductions in the pa have to do some scrambling," sai G. Gargula, JD, tax principal of Young and Co. in Chicago.

The provisions that are forcing cians to take a long, hard look at

Ophthalmol for first Mec

As expected, ophthalmologists w the first victims of new Medicare aimed at reducing payment for p dures that program officials rega "overpriced."

Under rules proposed in the Au *Federal Register*, Medicare would paym nts for cataract extractions w intraocular lens implant to only more than payment for cataract re alone. The plan would be phased i the limit set at 20% in 1987 and at 1 1988, before falling to 10% in 198 thereafter. Public comments will b cepted on the plan until Sept. 1

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MDs at risk also, court rules

Payers can be held liable for care limits

Third-party payers can be held liable other states often find opinions written by into the medical malpractice cau

Pilot group calls for safety standards

Hospital chopper crash rate aviation's worst

Continued from page 1

lost per 100,000 flying hours. That is nearly triple that of commercial helicopters in general, which suffered 2.2 lost lives per 100,000 flying hours.

There have been 21 hospital helicopter accidents so far this year, including one in June near Birmingham, Ala., that killed a pilot and two flight nurses (*AMN*, June 13, 1986). "It's a miracle that more of the accidents this year didn't result in fatalities," said John B. Galipault, president of the aviation institute. Last year, 10 people were killed in hospital helicopter accidents.

Einhorn said that "the one threat to the survivability of aeromedical EMS in this country is the issue of safety." He cited several factors that have contributed to the string of accidents. They are:



Photos: Ryan Ver Berkmoes/AMN

Pilots Don Wright (pictured at right in photo at left) and Tom Einhorn head National EMS Pilots Assn., which wants standards that would improve hospital helicopter safety statistics.

● Stress and fatigue. Don Wright, president of the helicopter pilots' association, said that too many hospitals are trying to run their aeromedical program with only two pilots. This means that each pilot must work at least 12 hours a day, seven days a week, to provide around-the-clock coverage. Wright said that pilots had confessed to him that they had fallen asleep at the controls due to fatigue.

Einhorn noted that flying a helicopter requires far more pilot concentration than does flying a regular airplane. Hospital helicopter pilots also must be on the lookout for wires and obstructions, navigate with street maps, and at the same time, communicate with air traffic controllers and emergency service dispatchers, he said.

● Training. Most EMS pilots have military and commercial backgrounds that do not prepare them for the challenges of aeromedical flying, where they must frequently land by expressways, in the middle of subdivisions, or in populated areas that aren't prepared for helicopter landings. Problems are compounded when the pilot flies at night or in bad weather. A large number of crashes resulted after the helicopter struck an unseen electric or telephone wire. Presently, there are no national training standards for aeromedical pilots, and as a result, the quality of training given to pilots varies widely from program to program.

● Equipment. In order to economize, many aeromedical EMS programs operate with helicopters that have only one engine, as opposed to the preferable two, and that don't have all the instruments and equipment needed for some flights.

● Operating standards. There are no nationally accepted operating standards for aeromedical programs that would govern when conditions are suitable and unsuitable for flight. Presently, Einhorn says that all too often, a heroic "save the patient" attitude exists, causing flights to be made in conditions that are unsafe.

In addition to questions of safety, questions regarding the very need for hospital helicopters were raised. Wright said that too often a hospital starts a program for financial, and not medical reasons. "The administrators may have seen the studies that show that patients brought in by helicopter are overall better insured and tend to stay in the hospital three times longer than average patients."

In addition, Wright said that administrators may be swayed by the 150-mile radius of coverage a helicopter will give a hospital, and the vast amount of free publicity it provides. "TV news shows love shots of helicopters whisking injured patients away from accident scenes," he said, adding, "Too often a hospital in a city will start an aeromedical program, and that in turn will spark other hospitals in the area to start their own. This happens in cities that can't even support the first one."

Dr. Stewart said that data is "sparse" to support air over ground transport of patients to hospitals. "We are not certain that air transport improves patients' outcomes; preliminary data suggests that it may be detrimental."

Dr. Stewart cited a study that showed that cardiovascular patients, who make up a high percentage of those transported by helicopters, had a greater incidence of problems when transported by air instead of by ambulance. Kenneth W. Kizer, MD, the director of the California Dept. of Health Services concurred with the studies saying, "It's not surprising that art

Group aims to put 'medical' back in EMS

Seeking to increase physician involvement in emergency medical services (EMS), a new cross-specialty organization, the National Assn. of EMS Physicians, detent physician involvement and inadequate accountability in EMS systems. The recognition that both on-line EMS physicians and medical directors need to mainmeshes perfectly with the stated goals and objectives of both our sponsoring organizations."

About 150 people attended the confer-

In Los Angeles,

(6)

On page one fourth para. It is stated that 3 trees will be removed from site. On the FAA form 7480-1 COH submits that one 50'ft. Cypress is an obstruction to the flight path. Please rectify this descrepancy. Please submit as part of fonal document ~~Doc~~ ac 78 the current FAA 7480-1 that COH has submitted.

Please explain why the original prediction of 3-4 landings per month has now jumped to ten per month. What is the basis from which either of these predictions are made? ANW is described as "a Seattle vendor based at Boeing Field." Yet on the aircraft operated by ANW is clearly stated "operated by Hospital Air Transport, Inc". Who is Hosp. Air Transport, Inc. What role do they play in this proposal? Do they have guidelines or standards to which pilots must adhere. Do they carry liability insurance - if so how much - how has figure been determined and who is the provider? Who is their Contract with Seattle Jet or the four hospitals involved in the proposal?

Dr. Nicolas report predicts that over time COH could expect 15-20 flights per month as mentioned in MI/DEIS. Yet ANW records will show that for the month of August 1986, COH received 17 patients via ANW. Four came directly to the door of the ED and the remainder were delivered to Harborview, transferred to an ambulance and then transported to COH by ground. Why were these patients delivered to Harborview at all? Was the helicopter ride necessary? Where did the patients come from? What was their presenting condition? If this helipad is permitted [redacted] will these patients who are obviously stabilized come directly to COH, via ANW in the future? [redacted] If 15-20 flights per mo. was Dr. Nicolas predicted use for future than these figures need to be reassessed. To COH had 17 ANW headsports in Aug '86 than 15-20 per month is a future prediction that is grossly underestimated.

Please address in this in FEIS.

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Pg 1 DEIS - "The majority of these flights would be performed by Airlift Northwest (ANW), a Seattle vendor based at Boeing Field; although flights could occur by other ambulance services, U.S. Army MAST helicopters, or private helicopters." It is not sufficient to merely predict that landings will occur other than ANW. The impacts of these potential landings must be weighed just as those of ANW. What other ambulance services in the area exist that might use this helipad? What types of aircraft do they fly? Will the helipad physically be capable of servicing these aircraft? What types of liability insurance do they carry? What will be the predicted frequency of MAST landings at Cort. as well as others providing this service? anything else?

Page 2 - sixth paragraph. "Impacts on patient outcome are expected to be more favorable under the proposed action ....." This is an entirely subjective statement by the proponent. There is no scientific basis for this claim. All evidence to date supports the fact that in the eleven years of landings at the soccer field there were never any problems with patient transfer other than one occasion on which the ambulance became stuck in the mud. This is a problem which is easily remedied by improving the landing site or building the proper pediatils at some point on the east campus of UW. The proponent further claim that anything "other than the proposed action could result in suffering the need for prolonged treatment, or even death." Again there is no scientific basis for this claim, please remove from DEIS. Any of these ~~p~~ could result from the patient manipulation that will be involved in landing on Cort Campus and pushing

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the patient 120 ft. on a gurney to the ER. There will be less patient manipulation involved and less exposure to the elements if the current landing situation (grass field) remains status quo.

Page 3. 2nd para. It is stated that 3/4 of patient transports are expected to occur during day time hours. How was this prediction determined? This entire paragraph should be omitted from DEIS as it is based on an inadequate noise study. See remarks from _____. noise consultant.

Page 3 The concluding remarks of paragraph two (2nd para cont) are redundans. The ambulances that approach Cox turn off their sirens [redacted] and lights as traffic permits, but once they turn onto the Cox Campus the sirens are always turned off. It is not sufficient to say that sirens are approximately as loud as a helicopter. Please provide specific comparisons. Supplemental Information Oct. 1986

Page 3. The reported statistical frequency of a helicopter accident one in every 5,459 flight or 1 every 23 years is an estimate that is based on inappropriate figures. [redacted] To determine the accident probability the proponent should have used worst case scenario which Dr. Nicola predicts to be 40 cases per month. The accuracy of this prediction is supported by the fact that Cox had seventeen patient transported by NW Aug. '86. Further the average length of flight of 48 minutes which is used in this calculation is not representative of what is reported in the ALNW actual flight logs. According to the logs

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Page 4. 1st para. Is the grassy area outside of EE does do pose public risks because the site is not secured etc. Why is Coast currently landing there? Since the City has not ordered them to cease & desist landing will the city of Seattle share in the liability in the event of an accident? Please discuss in final EIS what current landing procedure on campus is - what are problems associated with this procedure. Why this procedure will not be adequate in future as well.

Page 4 paragraph 2
In the event of a crash and fire on Coast Campus in vicinity of natural gas meter, ~~is~~ could there be an explosion? I find it hard to believe that the natural gas would simply flare until shut off. Please have remarks verified by local gas authority as well as fire department.

Page 4 para. 2 -
It is mentioned that there is possibility of traffic accidents associated with ground ambulance. There is also the potential for traffic accidents caused by the helicopter flying overhead along Sand Point Way. Further, when people get in their cars and drive there is an associated risk that ~~they~~ drivers accept. It is entirely different though to sit in your own home and have the ~~[redacted]~~ risk of a helicopter crashing on your roof because the helipad is located too close to residences. One situation involves a voluntary participation in action that could result in an accident And the other situation involves a risk that is

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totally inadvertary! These kinds of remarks (10.)
~~Also~~ should be eliminated from this discussion, because arguments such as these can be presented to the point of absurdity.

Page 4 Paragraph 2
I object to the three point rationale ~~[redacted]~~ used in maintaining that there will be no proliferation of helicopter services in Seattle.

1. The point is made that the land-use criteria used by DCLU to evaluate helistop applications limit the use of helistops to those facilities that can demonstrate that ~~[redacted]~~ it is needed to save lives. The argument is that Cort is a tertiary care facility offering specialized services to the region, and thus demonstrates the need and offers unique medical capabilities that no other hospital offers in this region. There are two problems with this logic. First the land use criteria states only that the hospital ~~[redacted]~~ must needs a helipad to save lives. Every hospital in the state of Washington faces life threatening emergencies probably every day. There is no mention in the land use criteria about those hospitals having to be tertiary care facilities or having to offer unique medical services. They must only show that ~~[redacted]~~ the helipad is needed to save lives. Secondly, Mary Bridge Hospital in Tacoma offers the same medical services that Cort does with the exception of Cardiac Surgery. Yet in many instances already ALDW has flown right over the roof of Mary Bridge in order to supposidly save someones life at Cort. Cort is not unique from that standpoint. If these people involved in transporting these patients can afford the time involved ~~[redacted]~~ to be ~~[redacted]~~ selective ~~[redacted]~~ about what hospital they are sent to then why is

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a landing site at Graves field or the last Campus mat an adequate site for a helipad? Further effort has no permit and no pad and is landing anyway directly violating the land use code, why resident other hospitals do the same!

The 2nd argument is that the DSHSA has written two proposals to develop guidelines for the siting of helistops and policies having to do with the integration of such services with the statewide EMS systems. The claim is made in the DEIS that these guidelines along with those ~~[redacted]~~ being written by ~~[redacted]~~ the Wa. State Medical Association will deter proliferation & the improper use of such services.

The problem with this argument is again twofold: 1. Currently, there is nothing be done to promote the development of regional plan. So far many people ~~[redacted]~~ have given lip service to the idea but there has been no financial backing of such a proposal. According to my conversations with Dr Lothar Pinkers, Tittle. there is not even consensus on what criteria should be ~~[redacted]~~ evaluated in a regional plans. The last information that I received in this issue was that the "meat" of the plan had been gutted and as it stood now the plan called only for an inventory statewide to be taken of such services. By DCLU's own admission (a conversation with Katey Chaney) a regional plan would take years to develop.

According to a recent conversation with Dr. Lothar Pinkers the guidelines being developed ~~are to be~~ want, or thought of as "suggested guidelines". The Wa. State Medical Association does not have the authority to force compliance with such guidelines, and by DOH's own admission in this document, they will ~~only view~~ also view these recommendations as suggestions, not standards ~~to be complied~~ with which to comply.

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~~By~~ Why would these guidelines carry any more weight with any other hospital than COH?

Finally, COH ~~re~~ cites the CON as being another protection against proliferation. One only has to review the history of events resulting in COH's exemption from this process to realize how ridiculous this statement is. DSHS asked COH 3 different times to go through this process and their responses included filing a lawsuit against the state. Currently, the WA is in the process of preparing a DEIS on a similar proposal and they have not obtained a certificate of need. ~~Dec~~ St. Lukes hospital in Bellingham recently (this spring) went through the C.O.N process. The CON committee voted unanimously to deny the application but the ultimate action taken by DSHS was quite contrary. They recommended that St. Lukes make a few changes in their proposal and the certificate would be granted. What kind of protection does a process like this offer the public? DCLU has only to contact legislator Ken Jacobsen or any other for that matter to verify that there is a big push by lobbyists in Olympia to get rid of the C.O.N process altogether. which leaves absolutly no protection for the public from the proliferation of helipads and helicopter services.

Please eliminate these arguments from the final EIS and state that there is no effective means to guard against proliferation and improper use

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of such services, and that OCHH will be forced to deal with these permits on an application by application basis, which does not allow for the [redacted] statewide services development of a regional plan that is so desperately needed.

Please include in final document a detailed description of what the actual problem is that generated this proposal for a helipad at CoH campus. Please document all statements regarding problems that have been experienced [redacted] under the past WAST landing situation (Grants Field.)

Page 7 para. 3 - The proponent makes statement that in summary of 84-85 [redacted] CoH cases - of 621 patients associated with Blue Cross system 64% were categorized as "unique" cases. This does not make case for CoH having unique medical capabilities in the area

Page 7 para 3 — Please include in next document - [redacted] a discussion of who has classified CoH as a tertiary care facility? Was this through a self designation process? [redacted]

They may be the largest pediatric facility in the and but they are not the only pediatric facility. Because Blue Cross designated 64% of [redacted] a summary of cases in '84-85 as unique cases, data not mean that CoHD was the only hospital that could

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administer this care. Please include a detailed very specific discussion in mgt document of ~~what~~ COH's particular ~~regard~~ medical capabilities that no other hospital has. Please include a comparison of the capabilities and services available at COH and Mary Bridge Hospital in Tacoma. What other Childrens facilities or pediatric services are available in Idaho, Alaska, & Montana?

On page 8 para - 4 Statement is made that "Childrens is not a trauma center, as it does not meet all criteria necessary to be so designated." Yet all supportive ~~in~~ data in Dr. Nicolas report examines the transport of trauma victims. If there is no data available that suggests that neonates or other non trauma ~~pa~~ patients benefit from helicopter transport this document should state that clearly. Please include in mgt publication.
~~Dr H~~ I request that the medical need matter be remanded to Dr. Nicola for ~~further~~ further scrutiny. Dr. Nicolas mgt report should focus solely on the type of patients that COH transports.

Please discuss whether COH has plans to upgrade their capabilities so as to self designate themselves a ~~trauma~~ level a regional pediatric trauma facility? Does COH plan to Administer care in the future to pediatric trauma ~~victims~~ or burn victims. [redacted] Does COH ~~have~~ have a written or verbal agreement with HARBORVIEW ~~that calls for the treatment of the~~ as to who receives this type of patient now or who will in the future? Please include in mgt document. What sort of agreement has been signed between the involved hospitals (UW, COH, H. & Ro, transported by ALNW?) as to the division of patients?

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What would Cost have to do to become classified (city or otherwise) a trauma center.

Is there any provision in ALNW procedure for their medical team to stabilize patient at community hospital and then transport patient by ground? (e.g. how do they handle billing?) Will patients Always be transported and always by ALNW: transported to another hospital? Is there any provision for team to administer care at community or outlying hospital resulting in stabilization of patient and the option of leaving patient at referring hospital? Please discuss in next document. If answers are "no" please include explanation. Please refer to Dr. Nicola's report (pg. 3) "Once stable, a baby can be transported much more safely; some pediatricians prefer ground transport to helicopter because it is possible to stop an ambulance by the side of the road and listen to baby's heart and lungs and check the stability of its condition."

Page 10-5 ¼ paid. There is a minimal description of the training required by paramedics. Please include in next document a complete discussion of training required for paramedics — this is pertinent to this proposal and important to include because it will be the paramedics that will be calling for ALNW in many instances. What training do they have that will enable them to decide when to call ALNW? How will they be able to distinguish what patients can be transported by ground and which require air transport? How is dispatch handled - how is sick determined for ALNW to land. — at what risk to surrounding community?

Please expand this discussion to include the background and experience of the flight physicians associated with ALNW. Some specifics to address: 1.) Are they residents?
2) " " intensivists?
3) Are they board certified?
4) What has been experience in pediatric Emergencies?
5) Are they neonatologists?

Dr Nicolas report suggests (Pg. 3) that "One of the most important aspects in the case of the critically ill neonate is the transport of a specially trained

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medical team, the neonatologist/pediatrician and neonatal nurse to the community hospitals" to stabilize a deteriorating baby."

Page 10 para. 3 There is a reference to the guidelines being proposed by the Wa. State Medical Association The proponent suggests that "It is the opinion of the Seattle King County Dept of Public Health that Amcy recommendations be used as guidelines and not standards." This is quite contrary to what is mentioned in Dr. Nicolas report; "I would also recommend that the emergency transport of patients by helicopter be a planned part of a complete EMS transportation system, with specific criteria for use." (pg. 4)

Please resolve this discrepancy, and include a discussion of how any guidelines proposed will be implemented by this program (if new.) Who will monitor adherence to these guidelines? Please include in next document a copy of the Patient Distribution Guide (pg. 11-2nd para) that is used by hospital medical staff in determining appropriate medical center for treating patients. When was the last time this was updated?

It is mentioned that COH + UW only offer neonatal services (pg 11. para 6) and that critically ill or injured pts. are generally referred to COH but HARBORVIEW is the only hospital with an operating room staffed twenty four hours a day. How long does it take for COH to become 'operating room ready"? How is the ER staffed at COH? How is the ICU or NICU staffed at COH?

Page 12 – 1st para – According to DEIS in 1985 - there were 2 helicopter transports ~~patients~~ to COH out of 141 patients that were served by the County EMS systems. How does this figure compare with the number of total transports

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thus far in 1986? How do you account for the difference? (17.)

Page 12 para 2 (Item c.) "Major medical problems in a pediatric patient where time is critical for survival of the mother and/or the baby. Please be more specific, give examples of such cases. This seems like a very vague guideline for a paramedic to be using in order to determine method of transport required.

Item d. in guidelines for a paramedic "Multiple injuries that indicate bleeding of such a nature that the patient is in danger of bleeding and within minutes." This would be classified as a trauma patient and not transported to COH - but rather Harborview. [redacted].

Item f - "Major head injuries" = Trauma and would be transported to HARBORVIEW.

Please include in discussion in next document

Page 12 - 2nd para. Discussion of guidelines that paramedics use for determining mode of transport. Under item #1. examples are listed of presenting medical problems that ~~require~~ would most likely require helicopter transport. What specific data do South King City would transport these patient by helicopter rather than ground?

Page 12 - last para. "under no circumstances should there be a delay at the scene waiting for a ride from the helicopter." Please examine flights ~~to~~ regarding near drowning patients transported from Auburn. Did the paramedics ~~not in fact~~ in fact wait for HLNW to arrive at a Park and Ride lot that they had transported the patient to in order to be picked up? What

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was the reason for this action. What was the delay in time, What effect did this have on patient condition?

page 13 - item #4 "Permission to use any helicopter by a paramedic must be ~~g~~ obtained from the mobile units base hospital physician. Please include a discussion which details the dispatch system of HLNW. What has been used to date, and what might be contracted in the future. Please verify that the paramedic must call into to units base hospital physician, who then must in turn call the dispatch person for HLNW who must in turn contact dispatch Doctor on call who must ~~in turn~~ then return call to ~~to~~ units base hospital physician, who must then return call to paramedic unit giving O.K. How much time on the average does this dispatch system ~~take~~ require?

page 13 - item #6 — Please explain the rationale used in determining that paramedics should not call to get estimated arrival times for MAST and HLNW?

page 13 - last para. ~~Please explain~~ COH describes "critically ill or injured patients as those patients who might die or become seriously damaged unless appropriate treatment is received immediately." (Neff 1986) Please explain in next document why some patients have been flown over the roofs of hospitals that could have provided sooner ~~to have patients~~ the same treatment that COH administered.

Page 14 ~~and~~ 15 & 16 Please explain how these patients were selected for this list. ~~Is this~~ Does this list represent all patients transported to COH for this time frame or have these patients been selected over others to be

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represented in this document. If so how have these patients been selected? Are these consecutive cases that were transported to CoH? [redacted] What is the relationship between this list and [redacted] Attachment "A"

Page 13 last para. "Dr. Neff suggest that critically ~~ill~~ ill patients who have been brought to CoH include ① near drowning - Shouldn't these go to nearest hospital?
② premature children - may go to UW as well
③ severe injuries - is categorized as trauma and would go to Harborview.
④ overwhelming infection - CoH or closest hospital?
⑤ ingestion of toxic substance - Shouldn't this go to nearest hospital?

Please include more specific discussion of what type of patient will be transported to CoH and to provide explanation of how and why decision would be made? The explanation [redacted] that is provided in this paragraph does not make sense. If patients (trauma) are transported to Harborview than that is where the surgery would be done. ~~How can one determine~~

Page 17 para 5 Dr. Neff suggests that ~~the~~ if the patient is gassed in transfer there is a risk that a child will become hypothermic due to the opening of the isolette. Is it not true that the isolette would not be opened until it was placed in the ambulance? — which would consequently have little effect on the patient?

Page 18 - Table 3.
This table should be elemated from the draft. No one is suggesting that ~~pate~~ critical patients be transpalted by ambulance from

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Enumclaw – only that the helicopter transporting them land at the soccer field, in which case the difference in transit time would be ten minutes or less. In addition almost all patients from Enumclaw could be served at Mary Bridge Hospital Tacoma which is a lot closer to Enumclaw than COH/Seattle.

Please include a Table that shows the difference in transport time when comparing ~~took~~ the transport of a patient from Enumclaw to Mary Bridge and Enumclaw to COH!

Page 19 para 2 — Please include a list of physicians that Dr. Nicola spoke with both in and out of the region in gathering information for his recommendation.

Page 19 Dr. Nicolas ~~report~~ analysis and report are seriously flawed and should be reexamined. The data he uses to support his findings have to do with studies dealing with trauma patients. COH does not receive trauma patients. There is current data that has been released that relates to helicopter transports that should be included. From what bases does Dr. Nicola determine that COH may require three patient transports per month?

Pg 20 para 2
Dr Nicola suggests that some patients may be adversely affected by 3-5 min. delay in receiving treatment. Please have Dr. Nicola ~~to~~ address in next medical need analysis. ~~to~~ the issue of whether or not ~~those~~ some of these patients ~~are~~ being adversely affected by the delay in treatment which is a direct result of patients not being sent to the ~~a~~ nearest medical facility that can provide the appropriate care.

page 20 para 6 — Please clarify and expand the statement about the phase-in of Blackhawks ~~being~~ by MAST being

Our analysis, as well as many studies, are now showing that DOT's assumptions to obtain

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altered. The reference is listed as Greenwalt, 1986. Please include in next document a detailed description which includes the physical characteristics of the Black Hawks (i.e. weight, dimensions etc.) This is important information, and pertinent to this proposal as these helicopters will land at COH once the helipad is built according to Nancy Greenwalt.

Page 21 para 4 — Proponents mention that from 1983 to date MAST transported 29 patients to COH.
- Please compare the use of MAST for transporting patients with the current use of ALNW (May '85 — Present) Please explain why there has been dramatic change in number of transports.
- Please have MAST document whether or not there were ever any problems with transfer at soccer field.
- Please explain in next document how MAST will continue to operate in region with ALNW when they are restricted from competing with private transport services.
- Please include a copy of any agreement which exists between MAST and ALNW for the division and transport of patients.

Page 22 para 2 — Please include in next document a copy of ~~contract~~ current contract ~~and~~ or proposed contract under which ALNW is or will operate in future. This information is critical in terms of analyzing this proposal as it (CONTRACT) "characterizes ~~the personnel the operational~~ the airlift program and organizational structure, the roles of support, distribution of revenues, indemnification, record-keeping, services extended to non-participating hospitals, and provisions for amendment and termination of contract." It is well documented that in many locations across the nation, the improper use and abuse of such

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helicopter services have been the direct result of the contract signed for such services.

Further, since this Consortium was formed in ? (1984) there have been at least two different contracts, possibly three. I have been given conflicting information about ~~how this service is paid for~~ who it is that contracts with Seattle Jet, what function a Rule Hospital Air Transport, Inc serves and who carries liability insurance related to a helicopter accident. The ~~contract~~ contract which defines this ~~structure~~ (?) should be made public information.

Page 22 - There is no mention of what type of helicopter is used ~~when~~ for back-up in AGNW service. There are times when AGUSTA will be serviced or inspected by FAA which will preclude the aircraft from being used for transport. What type of aircraft will be flown in this situation. What are ~~specific features of this aircraft~~ How is it maintained? How does it compare to Agusta in terms of noise? generated and what ~~are~~ is ~~the capabilities~~? (~~is it twin engine? Turbine?~~) ~~what is seating~~ the standard medical equipment onboard?

(i.e) Dimensions, weight, engines, fuel, range, speed, seating?

~~Where~~

Is this aircraft capable of carrying a 16016. isolette unit w/ ventilator?

What is 147 gallons equivalent to in terms of measured weight? This is important information. To include in next document. At the helicopter that was used in noise test did not carry an isolette (weighing 160 165.) nor did it carry a full crew, (only

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a flight nurse and pilot.) It is my understanding that the heavier the aircraft the more noise it generates. At the time of the test the pilot told me that the full tank of fuel made up for the weight that would be experienced added with the isolette and full crew.

Please verify in next document. If this is not accurate information then noise studies are not valid.

Page 24 para 4 — Table two describes AlNW helicopter transports through mid June 1986, yet AlNW began services in May '85 — ~~=~~ please include total number of transports ~~A =~~ to COH May, June and July '85. If there were none during this time please specify.
Does Table 2 represent consecutive transport to COH - were these all the transports to COH via AlNW during this time period. What other patients did COH receive via other helicopter services during this time and what were the specifics of each case as listed in Table 2.
If this is not a complete list of consecutive flight how were these selected?

Page 25 — Table 5
Item #4 — what is basis for forecasted figures in Table 5? Please include in next document method used for these projections ~~which COH's patients transports~~
The prediction is that COH's transports will grow steadily over ten year period but as a percent of the total AlNW total transports - there is a steady ~~E~~ decline. Please explain basis for this prediction in next document.

Please verify →

It should be noted that this table also does not reflect any "return flights" as represented in Attachment "A."

Please include in next document a table that does include ~~a reflection~~ numbers that are reflective of all flight segments involved

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in the transport of patients as proposed by COH in this ~~document~~ DEIS. This would include the picking of medical team at COH, the pick up and delivery of patient, and the return of the helicopter to the base. Please include predictions ~~[redacted]~~ that allow for "return flights" as well since this is also being done and involves 2 flight segments over the community.

Accurate numbers and method for projecting these figures are critical to any analysis of this proposal, as the risk to the community must be properly assessed and mitigated in relation to the benefit that patients might receive from ~~[redacted]~~ this transport and the location of the landing site. A final EIS lacking this information would be inadequate.

Page 26 para 1 Please include an explanation in next document of why ~~specifications~~ dimensions of helipad are less than what is suggested by REMSPA. and please describe how ~~specifications~~ dimensions of COH's proposed pad compares with those suggested in FAA guidelines for construction of helipad.

Page 26 para 2
What is meant by "generally helicopters are given more latitude in their operations than fixed wing? Please explain.

Page 26 para 3 — Please include in next document a copy of current FAA form 7480-1 filed with FAA in regard to COH's proposal for helipad.

Please note that because there is little or no monitoring of this type of flight activity once approved by FAA — the burden of dealing with pilot negligence and deviation from approved flight path rests with the citizen as FAA states quite ~~clearly~~ clearly that unless complainant can prove negligence or operation of aircraft

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in unsafe manner, the FAA will generally not take any action on complaints. ~~Has~~ ~~the City~~ Is the city ready to share in the responsibility of monitoring these flight paths. What role might the city play in enforcing ~~these~~ adherence to these flight paths? What authority will city have over aeromedical pilots if this ~~permitted~~ permit is granted?

Regulation:

While the Wa. State Medical Association is developing "user guidelines" that may applicable to these services as proposed in the EIS, the proponent makes it quite clear that these will be viewed as guidelines not standards. ~~If these are not approved~~ If there are no specific criteria to which the operators of such services must adhere, ~~on what guidelines what authority will a peer review committee have?~~ from what basis will a peer review committee operate? The use of guidelines rather than standards diminishes the ~~possibility~~ ability of any group or agency having any authority over such services. What would characterize ~~a~~ inappropriate use of such services if there are no standards with which to comply, and what legal ~~[redacted]~~ support would exist for the revocation of a permit in the event of inappropriate usage? Who will assess the appropriateness of patient transfers, how often and who will empower this committee? How would the committee be selected? How can the community be assured that a such a group would ~~develop~~ report inappropriate usage. How ~~would~~ could this committee deal with the patients right to privacy and how would committee ~~[redacted]~~ view transports that were inappropriate but initiated by patient request? Dr. Copass has stated clearly

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that he is in the business of providing a service and will not deny this service to anyone. Will ALNW be held accountable for such flights if this permit is granted and conditioned with peer review? Who will be accountable COH, ALNW, Seattle Jet Hospital Air Transport, Harborview, the ~~pilot~~ referring physician? What will be the consequences of violations of the permits issued?

~~It should be~~ Will there be any formal or informal public review of the guidelines proposed by Wa. St. Med. Assoc. subcommittee before they are adopted? What can the city do to insure some citizen input to the process?

Please disclose in next document whether ALNW, Sea. Jet or Hospital Air Transport, Inc. are members of ASHBEAMS. If not please explain why. If all or one have enrolled please include in final EIS the criteria ~~they~~ to which they ~~must comply~~ have agreed to comply. Does the city have the authority to enforce compliance with such guidelines? Are ALNW pilots members of the NEMSPA?

Please include in next publication of this document an interpretation of WAC 248.18.285 as proposed by the city of Seattle legal department. Please state whether or not the city is in agreement with proponents interpretation of ordinance. If the city is not in agreement with proponent on this regard how might the use of this helipad be regulated by COH and how would city persuade COH to do so. What consequences would COH face if they did not comply?

If DCLU issued permit to COH for construction of helipad on their campus, what possible conditions ~~must~~ could be placed on the permit. How would these conditions be enforced and such service monitored over time? Who would be responsible

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for determining such conditions? ~~It~~ Please provide a detailed discussion of possible conditions and potential for enforcement Please suggest who would be charged with responsibility of reporting violations other than the appropriateness of transport? (i.e non compliance with noise abatement procedures?)
A complete discussion of this topic must be included so as to determine whether or not the adverse impacts of such a proposal on surrounding neighborhoods might be mitigated in the event of a permit being issued.
~~that assurance be satisfactory~~ ~~concerning~~ ~~guarantees~~ ~~community~~ ~~be required~~

The conclusion that should be drawn and stated in next publication with regard to regulation of such services is that these proposed policies as well as any other of like nature are and will be totally unregulated once flight paths are approved by FAA and that no agency, whether federal, state, or city has the authority to modify, revoke, or even condition such policies. Please state so.
~~It~~ It would be irrational, irresponsible and certainly ~~succesful~~ subject to challenge in a court of law for the city to grant a permit for this proposal ~~[redacted]~~ cognizant of these facts.
~~[redacted]~~

Pg 29 PARA. 5
Please include in next document a discussion of the role the VA. State Dept of Transportation might be encouraged to play in this issue. In other States (ie Louisiana) it was this this department that orchestrated and carried out ~~a formal~~ formal studies of aeromedical and overall plan for such transport within their states. ~~Only produced~~ Does this Dept have the capability of conducting such a statewide study + plan in this state?

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Has this dept. been considered in discussion of regional planning? Since the Div of Aeronautics "deals specifically with air transportation by participation in statewide transportation planning, assisting in enforcement of FAA regulations, investigation of aircraft accidents providing search and rescue support for aircraft and providing funding for public aviation facilities — it seems a natural! Please research and report results in next publication.

Page 28 Para 3
With regard to section on ~~f~~ conditional uses permitted ~~in~~ in Major Institutions zoning.

€ The proponent must show that

1a the helistop is needed to save lives.
this has not been shown by information provided in this document. Of ~~case~~ transported patients 50% Died anyway. ~~Dyed~~ It is not clear or even addressed whether the other remaining patients lives were saved ~~do~~ the helistop being located at CoH. — Please discuss how CoH plans to document that they are in compliance with this first criteria. Does the city believe that CoH has provided adequate ~~information~~ information from which they will be able to determine whether or not this proposal meets this criteria? Please discuss how city views report issued by Dr. Nicola as well.

b. the helistop is located so as to minimize impacts upon surrounding residential property.
— Have city personnel who will be responsible for making this decision visited the CoH complex and witnessed a helicopter landing? Without doing so I don't believe that one can adequately assess whether proposed site location mitigates the impacts ~~on~~ upon surrounding

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residences. The city should conduct an independent survey of residences within [redacted] of heliport location to determine what their experiences have been to date with the helicopter landings. With particular attention to how it has changed their lives (i.e. some residents feel they must sell property and move, some has experienced personal damage due to vibration, some have experienced physical changes [illegible], and psychological changes (ie elevated blood pressure, sleeplessness, anxiety, fear, stress.)

3 block area all directions of COH

and dep. loss in prop. values.

where to put?

What type of homeowners insurance will be required of residents closest to heliport and how will premiums be effected?

[redacted] A final EIS lacking this information which is available due to the fact that COH has been landing only feet from the proposed site since May '85 — would not provide sufficient information to determine from which to determined whether or not Item b. of Conditional Use-Helistops had been ~~met~~ met. Please ~~include~~ conduct survey and include results in final EIS.

Item C. 3 Use of the helistop will be restricted to occurrences involving life threatening emergencies.

— Since this service has been operating illegally at proposed site since May 85 it seems appropriate to review all flight records to determine whether or not COH has been using helistop for only life threatening emergencies. Please form a "credible" Review panel that includes objective people, lay people as well as physicians to determine whether flights to date have been justified. Please include

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~~[redacted]~~ criteria for evaluation and results in page 6 is. (30.)

Please see Attachment "A" as this reflects that use of helistop is not being used for life threatening cases i.e. Human Rights Etc.

(2.) "The directors report shall examine alternative locations for a helistop, including sites outside the institutions boundaries which would accomplish the purpose of the helistop with a lesser impact upon residential areas."

The purpose of the helistop according to CoH is two fold; Critical time saved and decrease in patient manipulation

Locating the helipad at an alternate site located on the East campus ~~[redacted]~~ saves ~~[redacted]~~ atl the same amount of time in transport less a few minutes. These few minutes that ~~[redacted]~~ might elapse could because of an additional transfer can be made up via some other leg of the transfer with minimal modifications. The fire HNU can do something which would allow them to take off sooner. The pediatric team might respond quicker for pick up - a possible change in flight path might make arrival at the destination sooner. Preparations at referring hospitals may expedite the transfer. Improvement in the overall dispatching system which Robo Childs, administrator of HNU describes as "archaic" could ~~[redacted]~~ easily make up for the minutes lost during a field transfer. Most people involved in planning and rescue and emergency transport will agree that it a very small percentage of cases in which minutes are critical Surgery. (Dr. Nicola) In most cases transport of patients take hours. (Flight time, stabilization time, transfer time) ~~[redacted]~~ In view of this an alternate site at the new campus would meet CoH's first objective.

The second objective is to decrease patient manipulation. In talking to people involved in doing emergency transport I have discovered

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that ~~[redacted]~~ some people think one is really "splitting hairs" in discussing whether or not there is more patient manipulation due to an additional transfer at the East campus. The reason being is that if a site is permitted at the CoH campus in the kitchen garden area the helicopter will land, unload patient on to a gurney (same procedure as field) or stretcher and then will be pushed, 120 ft ~~into the emergency room at CoH~~ or (all the while exposed to the elements) into the Emerg. room at CoH. All the while exposed to the risk of further IV becoming tangled, dislodged, disconnected At the field the ambulance pulls up to the aircraft the patient is moved into an ambulance ~~and then~~ (is not exposed to elements anywhere near as long as ~~there~~ in case of proposed action) and then is transported to emergency Room directly and unloaded. He is not subjected to the jostling ~~[redacted]~~ associated with a 120 ft ride on a gurney. The point is that neither procedure is perfect, they both have their disadvantages and one is not inherently better than the other. ~~When one weighs these facts with the ever present risks to the community in landing at CoH~~

The alternative site ~~is no better~~ offers better safeguards against hypothermia than the proposed CoH site. When one weighs these facts with the ever presents risks to community associated with landing at CoH, the prudent site selection is 'an' alternative at UW East campus, and this alternative meets CoH's criteria for decrease in patient manipulation. windchill factor from blades, and 120 ft trip

Please keep in mind that the purpose of the Major Institution Policy is to balance the need ~~[redacted]~~ for ~~protect~~ institutional growth and change with the need to protect the livability of neighborhoods.

Locating the helipad at the UW East campus area is ~~a compromise~~ not an idyllic situation. But best it is a compromise that the Eastmoreland and nonlake Community is willing to live with. Much of our

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communities will still suffer adverse impacts from the ~~with that proposed~~ alternative site. The noise will still be a concern although to a lesser degree. The flight paths may be modified but I doubt seriously altered and the number of flights COH receives via HLNW may even escalate as a result of the use of ~~an alternate~~ the east campus area. The burden of ~~repairing~~ violations will still be on the surrounding communities. What part of compromise has COH offered to live with? They have dismissed the possibility of an alternate site saying that it does not meet their objectives. Please include in final EIS a genuine consideration of alternate sites which includes a realistic assessment of the proposed transfer at COH landing—SITE.

(Please refer to testimony of ~~Dr. Schneider~~ Dr. Jerry Schneider from public hearing held Sept 23, with regard to Draft EIS.)

(B.) what steps might be initiated by proponent and HLNW to insure that they doesn't happen in future? How might geographic area be divided so as to delineate what patient are taken to what hospital?

Page 33. para 2

(1.) The sponsors objectives are suspect due to the fact that HLNW is not attempting to deliver medical expertise available to critically ill patients in the least amount of time after adding A+B

2. They are not minimizing transport time from the place of patient pickup to [redacted] ER at COH

Please describe in detail the system which dispatches HLNW. ~~How~~ What are existing problems with this system? How might it be changed in future to expedite transfers? How does ~~total~~ complete dispatch time ~~to~~ compare to the time involved in transfer at soccer field?

(4) Please explain why many hospitals cases have been taken to HLNW when hospitals that could have adequately treatment was quickly than COH?

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The Proposal may not minimize or reduce additional transfer.

Please define what is meant by "ground crew" that will assist in transfer of patient to ER at COH site. Will an ambulance be used to transfer patient from COH helipad to ER door, as is the case for the hovered. If not please explain why. ~~that no potential problems~~ The proponent has not discussed what potential problems exist for the patient landed at COH and then transfered 120 ft to the ER. Please include in final EIS. Consider in discussion jostling and movement of patient, exposure to elements, (i.e rain, cold temperature, snow, [redacted], wind.) consider also the wind chill factor produced by aircraft, the risk involved in disconnection of life support lines etc, the potential problem associated with moving patient on gurney over flick surface. Please examine what potential effects these problems may have on patient stabilization as these must be weighed against the potential problems of a transfer at the soccer field.

the 4th objective, "to construct a helistop that minimizes potential environmental impacts in a manner that would not sacrifice proper patient medical treatment." This alternative locations in this section have not been adequately reviewed and discussed in order to determine that the proposed action is the action that most effectively meets this objective.

Please include in next document a comprehensive discussion of alternative sites both on and off the campus of COH. ~~It is not acceptable for~~ ~~not be adequate to the document~~ ~~to~~ merely stated that an alternative has been judged unacceptable is not an ~~adequate~~ sufficient discussion of alternatives. Who has determined that these sites are unacceptable. The discussion does not include ~~what~~ you transfer of patient would

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be made and all the other information that is provided for in the proposed action section (i.e flight path, ~~transportation~~, transfer time, transfer methods associated transfers ~~[illegible]~~ problems.), how might the reader of this document ~~[illegible]~~ determine whether or not an alternative is even remotely feasible? One cannot, one has to rely solely on the biased opinion of the proponent in this situation. Please redo this entire section giving it as much consideration in your document as is done for the proposed action. and is required by SEPA.

In addition Please address specifically

(1.) Why would a route through the medical center be less desirable? The patient would not not be exposed to the elements ~~[illegible]~~ which results in proposed action. ~~Changing places of pad~~

(2.) Changing places is mentioned as being a disadvantage. Does the UW share this opinion? Their rooftop location will require a descent by elevator 5 floors to the emergency door. Please address.

(3.) Surrounding tall trees are not seen as a disadvantage in proposed action. They have been earmarked for removal. Would this not likewise be a solution to this problem with alternative location of pad?

(4) Please explain why flight path would change in administrative wing ~~location~~ ~~abbreviation~~. and parking surface parking lot alternative How could landing side be any closer to residences than what it is for Laurelon Terrace? Please compare distance and report

(5.) Pg. 3: para. 2 — "The significance of the safety distinctions are believed by the pilots to be negligible." The pilots referred to are

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(35)

HLNW pilots whose livelihood depends on ~~acceptance of this~~ the continuation of this service
Please provide an unbiased ~~Report~~ safety
report that relates to the proposed action
as well as the alternatives on and off Campus

Pg. 39 Had all concerned parties been involved
in the scoping process there would have
been an opportunity to discuss as an
alternate site [redacted] the possibility of sharing a helipad
[redacted] on the
NOAA property (Sand Pt. Way.)
@ NAVY

This site is already paved [redacted] site [redacted]
secured. and marked with a big red H. It has adjacent parking as well
It is easily accessed from the lake without
having to fly over the homes of [redacted]
surrounding residents. There is a
paved road that leads from the site out
onto Sand Point Way (short distance) and the distance to
COH is minimal. (3 minutes by car)
Please explore this situation as a possible
alternative to a site at COH. and discuss
in final EIS. Since the pad is already
built and would eliminate a major
expense, and have minimal adverse impact
on surrounding neighborhoods, it should
be considered.

Pg 40 - Please address why the proposed helipad
~~site~~ specifications are less than those proposed by
NFMSPA for medium sized helicopters.
How do these dimensions ~~for~~ compare with
those suggested by the FAA?

Who would be responsible for turning on lights
at helipad in event of emergency? Isn't this
an additional risk to safety of community.
failure to turn on lights may result in
a catastrophic accident. Please state that
~~Future~~ an added advantage to an off site
pad is the option of leaving lights on - 24 hrs a day,

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and not ~~[illegible]~~ being subject to human error. (36)

Pg 40 - Please state in not document that "future" in relation to this proposal equates to ten years, that someone ~~[illegible]~~ undertook estimate "potential for growth of this proposed service Please provide estimates for twenty year growth so that the cumulative impact over time might be properly assessed and weighed now when decision is being made.

Pg 40 - Why haven't signs been posted warning people of current helicopter activity on campus as a safety precaution?

Pg 41 — The projection for expected flights in year 1990 is not any where near accurate. COH ~~[illegible]~~ received in Aug '86, 17 flights via HNN alone. 3 or 4 came to emergency room, the remainder was transferred at Hahnemann to ground ambulance and transported. The future (10 year) projection is representative ~~of COH is [illegible]~~ of the number of flights COH is currently receiving. Please adjust figures and present more realistic predictions for future growth. Dr. Nicola estimates that the average number of flights that COH will ~~[illegible]~~ receive once helipad is located on campus is 30-40. Since the proponents refer to Dr Nicolas report ~~[illegible]~~ for support of their proposal ~~[illegible]~~ many ~~[illegible]~~ places throughout the draft, why ~~[illegible]~~ his figures ignored? Please provide realistic figures in terms of anticipated utilization both current and projected. If COH does not agree with Dr. Nicolas figures then state so and provide argument for this position.

Page 41 2nd para. The proponents ~~[illegible]~~ misinterpreted and misrepresented the findings by Dr. Nicola. He states that COH may transport 30-40 pts. to

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~~one~~ on any given month and that 3 or 4 of these patients may indeed need to be transported to the roof but likewise there needs to be some flexibility built in to the ~~allowed~~ permitted number of landings that should be allowed to land and COH should not be allowed to exceed that number.

Pg. 41 3rd para — How has proponent arrived at conclusion that COH shares 17% of ALNW total flights? Please include ~~in next~~ calculation in next document. In order to determine whether or not one can realistically predict that COH's transports will remain constant one must have some conception of what ~~COH~~ changes in capabilities might occur. While I recognize that it is difficult to determine what physicians may leave COH in future, certainly COH has an institutional plan for growth which would reveal what additional services would be made available at COH in near future that would affect the total number of transports expected. What programs and/or specialists does COH plan to add to present staff that may affect this proposal?

~~It~~ It is stated that ALNW has capability of performing 80-90 flights per month. ~~No demand~~ How does ALNW plan to meet demand for additional flights if requested? Would there be additional helicopters leased that might land at COH? How might an expansion of ALNW affect COH in terms of ~~current~~ present flight hrs and expected flights? #'s What happens to flight #'s if a hospital drops out of consortium?

Page 42 para 1 — Please include in next document any agreement reached with MAST in terms of landing and communication. If agreement had not been reached, please include a discussion

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what is being considered by mainland parties. (38)
What efforts will COH make to meet with
other Biomedical transport companies in
the region that may ~~transport~~ have reason
to ~~transport to and~~ transport to COH?

Please define and describe a pre-arranged
transport by ALNW.

How much time is ~~involved~~ elapsed on the average
from the time the first call comes in to
dispatch system until the time the helicopter
lifts off?

Pg. 43 In reviewing ~~past~~ history of ALNW helicopter
service to date, ~~what~~ and how many instances
has the helicopter landed in front of ER Door of referring hosp
In how many instances ~~have~~ has an ambulance
~~rode~~ involved in the transfer at referral hospital?

How long must helicopter run after landing
at COH before engine may be shut down?
How long must engine run before actual
lift off?

~~How~~ does the number of flights transported
by fixed wing to Bethel field ~~compare with~~
~~those~~ that are met by ALNW compare
with those initiated by a referring physician
requiring pick up of medical team at COH?
Please provide figures that are representative
of service since acquisition of helicopter by ALNW.
(Please review statement on pg. 43 ¶ in which
proponent maintains that there would usually
not be need for pick up of medical crew at COH.)

Page 45 What patient ~~weight~~ condition ~~was~~ might
require diviation from flight path?

Please define "Adverse" weather conditions
during which ALNW would not fly.

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(39)

Please provide comparison of faa standards NEMSPA and ALNW policies and/or standards for weather condition

How does the noise generated by ~~Dynette~~ the ALNW helicopter relate to the ~~[redacted]~~ turn pattern over the parking garage in attempting to land at COH? What are specific dangers associated with this ~~[redacted]~~ restricted turn.

Pg 45 para 4 ~~[redacted]~~ Please discuss the proximity of the helicopter to residences in relationship to the unusual winds which requir deviation from normal flight path.

Please state clearly in final EIS that when ~~[redacted]~~ winds are out of northwest quadrant and 17 knots or better the secondary flight path will be used which puts the helicopter over the Villa Academy School, Laurelhurst Elementary, St. Bridget's church. Many people do not look at maps and this information needs to be clear for those assessing this proposal.

Please check estimates for length of time elapsed from moment of touchdown until patient enters the emergency room. There will have to be time allowed to push patient on gurney 120 ft. to the emergency room doors. This movement alone may require more than three minutes. Please adjust figures for final document to reflect this leg of the transfer.

How long can one expect it to take for the pilot to retrieve the isolette and take off. ~~In proceeding, resident, it is important~~

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For people trying to sleep at night in neighboring residences and for ~~people~~ patients being cared for at Cott this time is critical as it is disruptive to normal sleep patterns. Please include in final document. (#10)

Conclusions drawn on page 46 (last two paragraphs) ~~are not~~ need to be supported by providing comparative figures for transporting patients by ALNW and Medic One or other responding ground ~~the~~ transport systems. Please review all patients that have been transported via ALNW since May '85 ~~and provide~~ determine transport time for each and provide estimate for similar transport by ground. Please include ~~the~~ origination of patient and ~~the~~ specific time initial call came into ALNW. Also include how many actual transfers ~~3~~ each patient experienced before final delivery into ER at Cott. ~~Many claims~~

How might the risk of the patient destabilizing been decreased by transporting the patient ~~by~~ to the nearest qualified hospital to administer the appropriate level of care, rather than flying to Cott. Please review patient transports May '85 to present and provide this information in final EIS. Please provide data to support claim that "time savings can reduce suffering, decrease hospital stay time and in the most severe cases, can mean the difference between life and death" if no data is available that pertains to specific nature of patients transported to Cott (not trauma & burn data) please remove this statement from document. Unsubstantiated claims of this nature are inappropriate in this document.

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(41)

What role [redacted] will medical malpractice play in the decision to transfer patient via AtNW and/or the decision of where to land? Please include discussion relating to this topic in final EIS. Please use unbiased sources (those having no affiliations with [redacted] proposed service (AtNW) or any affiliations with participating hospitals.

Figure 7

What safety risks are associated with the noise abatement approach in figure 7.

Page 49 — Please discuss "fire prevention system" that helistop will incorporate. Where has the oxygen tank been moved to? Please describe location in terms of distance from the proposed helipad site.

Please explain comment. "Childrens and Aeriel have actively participated in the development of communications guidelines to ensure communication from air-to-ground is facilitated.

Please include AtNW specific guidelines on acceptable weather conditions in next document as mentioned on pg. 49 - paragraph 4. In addition provide AtNW pilot qualifications. Please document that AtNW requirements exceed those guidelines developed by NEMSPA and [redacted] ASHBEAMS.

What provision might AtNW make for pilots to report safety concerns without fear of losing employment? How are pilots checked out before lifting off? What sort of aircraft maintenance program does AtNW employ. What safety checks are made on craft before lift-off? Where are windshield wipers for AtNW aircraft? How often does FAA inspect aircraft ~~too~~ what does inspection consist of? Please provide in next document

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The safety record for the Agusta A 109 Mark II. (42)

What is minimum distance allowed by faa between helicopter ~~and~~ landing site and surrounding buildings. How close to a building does the faa allow a helicopter land.

As there a weather advisor that will be stationed at CofH to report to ALNW? and incoming flights - please discuss

How does CofH see a ~~peer review panel~~ review panel functioning. Please discuss possible participatats, frequency of review, violation and enforcement, ~~[redacted]~~ confidentiality.

Please include in next document ~~[redacted]~~ copies of ~~letters~~ correspondence between Tallmen Trask and Trueman Katz as mentioned on page 50 in the DEIS Also include letter to Bob Klug, Lauelhurst Community Club President with regard to same topic (Trdeman Katz was sent a copy.) as your comments on pg 49+50 are misleading and need to be clarified.

Page 52 - The 15 minute transfer ~~da~~ may not be accurate as described. I have been told that in most cases the ambulance pulls up very close to the helicopter. consequently the right to nine minute estimate of moving patient from chopper to ambulance is an exaggeration. Please verify that in most instances the patient is not mauld across the field to the waiting ambulance. Also please clarify for readers that ~~[redacted]~~ proposed helipad alternative ~~to Tallmen Trask~~ area would be paved and have adjacent parking lot and allow for ambulance to ~~[redacted]~~ back up to aircraft.

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Please provide data ~~pp~~ to support Dr. Nepp's statement (1986) on pgs. 52 & 53. If no data is available please remove from this document. (43)

Page 53 – Please explain what ~~@~~ specific liability reasons would preclude COT from using proposed new rooftop helipad. Please include any documentation of this communication in final EIS. (Goetzen, 1986; Draweraft, 1986)

Argument about traffic delaying the transfer of patient from UW to COH is ridiculous. There is a ~~road that along~~ main road from Stadium through east campus area that would eliminate any problems ~~of~~ caused by congested traffic. (See Public Hearing Transcript, Dr. Jerry Schneider testimony.) Please address this point in final EIS.

Page 56 ~~I would like to Praise City of Seattle~~ ~~for departments comment on [illegible]~~ ~~made in DEIS which stated that~~

In the limited landings section. Please address in the final EIS that the possibility does exist for COH to remove tall trees so as to avoid deviation from proposed flight path. in final approach to COH.

Page 57 – ~~*~~ In final EIS please clarify that potential land problem may be eliminated by considering a landing site already paved as mentioned in Dr. Jerry Schneiders testimony, public hearing DEIS Sept 23, 1986.

Page 57 ~~para~~ paras – Please include in final EIS a copy of Section 7.70.040 of the Revised Code of Washington. and a discussion which reveals whether the City is in agreement with

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the interpretation made by the Hospital. (44)

Pg. 58 Please include in final EIS a report from Medic One which clearly reveals their policies on running their siens. Also include a discussion of agreement COH has made with Bellehurst Community and City of Seattle with regard to ambulance siens approaching their hospital — Please review past permits issued COH by City of Seattle.

Pg 58 Please remove statement about approval of proposed Action or Alternatives not having an impact on the number of Emerg. helistops constructed in this region. This is an opinion expressed by the proponent that is quite contrary to the trend across the United States that has been well-documented.

Pg 58 ~~Please provide survey population of those elementary schools located~~

An added benefit as a result of reserving implementation of the proposed action for the future is that the area school populations (which have been sadly overlooked in this DEIS) will not be subjected to noise and vibration ~~to the~~ and resulting disruption to classroom activity. In addition they will not be subjected to ~~to possibility of~~ COHs overflights in bad weather and possibility of crash on school playground that most likely would involve death and destruction. Please address in final EIS.

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Helicopter Safety

(45.)

Pg. 59. Please identify recognized authorities mentioned Pg. 59 paragraph 3.
For final EIS please use unbiased sources rather than opinions of AHAW pilots. Please recognize that they may be experiencing a conflict of interest.

This discussion of "trends" in helicopter safety is not germaine to the issue. How many EMS programs were even in operation during the time frame 1975-1981? — How has that figure changed during the years '80-'85 Please focus on safety as it relates to the EMS helicopter industry from [redacted] 1982-'85. And include ~~statement~~ CONCLUSION — that it has the WORST AVIATION record in history. (EINHORN. AMA NEWS Sept 5, 1986)

— Please secure NTSB statistics for general aviation for the years 1982-85 and provide that information for final EIS.

On pg 60 the ~~increase in~~ proponent maintains that the increase in helicopter safety is due to the the increased use of turbine powered engines. But on pg. 65 Table 11 shows that in 1981 the single leading cause of ~~helicop~~ accidents among turbine powered helicopters was engine failure or malfunction.

On pg 65 proponent makes the argument that ~~[redacted]~~ pilots are crashing due to striking wires or obstacles (single greatest cause of EMS accidents 1979-1985) is because the pilots are unfamiliar with the landing area. I would like to submit that this has more to do with the inability to see wires and obstacles as a result of flying at night. The second greatest cause of EMS accidents is power loss or mechanical failure (26%) — Thirty six percent of these accidents resulted in injury or death.

(see 67 1st para ?) → flying in restricted areas

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Helicopter Safety.

Pg. 67 It is stated that in December of 1985 ALNW refused to answer twenty calls over a two week period due to bad weather. Please investigate what happened to this patients and legal findings in final EIS. Please indicate condition of patient at time of call to ALNW - subsequent treatment administered - what hospital were patients transferred to - origin of call mode of transfer - time of transfer and patient out come.

FAA standards for flying are ~~applicable~~ written for and applicable to all aircraft There is a big difference between what conditions are acceptable for commercial jets to fly in and ~~would~~ what would be acceptable for helicopters - Please indicate this in final EIS. Please specify what FAA standards are as well as ALNW. Who establishes the ALNW criteria for flying and how do they compare with the NEMSPA. Please include NEMSPA standards in final document so that there is a means of comparison for the reader.

Pg 68 - What is good visibility?
para 1 Why doesn't ALNW fly with two pilots? (instead of 1)

para 2 - ~~Please give information on A~~ accidents that are reported

How many Agusta 109's are in operation around the country. How many are involved in EMS programs?

Pg 68 - Bane Hills comments on the reliability of turbine powered aircraft is not supported by information provided in Table 11 - 42.3% of all helicopter accidents (turbine powered) was

due to engine failure or malfunction. Please ask Ft. Hill to comment on this and provide for final document. Engine malfunction is not the only factor that constributes to helicopter safety. Please have Gene Hill or preferably ~~Ted~~ unbiased pilot comment on ~~the~~ potential outcome in the event of transmission failure or rotar problems.

Frank Benedict is not viewed as a reliable source in the discussion of EMS helicopter safety. In a conversation with Mr Benedict on Sept. 23, 1986. He told me that he was completely unaware of the current safety record held by the EMS helicopter industry. Please include in final EIS comments on the part that in 1985 1 out of 10 aeromedical helicopters suffered a reportable accident (Aviation week & Space Tech. mar. 24, 1986) Please include this article as part of final EIS.

[redacted]

Pg. 68+69 The comments made by Dr. Thomas Poulton in regard to improved EMS flight safety are not substantiated by the data presented in this document. What is meant by "early operaters" How does Dr. Poulton feel about accident rate of EMS helicopters in 1985?

Is restrictive budgets play a role in EMS helicopter safety. Please define. What is a restrictive budget. How does this compare with that of the AH-1W budget. Please provide this budget information in final EIS. Please include

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all cost related information to the operation of ALNW (i.e salaries of personnel, expenses, (equipment leasing of craft + pilot. etc.

Please explain how participating hospitals share in expenses. both fixed + variable

Please provide information on cost to patient of such services. Billing procedures, History to date of recovery of these charges.

What ~~is~~ has been experience (since inception of service) ~~of Hoist~~ with regard to third party payors?

How does the budget of ALNW affect the judgements made in regard to which flights to take and which not.

Pg. 69. para 2. Please provide specific information and data on safety record of "major vendors" It is not sufficient to say that it is someones opinion that they have a better record. Please provide the data to support this point in final document.

Pg. 69 para. 3 — What are 'insurance companies' standards" how do they compare with FAA regulations it is not sufficient to say they are more stringent. Please provide information. Please provide ALNW standards for pilot so that reader may make comparison. Please provide individual pilot record to date for pilots flying for ALNW in final document.

Please specify [redacted] definition of "small airport"

Pg. 70 para 2 — Dr. Nicola [redacted] suggests [redacted] COH will have 30-40 flights per month not 15-20. This document is supposed to represent worst case scenario. COH had 17 transports Aug. '85 — Your figures are not realistic please adjust for final EIS.

Pg 70 - para 3 — According to our review of flight logs the average flight was not 48 minutes but 77 please address in final EIS.

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Please provide accident probabilities based on worst case (40 flights per mo.) Please project these probability over twenty year period allowing for growth of service. Include in final EIS

Pg 72 para 5 — Please include in final EIS Mr. Benedicts comments on which landing site would offer least safety risks in comparing proposed action with alternative sites ~~mentioned in EIS~~ In my conversation with Mr. Benedict Sept 23, 85 ~~The was~~ he was unaware that MAST had previously landed at UW soccer field and that this alternative ~~was~~ was being considered in proposal. Has Mr. Benedict physically visited ~~the proposed~~ COH campus and viewed proposed site? ~~or~~ Please include in EIS. Comments in EIS suggest that Mr. Benedict compared the COH site only to landing areas in Downtown Seattle

and includes NAVY Sand Pt.

Pg 72 — There is no discussion of proposed Medical office Bldg and it's effect on landings at COH. Please include ~~no~~ discussion in final EIS include unbiased credible sources when determining effect. Please also include what other bldgs COH has planned to erect on its property (not just vicinity of proposed site) ~~for~~ This development and proposed develop should be considered ~~in~~ in siting a helipad on campus.

Pg 72 — Please address in final EIS — Possibility of natural gas meter ~~on the Event~~ leaking undetected as a result of accident on site and possibility of subsequent explosion. Who ~~that~~ is responsible for shut off of main valve across Sand Pt Way. In the event of emergency — how long does this procedure take.

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(50)

Pg. 73. Please refer to Table 12 - Helicopter Accidents by cause 1972-1985. — 31.5% Struck wires and obstacles. 22.2% flew into the ground. 16.7% — loss of control

The ~~landing~~ flight path to landing site at COH includes more wires and obstacles (trees, light standards, buildings) than ~~some~~ open area of alternatives sites. The flight path is over + schools homes, the landing site is 240 ft from ~~a~~ multi family housing. The landing site is located in a very restricted area. — loss of control could ~~be~~ have devastating results. How can you possibly conclude that the alternative sites would not be more safe from a helicopter accident frequency? — Please consider varying wind currents, ~~the~~ the influence that buildings have on wind etc.

The fact that you cannot produce any statistics ~~of~~ on ~~accidents~~ ambulance accidents involving ~~the~~ a transfer of patient such as would be required in alternatives action suggests that if a risk exists it must be very minimal — Please compare this risk to that which is experienced by locating helipad at COH. ~~[redacted]~~

Please have pilots comments on whether open, paved, lite secured area of alternative (whilst helipad on East Campus) is preferred to restricted site at COH Please have ALSO pilots comment as well as unbiased authority.

Pg. 76 - Please explain why exempt ~~[redacted]~~ sound sources can not be considered a public nuisance, and what authority puts forth this information

Pg 80 \ The discussion on health effects of Noise

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is inadequate. Please attempt to give serious consideration to this issue. As one source of information please refer to EPA pamphlet entitled NOISE: A HEALTH PROBLEM (Enclosed)

Please refer to letter sent to Herman Hp by Dr. Anderson in reference to noise test conducted at COH — Date _____.

There is no discussion of impacts of Helicopter noise on elementary schools located in vicinity of landing site. Secondary approach departure path is over both elementary. Please give serious consideration to this ~~discussion~~ issue and present in FEIS. It is not sufficient to say that they are noise-sensitive.

Please ~~ensure~~ verify that noise measurements were actually taken at only one spot designated to be measured. Other information was extrapolated from these readings.

Pg. 81 There is not an adequate discussion of impacts of two bladed helicopters that will land at COH — please address.

With what degree of accuracy can measurements taken at HarborView with regard to Helicopter noise be applied to COH site and vicinity? Different terrain, bldgs etc. Please respond FEIS.

Pg 81 para 6 Please verify that gross vehicular weight has negligible effect on Helic. noise. Gene Hill in a pilot nat'l noise report. Provide comment by credible authority in final EIS.

Specific noise measurement should be taken. ~~required~~ — at both elementary schools doing ~~using~~ separate tests for primary and secondary flight paths. Include results in FEIS.

Pg 83 - Noise information conclusions are invalid as

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presented in this document as the report assumed twenty patients transport or 40 round trip flights

~~impacts of 40 flights~~ transports per months or 160 round trip flights should be used as is supported by findings of Dr Nicola, 1986. Please use accurate worst case predictions in FEIS.

Pg. 84 para -2 — The flight path ~~using~~ a that incorporates a sharp turn South over parking garage is still being used. Consequently there would not be a lowering of 7-9 dBA. Delete from key for FEIS.

There have been no measurements taken for backup aircraft used by HLNW. which has landed several times at COH already. Please provide noise information for this aircraft in FEIS - Please provide noise information on BLACKHAWK helicopter - as military plans to ~~incorporate~~ replace the Huey. — [redacted] Provide for final EIS.

Please provide information on how hospital rooms at COH were determined noise-sensitive. If noise studies were done accurately [redacted] it would be shown that more than 50% of hospital would be awaken. Please discuss ~~Other~~ effects on Patients when windows are open during summer, fall, spring of year.

How did proponent determine there were no known health effects associated with the predicted helicopter sound levels for the neighborhood surrounding COH? Please discuss FEIS.

The current Helic. noise awakens more than 15-20% of closest residents. Please Poll the ~~community~~ closest line of sight residences to determine.

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Please address the potential impacts on residences of consecutive night flights that ~~prevents~~ prevents residences from sleeping at all. This has already been experienced at least once since landings have ~~occurred at COH~~. been taking place at COH.

Why is it that in addressing noise impacts to ~~COH~~ Intramural field helistop the proponent mentions the disruption to class lectures at the UW — but does not even acknowledge this same impact with regard to the elementary schools located in proximity of COH. This description occurs even when the school is not overflown.

Pg 87 — Please eliminate discussion of and impacts of ambulance sirens — Medic One doesn't use it sirens when approaching COH Mary Sand Pt. and other ambulance companies use sirens only if traffic requires. Everyone turns off siren as they approach vicinity COH.

Pg. 89 — The proposed flight path does not keep helicopters at "high" altitude over Sand Pt. Way. What does proponent consider high altitude?

The disturbance to residences as experienced in noise abatement approach is not minimal.

Residents to the south of hospital experience disruption to lives as a result of helic. landing at COH. Many have complained about sleep interference.

Pg. 90 - When did the UW receive CON approval for their helistop. Helen Shawcraft UW - was unaware that the institution had gone through process. See testimony Joanne Brekke hearing Sept, 1985.

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What do long range plans of Seattle area project in terms of helic pervice acquistion.

Please note: Six months prior to COH announcing it's plans to acquire helicopter service - ~~[redacted]~~ orbid. pad. hospital representatives maintained in a public community meeting that they in fact had no plans to acquire such services nor did they intend to build a helistop on their campus. — So much for your survey of Seattle area hospitals. Why would these hospitals divulge their plans to COH ~~anyway~~? institutional COH certainly does not share its plans with other hospitals. Please ~~make~~ delete your survey of hospitals it has no validity with regard to the precedent setting nature of this issuing of this permit.

Hudnell Hake, EMS helicopter program Consultant has remarked in ~~COH hearing~~ the St. Luke CON hearing (helicopter proposal Spring '86) that a consortium is the worst way to set up ~~a~~ an EMS helicopter program. Please address in final EIS. and research his "public utility model"

How can ALNW do an adequate job of providing appropriate medical services to public if it is not integrated to total EMS system and part of regional plan?

See references to CON process and helicopter service acquisition by hospitals.

Your conclusions on Pg. 91 are ~~[redacted]~~ contrary experienced to date to realistic results of CON, PSHSA Study, Guidelines Wa. St. Med. Assoc the city's land use process — see earlier discussion.

Pg 91 — What Dr. Nicola suggested as referenced in para 6 is illegal.

Please refer to comments on 1st para. in public hearing speech. Liz Anderson. 9/23/86.

Pg. 92 Please reconsider concluding paragraph on noise + vibrations when accurate noise study is complete.

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Pg 55

Submitted Dec 10/17/86

Signed
Liz Anderson
4746 45th NE
Sea. Wa 98105

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NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

TC/25

CITY OF SEATTLE

ZONING RECEIPT

DEPARTMENT OF CONSTRUCTION AND LAND USE RECEIPT

date 11-13 1984 payor Children's Ortho Hospital

bldg. address

owner 4800 Sandpt Way NE dollars $640.00

permit no. CC 84-22 amt. received $

letter inv. # check no. W-45171

	fee	crg.	account	task	option	proj.	amount
Z1	lot boundary/ short plats	2138	34182		S01		
Z2	cert. of land use	2138	34182		S02		
Z3	design terms/depart:	2138	34182		S03		
Z4	rezone	2138	34182		Z01		
Z5	council cond. use	2138	34182		Z02		640.00
Z6	cond. use & special exceptions	2138	34182		Z03		
Z7	variance	2138	34182		Z04		
Z8	use/ zoning plan check	2155	32211				
Z9	SMA	2138	32290		W01		
Z10	SEPA check	2138	34182		A01		
	hrly:						

Please examine voucher and report errors at once $640.00

by

Dept of Construction and Land Use

Z 09504

THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER
4800 SAND POINT WAY N.E.
P.O. BOX C5371, UNIV. STA.
SEATTLE, WASHINGTON 98105

19-3 / 1250 W-45171

TO THE RAINIER NATIONAL BANK
SECOND & SPRING OFFICE
SEATTLE, WASHINGTON

PAY The sum of 640 dol's 00 cts

CHECK DATE	AMOUNT
11/12/84	$640.00

THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER
WORKING FUND

Barbara B. Prinsle
TREASURER

ASSOCIATE ADMINISTRATOR-FINANCE

TO THE ORDER OF
City of Seattle
Dept. of Construction & Land Use
400 Municipal Bldg.
Seattle, WA 98104

⑈045171⑈ ⑆125000037⑆ 2920408880⑈

8405870
Related Permits & Files

Related Controller Files and Council Bills

CC 84-22
Council Land Use Application Number
Application made: 11-13, 1984

Receipt Number | Amount
Z 07504 | 640
Z 09732 | 272.50

COUNCIL LAND USE APPLICATION
CITY OF SEATTLE
Department of Construction and Land Use

I2-SF5000
Kroll Map Page 16W Zoning I4-SF5000
Property Address 4800 SAND POINT WAY NE

Legal Description: Lot SEE ATTACHED
Block
Addition

Lot Size IRREGULAR Alley Width NA
Street Width 100, 60, 60

Description of Proposal: to construct an emergency helistop facility accessory to an existing hospital/medical center

Project Value 50,000

Approvals Requested	Action/ Referral	Fee
Council Land Use Components		
__ Rezone		
✓ Conditional Use		640.00
__ Subdivision		
__ Planned Unit Development		
__ Public Project		
__ City Facility		
__ Master Plan		
__ Code Amendment		
Master Use Components		
__ Use		
__ Variance		
__ Admin. Cond. Use		
__ Special Exception		
✓ SEPA Review		272.50
__ Other		
TOTAL LAND USE FEES:		

G=Granted; C=Granted with Conditions; D=Denied

Other Council Approvals Required This Permit
__ Skybridge
__ Street Vacation
__

MISC. NOTES - DEPT. USE ONLY:

Land Use Tech. KH
Land Use Spec.

	Yes	No
Environ. Sensitive Area?	__	✓
Shoreline Area?	__	✓
Protected Dist. or Landmarks Approval?	__	✓

Existing Use: HOSPITAL/CLINIC OFFICE/STORAGE
Requested Use: ACCESSORY HELISTOP
Authorized Use:

Owner's Name Children's Orthopedic Hosp
Contact Person Dorothy Teteak
Address 4800 Sand Point Way NE
PO Box C6371 University Station, Seattle 98105
Phone 526-2004
Dorothy F. Teteak — Director of Planning
Applicant's Signature — Relationship to Project OWNER

Director of Department of Construction and Land Use By:

Application Approved _____, 19__
Date of Expiration _____, 19__

CAUTION:
Construction or substantial progress toward construction of a project for which a Council Land Use Master Use Permit or construction permit has been granted must be undertaken prior to the expiration date.

Not valid unless signed by the DIRECTOR OF THE DEPARTMENT OF CONSTRUCTION AND LAND USE. Starting construction without a building permit is punishable by fine and/or imprisonment. All work shall be done in accordance with this permit and approved plans.

LU25/LU1

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A. Ormsby - DCLU
File 84.022

PUGET SOUND HEALTH SYSTEMS AGENCY
Serving The Ten-County Northwest Washington Area
601 Valley Street / Seattle, WA 98109 / (206) 464-6143

LARRY A. THOMPSON
Executive Director

January 7, 1984

RECEIVED
JAN 9 1985
MAYOR'S OFFICE

RECEIVED
JAN 15 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Charles Royer, Mayor
City of Seattle
1200 Municipal Building
Seattle, Washington 98104

Dear Mayor Royer:

I am responding to your letter of December 17, 1984 requesting that Puget Sound Health Systems Agency forward health policy guidance on the development of helicopter landing facilities at hospitals. I have asked agency staff to prepare a response to your specific questions about utilization and appropriateness of helicopter transport. This response should be available to you by February 15, 1985. Having researched the issues to some degree already we can thus provide your office and related agencies with professional opinion from a planning perspective.

However, I recognize that your letter requests our policy guidance on helicopter transport. Our current plans and policies do not directly address this service. To develop such a policy is a much more substantial task involving a committee with the relevant expertise and range of viewpoints. At the present time I cannot internally fund a project of that scale. Clearly, however, the issue of helicopter transport is becoming more significant all across the region Puget Sound Health Systems Agency serves. Consequently, I will propose such a project to the agency board for their consideration.

I hope these actions meet your immediate needs and appreciate your coordination with Puget Sound Health Systems Agency on matters of health policy.

Sincerely,

Larry A. Thompson

Larry A. Thompson
Executive Director

LAT/sae

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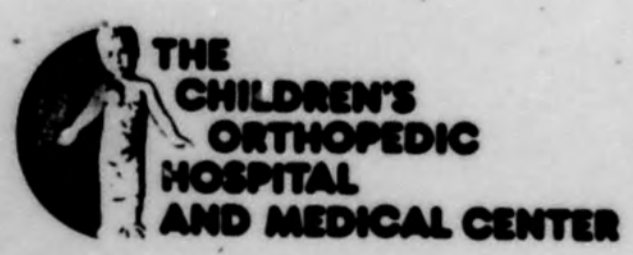

HI
FYI
Chris Ogness

RECEIVED
JAN 15 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

November 23, 1984

Mr. Frank Chestnut
Certificate of Need Unit
Office of State Health Planning
& Development, MS ET-23
Olympia, WA 98504

Dear Mr. Chestnut,

We understand that both the Certificate of Need Unit and the HSA have received inquiries from third parties relating to whether a proposed activity of COHMC is subject to Certificate of Need review.

Since at least 1971, COHMC has provided, and continues to provide, air ambulance services for critically ill or injured children in need of immediate care of COHMC. This transportation has occurred by way of fixed wing aircraft and helicopter during this continuous period.

We are now planning to construct an emergency helistop on the COHMC campus to better support this long-standing service. The helistop does not represent a change in services requiring Certificate of Need review because it is not an emergency service licensed under 18.73 RCW. Actually, the helistop construction project is precisely the same as simply repaving the driveway to an emergency room. Such activity is reviewable only if the expenditure minimum is exceeded. There are no additional staffing or equipment costs, nor is there a change in services as set forth in the regulations.

COHMC has always complied with the spirit and the letter of the Certificate of Need law, and we are simply writing to inform you of this plan, to avoid any confusion that may have been engendered regarding the scope of our proposed activity.

Sincerely,

Dorothy F. Teeter

Dorothy F. Teeter
Director of Planning

DT:js

cc: Mr. Larry Thompson
Mr. Treuman Katz

RECEIVED
DSHS-HEALTH SERVICES DIVISION
NOV 27 1984
CERTIFICATE OF NEED UNIT

P.O. BOX C5371 • 4800 SAND POINT WAY N.E. • SEATTLE, WASHINGTON 98105 • (206) 526-2000

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

December 19, 1984

Dorothy F. Teeter
Director of Planning
The Childrens Orthopedic Hospital
and Medical Center
P.O. Box C5371
4800 Sandpoint Way Northeast
Seattle, WA 98105

Dear Ms. Teeter:

This correspondence is in response to your letter received November 27, 1984 concerning Certificate of Need review for a helistop. Before the department can make a formal determination concerning this project, additional information is required. Please provide the department with an explanation of the current agreement for the provision of air ambulance services and a description of how these services will be provided following your proposed construction of a helio-stop. Please include copies of present contractual agreements and any proposed contractual agreements. Also, please include the cost to construct the helistop and the annual operating expense associated with the air ambulance service and the helistop.

If you have any questions regarding this matter, please feel free to contact me at (206) 753-5857.

Sincerely,

Kristina M. Sparks, Supervisor
Project Review Unit
Certificate of Need Program ET-33

KMS:mg

cc: Jim Smith
Maurice Click
Jerry Schnieder
Senator Nita Rinehart

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State of Washington
John Spellman, Governor
DEPARTMENT OF SOCIAL AND HEALTH SERVICES
Olympia, WA 98504

ET 53

SEATTLE
BKCP SHIPMENT
AUTHORIZATION 19
PRESORTED FIRST-CLASS

OLYMPIA JAN 12 '85 WASH

William Justen, Director
Dept. of Construction & Land Mgt.
600 4th Ave
Municipal Building
Seattle, WA 98104

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JOHN SPELLMAN
Governor

KAREN RAHM
Secretary

STATE OF WASHINGTON
DEPARTMENT OF SOCIAL AND HEALTH SERVICES
Olympia, Washington 98504

December 19, 1984

RECEIVED
JAN 15 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dorothy F. Teeter
Director of Planning
The Childrens Orthopedic Hospital
and Medical Center
P.O. Box C5371
4800 Sandpoint Way Northeast
Seattle, WA 98105

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If you have any questions regarding this matter, please feel free to contact me at (206) 753-5857.

Sincerely,

Kristina M. Sparks, Supervisor
Project Review Unit
Certificate of Need Program ET-33

KMS:mg

cc: Jim Smith
Maurice Click
Jerry Schnieder
Senator Nita Rinehart

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Los Angeles Times

8 Part II/
Thursday, December 20, 1984

Airport OKs Noise Rules for Copters

By PATRICIA MANISCO,
Times Staff Writer

Under mounting community pressure to lessen the noise created by low-flying helicopters, the Los Angeles Board of Airport Commissioners voted Wednesday to approve noise abatement guidelines that limit helicopter operations at Los Angeles International Airport.

Together with the guidelines, which were proposed earlier by the Federal Aviation Administration and the city Department of Airports, the airport commissioners also approved their first formal helicopter operating policy. The policy includes a ban on unscheduled nighttime helicopter flights except in cases of extreme emergency.

The guidelines will go into effect immediately and include:

- Raising flight altitudes to a minimum of 1,000 feet and a maximum of 1,500 feet. At night, helicopters along the so-called Sepulveda Corridor—which runs above Sepulveda Boulevard in Westchester—would be asked to fly at 2,000 feet, conditions permitting. Currently there are no standards regulating helicopter altitudes, and such aircraft frequently fly at less than 300 feet.
- Requiring northbound passenger helicopters, such as Airspur, always to use the same over-water departure procedures used by jet aircraft.
- Closing the airport's east heliport.
- Reassessing routes and altitudes for Coast Guard helicopter operations.
- Attempting to reduce the number of helicopter flights over beach areas.

FAA facility manager Jim Holtsclaw said the FAA would begin immediately to renegotiate its letters of agreement with helicopter pilots who use the airport, and include the changes. The FAA, he said, would revoke the airport privileges of pilots found to violate the agreement.

Airport manager Bob Quincey said the Department of Airports and the FAA will study the possibility of abolishing the Sepulveda Corridor altogether. That proposal would require helicopters that now fly on a "see-and-be-seen" basis to install expensive flight instrumentation and to fly according to the same instrument flight rules used by fixed-wing aircraft.

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5003 45th N.E.
Seattle, WA 98105
January 8, 1985

Charles Royer, Mayor
City of Seattle
Municipal Building
Seattle, WA 98104

Dear Mayor Royer:

Your letter of December 17, 1984 to Larry Thompson, Director of the Puget Sound Health Systems Agency, is very much appreciated. Their study should be of great help to everyone who is concerned about the potential for the increased use of helicopters by hospitals in Seattle.

I would like to cal your attention to some recent actions in Los Angeles that may be relevan to our situation. A news item (enclosed) from the LA Times describes some recently adopted noise abatement guidelines and operating policies for helicopters that may be quite appropriate for Seattle as well. I hope you will examine these materials to see how they could be applied here.

I also encourage you to seek some policy guidance from the DSHS people (Frank Chestnut) in Olympia that make "certificate of need" determinations. Enclosed is some recent correspondence on this topic for your review.

Our neighborhood group has now collected over 500 signatures on a petition that expresses our opposition to a helipad located at Children's Orthopedic Hospital. Your letter requesting policy guidance from the PSHSA is being widely circulated in our neighborhood and is receiving a very good reception. We hope you will continue to maintain an active interest in this city-wide issue.

Yours sincerely,

Jerry Schneider

Jerry B. Schneider

copies:
J. Williams
N. Rice
W. Justin
L. Thompson

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5003 45th N.E.
Seattle, WA 98105
December 18, 1984

Mr. Frank Chestnut
Certificate of Need Program
Dept. of Social and Health Services
MS ET-33
Olympia, Washington 98504

Dear Mr. Chestnut:

It is clear that the new helicopter services proposed by Children's Orthopedic Hospital should be subject to a certificate of need review. I request that you require that this be done. There are three main reasons for this request.

1. The cost of the helicopter service will be substantial. Enclosed is an article by Nick Gallo published in The Weekly which summarizes some cost data for helicopter services he found in his investigations. Gallo points out that:

   a. The AMA News estimates the costs for establishing and running a helicopter as over $1 million per year (See note A in The Weekly article).

   b. Dr. Jay Kranz, Chairman of the MAST (Military Assistance to Safety and Traffic) coordinating committee estimates it could cost as much as $40,000 per month to lease a helicopter, which is what Airlift Northwest is likely to do (see note B in The Weekly article).

2. The helicopter service at COH will be a new service since, as COH administrators point out, current air transport is by fixed-wing aircraft. The change to a helicopter is a new service and should have a certificate of need review.

3. The proposed service is likely to increase hospital costs in the entire region by introducing a costly new service; competition among the hospitals will force the other hospitals to acquire this service in the near future. As Dr. Copass (Director of Airlift Northwest) is quoted as saying, "There is not that much work here and competing transport could really drive up costs."(See The Weekly article, note C).

This precedent-setting move is so expensive in both the short- and long-term, that it deserves the thoroughness of review and discussion that only the certificate of need process can accomplish.

I believe you should ask COH to examine seven alternative ways of providing helicopter service to central Seattle hospitals and to estimate the probable costs and benefits of each alternative, 5 and 10 years into the future. These alternatives are as follows:

Alternative 1: Have 1 helipad in city, located at Harborview Hosp.,--to serve all area hospitals.

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Alternatives 2-4: Have 2 helipads in city
a. one helipad to serve Harborview, V. Mason, Swedish and Providence Hosps.--located at Harborview
b. a second helipad, to serve Univ. Hosp. and C -located at either:

(alternative 2) (1) University Hospital
(alternative 3) (2) UW intramural field (Graves' Field)
(alternative 4) (3) Sandpoint Naval Station area

Alternatives 5-7: Have 3 helipads in city
a. one helipad to serve Harborview, V. Mason, Swedish and Providence Hosps.--located at Harborview
b. second and third helipads, to serve Univ. Hosp. and COH--located at:

(alternative 5) (1) Univ. Hosp. and COH
(alternative 6) (2) Univ. Hosp. and UW intramural field
(alternative 7) (3) Univ. Hosp. and Sandpoint Naval Station area

Please keep me informed as to your decision.

Sincerely,

Anita Francis

Anita M. Francis

cc:
Senator Rita Rinehart
Rep. Ken Jacobsen
Rep. Marlin Applewick

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

November 23, 1984

RECEIVED
JAN 15 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. Frank Chestnut
Certificate of Need Unit
Office of State Health Planning
& Development, MS ET-23
Olympia, WA 98504

Dear Mr. Chestnut,

We understand that both the Certificate of Need Unit and the HSA have received inquiries from third parties relating to whether a proposed activity of COHMC is subject to Certificate of Need review.

Since at least 1971, COHMC has provided, and continues to provide, air ambulance services for critically ill or injured children in need of immediate care of COHMC. This transportation has occurred by way of fixed wing aircraft and helicopter during this continuous period.

We are now planning to construct an emergency helistop on the COHMC campus to better support this long-standing service. The helistop does not represent a change in services requiring Certificate of Need review because it is not an emergency service licensed under 18.73 RCW. Actually, the helistop construction project is precisely the same as simply repaving the driveway to an emergency room. Such activity is reviewable only if the expenditure minimum is exceeded. There are no additional staffing or equipment costs, nor is there a change in services as set forth in the regulations.

COHMC has always complied with the spirit and the letter of the Certificate of Need law, and we are simply writing to inform you of this plan, to avoid any confusion that may have been engendered regarding the scope of our proposed activity.

Sincerely,

Dorothy F. Teeter

Dorothy F. Teeter
Director of Planning

DT:js

cc: Mr. Larry Thompson
Mr. Treuman Katz

RECEIVED
DSHS-HEALTH SERVICES DIVISION
NOV 27 1984
CERTIFICATE OF NEED UNIT

P.O. BOX C5371 • 4800 SAND POINT WAY N.E. • SEATTLE, WASHINGTON 98105 • (206) 526-2000

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December 19, 1984

Dorothy F. Teeter
Director of Planning
The Childrens Orthopedic Hospital
and Medical Center
P.O. Box C5371
4800 Sandpoint Way Northeast
Seattle, WA 98105

Dear Ms. Teeter:

This correspondence is in response to your letter received November 27, 1984 concerning Certificate of Need review for a helistop. Before the department can make a formal determination concerning this project, additional information is required. Please provide the department with an explanation of the current agreement for the provision of air ambulance services and a description of how these services will be provided following your proposed construction of a helio-stop. Please include copies of present contractual agreements and any proposed contractual agreements. Also, please include the cost to construct the helistop and the annual operating expense associated with the air ambulance service and the helistop.

If you have any questions regarding this matter, please feel free to contact me at (206) 753-5657.

Sincerely,

Kristina M. Sparks, Supervisor
Project Review Unit
Certificate of Need Program ET-33

KMS:mg

cc: Jim Smith
Maurice Click
Jerry Schnieder
Senator Nita Rinehart

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

State of Washington
John Spellman, Governor
DEPARTMENT OF SOCIAL AND HEALTH SERVICES
Olympia, WA 98504

ET 33

SEATTLE
DROP SHIPMENT
AUTHORIZATION 19
PRESORTED FIRST-CLASS

OLYMPIA WASH. JAN 12 '95

U.S. POSTAGE
0 1 7

Hermia Ipp
Dept. of Construction & Land Mgt.
600 4th Ave
Municipal Building
Seattle, WA 98104

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File cr 84-022

Chapter 70.38 RCW

HEALTH PLANNING AND RESOURCES DEVELOPMENT

RECEIVED
MAY 28 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

SECTIONS

70.38.015 Declaration of public policy.
70.38.025 Definitions.
70.38.035 State health planning and development agency--Designation.
70.38.045 Department planning and development duties and powers.
70.38.055 Health coordinating council.
70.38.065 Council duties and powers.
70.38.085 Regional health councils--Areas--Functions.
70.38.095 Public disclosure.
70.38.105 Health services and facilities requiring certificate of need.
70.38.111 Certificates of need--Exemptions.
70.38.115 Certificates of need--Procedures--Rules--Criteria for review--Conditional certificates of need--Concurrent review--Review periods--Hearing--Administrative review--Amended certificates of need.
70.38.125 Certificates of need--Issuance--Duration--Penalties for violations.
70.38.135 Department services and surveys--Rules.
70.38.145 Long-range health facility plans.
70.38.155 Certificates of need--Savings clause.
70.38.156 Certificates of need--Savings.
70.38.157 Certificates of need--Savings.
70.38.905 Conflict with federal law--Construction.
70.38.910 Severability.
70.38.911 Severability--1980 c 139.
70.38.914 Pending certificates of need.
70.38.915 Effective dates--Pending certificates of need.
70.38.916 Effective date--1980 c 139.
70.38.920 Short title.

RCW 70.38.015 DECLARATION OF PUBLIC POLICY. It is declared to be the public policy of this state:

(1) That health planning to promote, maintain, and assure the health of all citizens in the state, to provide accessible health services, health manpower, health facilities, and other resources while controlling excessive increases in costs, and to recognize prevention as a high priority in health programs, is essential to the health, safety, and welfare of the people of the state. Health planning should be fostered on both a state-wide and regional basis and must maintain responsiveness to changing health and social needs and conditions. Involvement in health planning from both consumers and providers throughout the state should be encouraged. Regional health planning under this chapter and in a manner consistent with RCW 36.70-.015 is declared to be a proper public purpose for the expenditure of funds of counties or other public entities interested in local and regional health planning;

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(2) That the development of health services and resources, including the construction, modernization, and conversion of health facilities, should be accomplished in a planned, orderly fashion, consistent with identified priorities and without unnecessary duplication or fragmentation;

(3) That the development and maintenance of adequate health care information, statistics and projections of need for health facilities and services is essential to effective health planning and resources development;

(4) That the development of nonregulatory approaches to health care cost containment should be considered, including the strengthening of price competition;

(5) That health planning should be concerned with financing, access, and quality, recognizing the close interrelationship of the three and emphasizing cost control of health services, including cost-effectiveness and cost-benefit analysis;

(6) That this chapter should be construed to effectuate this policy and to be consistent with requirements of the federal health planning and resources development laws. [1983 c 235 § 1; 1980 c 139 § 1; 1979 ex.s. c 161 § 1.]

RCW 70.38.025 DEFINITIONS. When used in this chapter, the terms defined in this section shall have the meanings indicated.

(1) "Board of health" means the state board of health created pursuant to chapter 43.20 RCW.

(2) "Capital expenditure" is an expenditure, including a force account expenditure (i.e., an expenditure for a construction project undertaken by a facility as its own contractor) which, under generally accepted accounting principles, is not properly chargeable as an expense of operation or maintenance. Where a person makes an acquisition under lease or comparable arrangement, or through donation, which would have required review if the acquisition had been made by purchase, such expenditure shall be deemed a capital expenditure. Capital expenditures include donations of equipment or facilities to a health care facility which if acquired directly by such facility would be subject to certificate of need review under the provisions of this chapter and transfer of equipment or facilities for less than fair market value if a transfer of the equipment or facilities at fair market value would be subject to such review. The cost of any studies, surveys, designs, plans, working drawings, specifications, and other activities essential to the acquisition, improvement, expansion, or replacement of any plant or equipment with respect to which such expenditure is made shall be included in determining the amount of the expenditure.

(3) "Council" means the state health coordinating council created in RCW 70.38.055 and described in Public Law 93-641.

(4) "Department" means the state department of social and health services.

(5) "Expenditure minimum" means, for the purposes of the certificate of need program, one million dollars adjusted by the department by rule to reflect changes in the United States department of commerce composite construction cost index; or a lesser amount required by federal law and established by the department by rule.

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(6) "Federal law" means Public Law 93-641, as amended, or its successor.

(7) "Health care facility" means hospices, hospitals, psychiatric hospitals, tuberculosis hospitals, nursing homes, kidney disease treatment centers, ambulatory surgical facilities, rehabilitation facilities, and home health agencies, and includes such facilities when owned and operated by the state or by a political subdivision or instrumentality of the state and such other facilities as required by federal law and implementing regulations, but does not include Christian Science sanatoriums operated, listed, or certified by the First Church of Christ Scientist, Boston, Massachusetts. In addition, the term does not include any nonprofit hospital: (a) Which is operated exclusively to provide health care services for children; (b) which does not charge fees for such services; (c) whose rate reviews are waived by the state hospital commission; and (d) if not contrary to federal law as necessary to the receipt of federal funds by the state.

(8) "Health maintenance organization" means a public or private organization, organized under the laws of the state, which:

(a) Is a qualified health maintenance organization under Title XIII, section 1310(d) of the Public Health Services Act; or

(b) (i) Provides or otherwise makes available to enrolled participants health care services, including at least the following basic health care services: Usual physician services, hospitalization, laboratory, x-ray, emergency, and preventive services, and out-of-area coverage; (ii) is compensated (except for copayments) for the provision of the basic health care services listed in (b)(i) to enrolled participants by a payment which is paid on a periodic basis without regard to the date the health care services are provided and which is fixed without regard to the frequency, extent, or kind of health service actually provided; and (iii) provides physicians' services primarily (A) directly through physicians who are either employees or partners of such organization, or (B) through arrangements with individual physicians or one or more groups of physicians (organized on a group practice or individual practice basis).

(9) "Health services" means clinically related (i.e., preventive, diagnostic, curative, rehabilitative, or palliative) services and includes alcoholism, drug abuse, and mental health services and as defined in federal law.

(10) "Health service area" means a geographic region appropriate for effective health planning which includes a broad range of health services and a population of at least four hundred fifty thousand persons.

(11) "Institutional health services" means health services provided in or through health care facilities and entailing annual operating costs of at least five hundred thousand dollars adjusted by the department by rule to reflect changes in the United States department of commerce composite construction cost index; or a lesser amount required by federal law and established by the department by rule: *PROVIDED, That no new health care facility may be initiated as an institutional health service.

(12) "Major medical equipment" means medical equipment which is used for the provision of medical and other health services and which costs in excess of one million dollars, adjusted by the department by rule to reflect changes in the United States department of commerce

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composite construction cost index; or a lesser amount required by federal law and established by the department by rule; except that such term does not include medical equipment acquired by or on behalf of a clinical laboratory to provide clinical laboratory services if the clinical laboratory is independent of a physician's office and a hospital and it has been determined under Title XVIII of the Social Security Act to meet the requirements of paragraphs (10) and (11) of section 1861(s) of such act;

(13) "Person" means an individual, a trust or estate, a partnership, a corporation (including associations, joint stock companies, and insurance companies), the state, or a political subdivision or instrumentality of the state, including a municipal corporation or a hospital district.

(14) "Provider" generally means a health care professional or an organization, institution, or other entity providing health care but the precise definition for this term shall be established by rule of the department, consistent with federal law.

(15) "Public health" means the level of well-being of the general population; those actions in a community necessary to preserve, protect, and promote the health of the people for which government is responsible; and the governmental system developed to guarantee the preservation of the health of the people.

(16) "Regional health council" means a public regional planning body or a private nonprofit corporation which is organized and operated in a manner that is consistent with the laws of the state and which is capable of performing each of the functions described in RCW 70.38.085. A regional health council shall have a governing body for health planning which is composed of a majority (but not more than sixty percent of the members) of persons who are residents of the health service area served by the entity; who are consumers of health care; who are broadly representative of the social, economic, linguistic, and racial populations, and geographic areas of the health service area, and major purchasers of health care; and who are not, nor within the twelve months preceding appointment have been, providers of health care. The remainder of the members shall be residents of the health service area served by the agency who are providers of health care.

(17) "Regional health plan" means a document which provides at least a statement of health goals and priorities for the health service area. In addition, it sets forth the number, type, and distribution of health facilities, services, and manpower needed within the health service area to meet the goals of the plan.

(18) "State health plan" means a document developed in accordance with RCW 70.38.065. [1983 1st ex.s. c 41 { 43; 1983 c 235 { 2; 1982 c 119 { 1; 1980 c 139 { 2; 1979 ex.s. c 161 { 2.]

NOTES:

*Reviser's note: This proviso was originally added to RCW 70.38-.025 in Senate Bill No. 4204 [1983 c 235]. Reengrossed Substitute Senate Bill No. 3660 [1983 1st ex.s. c 41] amended RCW 70.38.025 as it existed after its amendment by Senate Bill No. 4204. The governor vetoed the proviso in Senate Bill No. 4204 but not in Reengrossed Substitute Senate Bill No. 3660.

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Severability--1983 1st ex.s. c 41: See note following RCW 26.09.060.

RCW 70.38.035 STATE HEALTH PLANNING AND DEVELOPMENT AGENCY--DESIGNATION. The department is designated as the state health planning and development agency. The department is designated as the agency of this state to accept, receive, retain, and administer federal funds made available for health planning and the certificate of need program. Nothing in this chapter shall be construed to affect the authority of the state hospital commission pursuant to chapter 70.39 RCW. [1983 c 235 { 3; 1979 ex.s. c 161 { 3.]

RCW 70.38.045 DEPARTMENT PLANNING AND DEVELOPMENT DUTIES AND POWERS. The department is authorized and empowered to:

(1) Exercise such duties and powers as are prescribed for state health planning and development agencies in federal law, consistent with the policy of this chapter;

(2) Assist the state health coordinating council in determining state-wide needs and conducting health planning activities, review the state health plan as developed by the council and submit the plans and recommendations as to approval or modification to the governor, and implement the state health plan as approved by the governor. In implementing the state health plan, the department shall be assisted by such other agencies of state government as the governor may designate;

(3) Consider recommendations from the council and assign, subject to the continuing approval of the council, an executive director, who shall be exempt from chapter 41.06 RCW, and provide such additional dedicated staffing assistance as necessary for the performance of its functions to work under the direction and supervision of the director;

(4) Serve as the designated planning agency of the state for the purposes of section 1122 of the Social Security Act, if the department maintains an agreement with the secretary, United States department of health and human services pursuant to section 1122 of Public Law 92-603, and administer a state certificate of need program as provided in RCW 70.38.105, 70.38.115, and 70.38.125;

(5) After consideration of recommendations, if any, submitted by the designated regional health councils respecting proposed undertakings which are subject to certificate of need review under the provisions of this chapter, making findings as to the need for such undertakings;

(6) Coordinate and consult in the conduct of its authorized activities with the Washington state hospital commission, the council, designated regional health councils, and other state agencies designated by the governor;

(7) Consider the recommendations of the council, designated regional health councils, and the state health plan in development of its biennial budget; and

(8) Approve and deny applications for certificates of need. [1983 c 235 { 4; 1980 c 139 { 3; 1979 ex.s. c 161 { 4.]

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RCW 70.38.055 HEALTH COORDINATING COUNCIL. (1) There is established a state health coordinating council.

(2) The council shall be composed of members who shall be appointed by the governor in accordance with the provisions of Public Law 93-641 and shall be considered appointed officials for whom compliance with section 1, chapter 104, Laws of 1975-'76 2nd ex. sess., (Ref. Bill No. 36), RCW 42.17.240, is required.

(3) The council shall, in addition to the appointed members, include as nonvoting, ex officio members the chairpersons of the house and senate committees on social and health services, the secretary of the department, the chairman of the hospital commission, or their designees, and an individual whom the chief medical director of the veterans administration shall have designated as a representative of the veterans administration.

(4) The council shall have a chairperson designated by the governor by and with the consent of the senate from among the members of the council who shall serve a one-year term.

(5) The council shall conduct all of its business meetings in public pursuant to the "Open Public Meetings Act of 1971", chapter 42.30 RCW, and shall meet at least once in each calendar quarter of a year. Books and records of the council shall be subject to public disclosure in accordance with RCW 42.17.250 through 42.17.340.

(6) Members of the council shall serve without pay, but shall be entitled to reimbursement for travel expenses incurred as provided in RCW 43.03.050 and 43.03.060.

(7) The governor shall have the power to stagger the terms of the members so that one-third thereof may be appointed for an original term of one year, one-third for an original term of two years, and one-third for an original term of three years, with all subsequent appointments to be for terms of three years. [1980 c 139 { 4; 1979 ex.s. c 161 { 5.]

NOTES:

Executive director of health coordinating council to serve on technical advisory committee to hospital commission: RCW 70.39.070.

RCW 70.38.065 COUNCIL DUTIES AND POWERS. The council is authorized and empowered to

(1) Exercise such duties and powers as are required for state-wide health coordinating councils in federal law.

(2) Establish, in consultation with the designated regional health councils, requirements for a uniform format and content for materials to be submitted by regional health councils to assist in development of the state health plan, and develop at least biennially the state health plan.

(3) Submit the council-adopted health plan to the secretary for review and comment and submission to the governor for adoption as the state health plan for the state. The governor may disapprove or modify the plan. The governor, in disapproving or modifying a state health plan, shall make public a written explanation of the actions taken. As approved by the governor, the plan shall be the state health plan. [1983 c 235 { 5; 1980 c 139 { 5; 1979 ex.s. c 161 { 6.]

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NOTES:

Applicants for regulation of health professions--Review of written reports by council: RCW 18.120.040.

RCW 70.38.085 REGIONAL HEALTH COUNCILS--AREAS--FUNCTIONS. The council shall establish health service areas within the state and designate regional health councils organized, composed, and established in accordance with this chapter and criteria established by the council, considering the resources available for such purpose.

Each designated regional health council shall have as its primary responsibility the provision of effective health planning for its health service area and the promotion of health services, manpower, and facilities which meet identified needs and reduce documented inefficiencies. To meet its primary responsibility, a designated regional health council shall carry out the following functions:

(1) Exercise such duties, powers, and responsibilities as are prescribed for health systems agencies in federal law, consistent with the policy of this chapter.

(2) Identify local health problems and concerns and assemble and analyze health data and information consistent with the requirements of the board;

(3) Develop, consistent with the criteria established by the council, other materials of assistance to the council in preparation of the state health plan;

(4) Review and make recommendations to the council respecting the need for health services in the health service area of the council;

(5) Seek the assistance of individuals and public and private entities in the health service area, to the extent practicable; and

(6) Exercise such other duties and functions as may be established by the council or department to fulfill the intent and purposes of this chapter, which may include review, analysis, and recommendations on applications for certificates of need.

In addition, the regional health councils may establish, biennially review, and amend as necessary a regional health plan which provides at least a statement of health goals and priorities for the health service area and sets forth the number, type, and distribution of health facilities, services, and manpower needed within the health service area to meet the goals of the plan. [1983 c 235 { 6; 1980 c 139 { 6; 1979 ex.s. c 161 { 8.]

RCW 70.38.095 PUBLIC DISCLOSURE. Public accessibility to records shall be accorded by health systems agencies pursuant to Public Law 93-641 and RCW 42.17.250 through 42.17.340. A health systems agency shall be considered a "public agency" for the sole purpose of complying with the "Open Public Meetings Act of 1971", chapter 42.30 RCW. [1979 ex.s. c 161 { 9.]

RCW 70.38.105 HEALTH SERVICES AND FACILITIES REQUIRING CERTIFICATE OF NEED. (1) The department is authorized and directed to implement the certificate of need program in this state pursuant to the provisions of this chapter.

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(2) There shall be a state certificate of need program which is administered consistent with the requirements of federal law as necessary to the receipt of federal funds by the state.

(3) No person shall engage in any undertaking which is subject to certificate of need review under subsection (4) of this section without first having received from the department either a certificate of need or an exception granted in accordance with this chapter.

(4) The following shall be subject to certificate of need review under this chapter:

(a) The construction, development, or other establishment of a new health care facility;

(b) The sale, purchase, or lease of part or all of any existing hospital as defined in RCW 70.39.020;

(c) Any capital expenditure by or on behalf of a health care facility which substantially changes the services of the facility after January 1, 1981, provided that the substantial changes in services are specified by the department in rule;

(d) Any capital expenditure by or on behalf of a health care facility which exceeds the expenditure minimum as defined by RCW 70.38.025. However, a capital expenditure which is not subject to certificate of need review under (a), (b), (c), (e), (f), or (g) of this subsection and which is solely for any one or more of the following is not subject to certificate of need review except to the extent required by the federal government as a condition to receipt of federal assistance and does not substantially affect patient charges:

(i) Communications and parking facilities;

(ii) Mechanical, electrical, ventilation, heating, and air conditioning systems;

(iii) Energy conservation systems;

(iv) Repairs to, or the correction of, deficiencies in existing physical plant facilities which are necessary to maintain state licensure;

(v) Acquisition of equipment, including data processing equipment, which is not or will not be used in the direct provision of health services;

(vi) Construction which involves physical plant facilities, including administrative and support facilities, which are not or will not be used for the provision of health services;

(vii) Acquisition of land; and

(viii) Refinancing of existing debt;

(e) A change in bed capacity of a health care facility which increases the total number of licensed beds or redistributes beds among facility and service categories of acute care, skilled nursing, intermediate care, and boarding home care if the bed redistribution is to be effective for a period in excess of six months;

(f) Acquisition of major medical equipment:

(i) If the equipment will be owned by or located in a health care facility; or

(ii) If, after January 1, 1981, the equipment is not to be owned by or located in a health care facility, the department finds consistent with federal regulations the equipment will be used to provide services for hospital inpatients, or the person acquiring such equipment did not notify the department of the intent to acquire such equipment at least thirty days before entering into contractual arrangements for such acquisition;

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(g) Any new institutional health services which are offered in or through a health care facility, and which were not offered on a regular basis by, in, or through such health care facility within the twelve-month period prior to the time such services would be offered; and

(h) Any expenditure by or on behalf of a health care facility in excess of the expenditure minimum made in preparation for any undertaking under subsection (4) of this section and any arrangement or commitment made for financing such undertaking. Expenditures of preparation shall include expenditures for architectural designs, plans, working drawings, and specifications. The department may issue certificates of need permitting predevelopment expenditures, only, without authorizing any subsequent undertaking with respect to which such predevelopment expenditures are made.

(5) No person may divide a project in order to avoid review requirements under any of the thresholds specified in this section. [1984 c 288 § 21; 1983 c 235 § 7; 1982 c 119 § 2; 1980 c 139 § 7; 1979 ex.s. c 161 § 10.]

NOTES:

Severability--1984 c 288: See note following RCW 70.39.010.

Effective date--1980 c 139: See RCW 70.38.916.

Effective dates--1979 ex.s. c 161: See RCW 70.38.915.

RCW 70.38.111 CERTIFICATES OF NEED--EXEMPTIONS. (1) The department shall not require a certificate of need for the offering of an inpatient institutional health service or the acquisition of major medical equipment for the provision of an inpatient institutional health service or the obligation of a capital expenditure for the provision of an inpatient institutional health service by--

(a) a health maintenance organization or a combination of health maintenance organizations if (i) the organization or combination of organizations has, in the service area of the organization or the service areas of the organizations in the combination, an enrollment of at least fifty thousand individuals, (ii) the facility in which the service will be provided is or will be geographically located so that the service will be reasonably accessible to such enrolled individuals, and (iii) at least seventy-five percent of the patients who can reasonably be expected to receive the institutional health service will be individuals enrolled with such organization or organizations in the combination,

(b) a health care facility if (i) the facility primarily provides or will provide inpatient health services, (ii) the facility is or will be controlled, directly or indirectly, by a health maintenance organization or a combination of health maintenance organizations which has, in the service area of the organization or service areas of the organizations in the combination, an enrollment of at least fifty thousand individuals, (iii) the facility is or will be geographically located so that the service will be reasonably accessible to such enrolled individuals, and (iv) at least seventy-five percent of the patients who can reasonably be expected to receive the institutional

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health service will be individuals enrolled with such organization or organizations in the combination, or

(c) a health care facility (or portion thereof) if (i) the facility is or will be leased by a health maintenance organization or combination of health maintenance organizations which has, in the service area of the organization or the service areas of the organizations in the combination, an enrollment of at least fifty thousand individuals and, on the date the application is submitted under subsection (2) of this section, at least fifteen years remain in the term of the lease, (ii) the facility is or will be geographically located so that the service will be reasonably accessible to such enrolled individuals, and (iii) at least seventy-five percent of the patients who can reasonably be expected to receive the institutional health service will be individuals enrolled with such organization,

if, with respect to such offering, acquisition, or obligation, the department has, upon application under subsection (2) of this section, granted an exemption from such requirement to the organization, combination of organizations, or facility.

(2) A health maintenance organization, combination of health maintenance organizations, or health care facility shall not be exempt under subsection (1) of this section from obtaining a certificate of need before offering an institutional health service, acquiring major medical equipment, or obligating capital expenditures unless--

(a) it has submitted at least thirty days prior to the offering of an institutional health service, acquiring major medical equipment, or obligating capital expenditures in excess of the expenditure minimum an application for such exemption, and

(b) the application contains such information respecting the organization, combination, or facility and the proposed offering, acquisition, or obligation as the department may require to determine if the organization or combination meets the requirements of subsection (1) of this section or the facility meets or will meet such requirements, and

(c) the department approves such application. The department shall approve or disapprove an application for exemption within thirty days of receipt of a completed application. In the case of a proposed health care facility (or portion thereof) which has not begun to provide institutional health services on the date an application is submitted under this subsection with respect to such facility (or portion), the facility (or portion) shall meet the applicable requirements of subsection (1) of this section when the facility first provides such services. The department shall approve an application submitted under this subsection if it determines that the applicable requirements of subsection (1) of this section are met.

(3) A health care facility (or any part thereof) or medical equipment with respect to which an exemption was granted under subsection (1) of this section may not be sold or leased and a controlling interest in such facility or equipment or in a lease of such facility or equipment may not be acquired and a health care facility described in (1)(c) which was granted an exemption under subsection (1) of this section may not be used by any person other than the lessee described in (1)(c) unless--

(a) the department issues a certificate of need approving the sale, lease, acquisition, or use, or

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(b) the department determines, upon application, that (i) the entity to which the facility or equipment is proposed to be sold or leased, which intends to acquire the controlling interest, or which intends to use the facility is a health maintenance organization or a combination of health maintenance organizations which meets the requirements of (1)(a) (i), and (ii) with respect to such facility or equipment, meets the requirements of (1)(a) (ii) or (iii) or the requirements of (1)(b) (i) and (ii).

(4) In the case of a health maintenance organization, an ambulatory care facility, or a health care facility, which ambulatory or health care facility is controlled, directly or indirectly, by a health maintenance organization or a combination of health maintenance organizations, the department may under the program apply its certificate of need requirements only to the offering of inpatient institutional health services and the acquisition of major medical equipment and the obligation of capital expenditures for the offering of inpatient institutional health services, and then only to the extent that such offering, acquisition, or obligation is not exempt under the provisions of this section. [1982 c 119 { 3; 1980 c 139 { 9.]

RCW 70.38.115 CERTIFICATES OF NEED--PROCEDURES--RULES--CRITERIA FOR REVIEW--CONDITIONAL CERTIFICATES OF NEED--CONCURRENT REVIEW--REVIEW PERIODS--HEARING--ADMINISTRATIVE REVIEW--AMENDED CERTIFICATES OF NEED. (1) Certificates of need shall be issued, denied, suspended, or revoked by the designee of the secretary of the department in accord with the provisions of this chapter and rules of the department which establish review procedures and criteria for the certificate of need program.

(2) Criteria for the review of certificate of need applications, except as provided in subsection (3) of this section for health maintenance organizations, shall include but not be limited to consideration of the following:

(a) The relationship of the health services being reviewed to the applicable health plans;

(b) The need that the population served or to be served by such services has for such services;

(c) The availability of less costly or more effective alternative methods of providing such services;

(d) The financial feasibility and the probable impact of the proposal on the cost of and charges for providing health services in the community to be served, including findings and recommendations of the Washington state hospital commission in the case of applications submitted by hospitals. An application by a hospital shall be denied if the state hospital commission does not recommend approval, unless the secretary provides the commission with a written statement setting forth the reason or reasons, and citing the applicable subsection or subsections of this section, for approving an application that the commission has determined to be not feasible;

(e) In the case of health services to be provided, (i) the availability of alternative uses of project resources for the provision of other health services, (ii) the extent to which such proposed services will be accessible to all residents of the area to be served, and (iii) the need for and the availability in the community of services and facilities for osteopathic and allopathic physicians and their

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patients. The department shall consider the application in terms of its impact on existing and proposed institutional training programs for doctors of osteopathy and medicine at the student, internship, and residency training levels;

(f) In the case of a construction project, the costs and methods of the proposed construction, including the cost and methods of energy provision, and the probable impact of the construction project reviewed (i) on the cost of providing health services by the person proposing such construction project and (ii) on the cost and charges to the public of providing health services by other persons;

(g) The special needs and circumstances of osteopathic hospitals, nonallopathic services and children's hospitals;

(h) Improvements or innovations in the financing and delivery of health services which foster cost containment and serve to promote quality assurance and cost-effectiveness;

(i) In the case of health services proposed to be provided, the efficiency and appropriateness of the use of existing services and facilities similar to those proposed;

(j) In the case of existing services or facilities, the quality of care provided by such services or facilities in the past; and

(k) In the case of hospital certificate of need applications, whether the hospital meets or exceeds the regional average level of charity care, as determined by the hospital commission.

(3) A certificate of need application of a health maintenance organization or a health care facility which is controlled, directly or indirectly, by a health maintenance organization, shall be approved by the department if the department finds:

(a) Approval of such application is required to meet the needs of the members of the health maintenance organization and of the new members which such organization can reasonably be expected to enroll; and

(b) The health maintenance organization is unable to provide, through services or facilities which can reasonably be expected to be available to the organization, its institutional health services in a reasonable and cost-effective manner which is consistent with the basic method of operation of the organization and which makes such services available on a long-term basis through physicians and other health professionals associated with it.

A health care facility (or any part thereof) or medical equipment with respect to which a certificate of need was issued under this subsection may not be sold or leased and a controlling interest in such facility or equipment or in a lease of such facility or equipment may not be acquired unless the department issues a certificate of need approving the sale, acquisition, or lease.

(4) The decision of the department on a certificate of need application shall be consistent with the state health plan in effect, except in emergency circumstances which pose a threat to the public health. The department in making its final decision may issue a conditional certificate of need if it finds that the project is justified only under specific circumstances. The conditions shall directly relate to the project being reviewed. The conditions may be released if it can be substantiated that the conditions are no longer valid and the release of such conditions would be consistent with the purposes of this chapter.

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(5) Criteria adopted for review in accordance with subsection (2) of this section may vary according to the purpose for which the particular review is being conducted or the type of health service reviewed.

(6) The department shall specify information to be required for certificate of need applications. Within fifteen days of receipt of the application, the department shall request additional information considered necessary to the application or start the review process. Applicants may decline to submit requested information through written notice to the department, in which case review starts on the date of receipt of the notice. Applications may be denied or limited because of failure to submit required and necessary information.

(7) Concurrent review is for the purpose of comparative analysis and evaluation of competing or similar projects in order to determine which of the projects may best meet identified needs. Categories of projects subject to concurrent review include at least new health care facilities, new services, and expansion of existing health care facilities. The department shall specify time periods for the submission of applications for certificates of need subject to concurrent review, which shall not exceed ninety days. Review of concurrent applications shall start fifteen days after the conclusion of the time period for submission of applications subject to concurrent review. Concurrent review periods shall be limited to one hundred fifty days, except as provided for in rules adopted by the department authorizing and limiting amendment during the course of the review, or for an unresolved pivotal issue declared by the department.

(8) Review periods for certificate of need applications other than those subject to concurrent review shall be limited to ninety days. Review periods may be extended up to thirty days if needed by a review agency, and for unresolved pivotal issues the department may extend up to an additional thirty days. A review may be extended in any case if the applicant agrees to the extension.

(9) The department or a designated regional health council shall conduct a public hearing on a certificate of need application if requested unless the review is expedited or subject to emergency review. The department by rule shall specify the period of time within which a public hearing must be requested and requirements related to public notice of the hearing, procedures, recordkeeping and related matters.

(10) Any applicant denied a certificate of need or whose certificate of need has been suspended or revoked shall be afforded an opportunity for administrative review in accordance with chapter 34.04 RCW and a hearing shall be held within one hundred twenty days of a request therefor. An administrative law judge shall review the decision of the secretary's designee and render a proposed decision for consideration by the secretary in accordance with chapter 34.12 RCW or remand the matter to the secretary's designee for further consideration. The secretary's final decision is subject to review by the superior court as provided in chapter 34.04 RCW.

(11) The department may establish procedures and criteria for reconsideration of decisions.

(12) An amended certificate of need shall be required for the following modifications of an approved project:

(a) A new service;

(b) An expansion of a service beyond that originally approved;

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(c) An increase in bed capacity;

(d) A significant reduction in the scope of a project without a commensurate reduction in the cost of the project, or a cost increase (as represented in bids on a construction project or final cost estimates acceptable to the person to whom the certificate of need was issued) if the total of such increases exceeds twelve percent or fifty thousand dollars, whichever is greater, over the maximum capital expenditure approved. The review of reductions or cost increases shall be restricted to the continued conformance of the project with the review criteria pertaining to financial feasibility and cost containment.

(13) An application for a certificate of need for a capital expenditure which is determined by the department to be required to eliminate or prevent imminent safety hazards or correct violations of applicable licensure and accreditation standards shall be approved. [1984 c 288 § 22; 1983 c 235 § 8; 1980 c 139 § 8; 1979 ex.s. c 161 § 11.]

NOTES:

Severability--1984 c 288: See note following RCW 70.39.010.

Effective date--1980 c 139: See RCW 70.38.916.

Effective dates--1979 ex.s. c 161: See RCW 70.38.915.

RCW 70.38.125 CERTIFICATES OF NEED--ISSUANCE--DURATION--PENALTIES FOR VIOLATIONS. (1) A certificate of need shall be valid for two years: PROVIDED, That one six-month extension may be made if it can be substantiated that substantial and continuing progress toward commencement of the project has been made as defined by regulations to be adopted pursuant to this chapter.

(2) A project for which a certificate of need has been issued shall be commenced during the validity period for the certificate of need.

(3) The department, in cooperation with the regional health councils, and the hospital commission in the case of hospital projects, shall monitor the costs and components of approved projects to assure conformance with certificates of need that have been issued. Rules and regulations adopted shall specify when changes in the cost or components of a project require reevaluation of the project. The department may require applicants to submit periodic progress reports on approved projects or other information as may be necessary to effectuate its monitoring responsibilities.

(4) The secretary of the department, in the case of a new health facility, shall not issue any license unless and until a prior certificate of need shall have been issued by the department for the offering or development of such new health facility.

(5) Any person who engages in any undertaking which requires certificate of need review without first having received from the department either a certificate of need or an exception granted in accordance with this chapter shall be liable to the state in an amount

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not to exceed one hundred dollars a day for each day of such unauthorized offering or development. Such amounts of money shall be recoverable in an action brought by the attorney general on behalf of the state in the superior court of any county in which the unauthorized undertaking occurred. Any amounts of money so recovered by the attorney general shall be deposited in the state general fund.

(6) The department may bring any action to enjoin a violation or the threatened violation of the provisions of this chapter or any rules and regulations adopted pursuant to this chapter, or may bring any legal proceeding authorized by law, including but not limited to the special proceedings authorized in Title 7 RCW, in the superior court in the county in which such violation occurs or is about to occur, or in the superior court of Thurston county. [1983 c 235 § 9; 1980 c 139 § 10; 1979 ex.s. c 161 § 12.]

NOTES:

Effective date--1980 c 139: See RCW 70.38.916.

Effective date--1979 ex.s. c 161: See RCW 70.38.915.

RCW 70.38.135 DEPARTMENT SERVICES AND SURVEYS--RULES. The secretary of the department shall have authority to:

(1) Provide when needed temporary or intermittent services of experts or consultants or organizations thereof, by contract, when such services are to be performed on a part time or fee-for-service basis;

(2) Make or cause to be made such on-site surveys of health care or medical facilities as may be necessary to the development of the state health plan and the administration of the certificate of need program;

(3) Upon review of recommendations, if any, from the board of health:

(a) Promulgate rules under which health care facilities providers doing business within the state shall submit to the department such data related to health and health care as the department finds necessary to the performance of its functions under this chapter;

(b) Promulgate rules pertaining to the maintenance and operation of medical facilities which receive federal assistance under the provisions of Title XVI;

(c) Promulgate rules in implementation of the provisions of this chapter, including the establishment of procedures for public hearings for predecisions and post-decisions on applications for certificate of need;

(d) Promulgate rules providing circumstances and procedures of expedited certificate of need review if:

(i) An application is found consistent with the state health plan; and

(ii) There has not been a significant change in existing health facilities of the same type or in the need for such health facilities and services;

(4) Grant allocated state funds to regional health councils to fund not more than seventy-five percent of the costs of regional planning activities, excluding costs related to review of applications for

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certificates of need, provided for in this chapter or approved by the council; and

(5) Contract with and provide reasonable reimbursement for designated regional health councils to assist in determinations of certificates of need. [1983 c 235 { 10; 1979 ex.s. c 161 { 13.]

RCW 70.38.145 LONG-RANGE HEALTH FACILITY PLANS. (1) Long-range health facility plans shall be filed with the appropriate health systems agency effective January 1, 1984. In order to ensure a streamlined planning process with the minimum of duplication, a common form for such plan shall be developed by the department, in cooperation with the health systems agencies and the Washington state hospital commission, which shall also be utilized as the three-year capital expenditure plan required by the hospital commission.

(2) The health systems agency shall review all such health facility plans in its area, identify any significant inconsistencies with the health systems plan for that area, and assist hospitals to cooperatively resolve inconsistencies among their plans and the health systems plan.

(3) An expedited certificate of need review shall be conducted by the department when:

(a) Long-range health facility plans have been developed in accordance with the requirements of this section; and

(b) When an application for a certificate of need has been found to be consistent with the applicant's long-range health facility plan and the applicable health systems plan, annual implementation plan, state health plan, and state medical facilities plan; and

(c) When there has not been a significant change, since the long-range health facility plan was approved, in existing health facilities of the same type or in the need for such health facilities and services. [1979 ex.s. c 161 { 14.]

RCW 70.38.155 CERTIFICATES OF NEED--SAVINGS CLAUSE. The enactment of this chapter shall not have the effect of terminating, or in any way modifying the validity of any certificate of need which shall already have been issued prior to *the effective date of this act. [1979 ex.s. c 161 { 15.]

NOTES:

*Reviser's note: "the effective date of this act", see RCW 70.38.915.

RCW 70.38.156 CERTIFICATES OF NEED--SAVINGS. The enactment of this chapter as amended shall not have the effect of terminating, or in any way modifying the validity of any certificate of need which shall already have been issued prior to *the effective date of this 1980 act. [1980 c 139 { 11.]

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NOTES:

*Reviser's note: For "the effective date of this 1980 act", see RCW 70.38.916.

RCW 70.38.157 CERTIFICATES OF NEED--SAVINGS. The enactment of amendments to chapter 70.38 RCW by *this 1983 act shall not have the effect of terminating or in any way modifying the validity of a certificate of need which was issued prior to **the effective date of this 1983 act. [1983 c 235 { 11.]

NOTES:

Reviser's note: *(1) "this 1983 act" [1983 c 235] consists of the 1983 amendments to RCW 70.38.015, 70.38.025, 70.38.035, 70.38.045, 70.38.065, 70.38.085, 70.38.105, 70.38.115, 70.38.125, 70.38.135, 70.38.905, 70.38.910, 43.131.213, and 43.131.214, and the enactment of RCW 70.38.157, 70.38.914, and two uncodified sections.

**(2) "the effective date of this 1983 act" [1983 c 235] for sections 16 and 17 of that act was May 17, 1983. For all other sections of that act the effective date was July 24, 1983.

RCW 70.38.905 CONFLICT WITH FEDERAL LAW--CONSTRUCTION. In any case where the provisions of this chapter may directly conflict with federal law, or regulations promulgated thereunder, the federal law shall supersede and be paramount as necessary to the receipt of federal funds by the state. [1983 c 235 { 12; 1979 ex.s. c 161 { 16.]

RCW 70.38.910 SEVERABILITY. If any provision of this chapter or its application to any person or circumstance is held invalid, the remainder of the chapter or the application of the provision to other persons or circumstances is not affected. [1983 c 235 { 13; 1979 ex.s. c 161 { 17.]

RCW 70.38.911 SEVERABILITY--1980 C 139. If any provision of this 1980 act or its application to any person or circumstance is held invalid, the remainder of the act or the application of the provision to other persons or circumstances is not affected. [1980 c 139 { 12.]

RCW 70.38.914 PENDING CERTIFICATES OF NEED. A certificate of need application which was submitted and declared complete, but upon which final action had not been taken prior to *the effective date of this act, shall be reviewed and action taken based on chapter 70.38 RCW, as in effect prior to *the effective date of this act, and the rules adopted thereunder. [1983 c 235 { 14.]

NOTES:

*Reviser's note: For "the effective date of this act", see note following RCW 70.38.157.

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RCW 70.38.915 EFFECTIVE DATES--PENDING CERTIFICATES OF NEED. (1) *Sections 10, 11, 12, and 21 shall take effect on January 1, 1980.

(2) Any certificate of need application which was submitted and declared complete, but upon which final action had not been taken prior to January 1, 1980, shall be reviewed and action taken based on chapter 70.38 RCW, as in effect prior to **the effective date of this 1979 act, and the regulations adopted thereunder. [1979 ex.s. c 161 § 19.]

NOTES:

Reviser's note: *(1) Sections 10, 11, and 12 are codified as RCW 70.38.105, 70.38.115, and 70.38.125. Section 21 was a repealer which repeals RCW 70.38.020, 70.38.110 through 70.38.190, and 70.38.210.

**(2) The effective date of those remaining sections of 1979 ex.s. c 161 which do not have a specific effective date indicated in this section is September 1, 1979.

RCW 70.38.916 EFFECTIVE DATE--1980 C 139. *Sections 7, 8, and 10 of this 1980 act shall take effect January 1, 1981. [1980 c 139 § 14.]

NOTES:

Reviser's note: *(1) "Sections 7, 8, and 10 of this 1980 act" consist of amendments to RCW 70.38.105, 70.38.115, and 70.38.125.

(2) The effective date of those remaining sections of 1980 c 139 is June 12, 1980.

RCW 70.38.920 SHORT TITLE. This act may be cited as the "State Health Planning and Resources Development Act". [1979 ex.s. c 161 § 22.]

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Office Of The Mayor
City of Seattle

Charles Royer, Mayor

December 17, 1984

RECEIVED
DEC 21 1984
Dept. of Construction & Land Use

Larry Thompson
Executive Director
Puget Sound Health Systems
Agency
601 Valley Street
Seattle, Washington 98109

Dear Mr. Thompson:

I am writing to seek the policy guidance of your agency with regard to the development of emergency helicopter landing facilities at hospitals in the City of Seattle.

I am concerned that without guidance from the health planning system, these facilities are likely to proliferate in response to the competitive pressures at work within the health care industry in our region. This trend could put additional upward pressure on the costs of health services and create severe environmental problems for neighborhoods with medical facilities nearby.

The City of Seattle has the responsibility to address the land use implications of hospital helipads, but we wish to do so in the context of sound health policy. Therefore, we would appreciate the agency's response to the following questions:

- In what circumstances is it appropriate to use a helicopter in emergency medical transport to Seattle health care facilities?
- How frequently is this means of emergency transport required?
- How many facilities in Seattle and King County should be equipped with helipads to meet the medical need?
- Which Seattle hospitals are best suited to meet the identified need?
- What alternatives are available for transporting patients, and what are the medical implications?

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I recognize that the Health Systems Agency may not yet have formal policies on this issue, but I believe your board will reflect the range of concerns held by the general public. It will be very important that we have your guidance as we weigh the human and environmental impact of our decisions.

I very much appreciate your willingness to consider this issue.

Sincerely,

Charles Royer

Charles Royer

cc: All City Council Members
William Justen, Director, Department of Construction and Land Use
Jesse M. Tapp, M.D., M.P.H., Director, Seattle-King County Public Health Department
Theresa Aragon, Director, Department of Human Resources
Patty Whisler, Department of Human Resources
Treuman Katz, Director, Children's Orthopedic Hospital
Jerry Schneider, Laurelhurst Community Council

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DEPARTMENT OF
CONSTRUCTION & LAND USE

NO.

DATE 12/21/84

TO LAO/CP/HI

FROM WJJ/KE

For your information ✓

Prepare reply _____ to be signed by _____

Response due _____

Review/Comment _____

Please see me _____

Please handle _____

Copy(ies) for _____

File _____

If this routing slip is numbered, please attach it to copy of your response and return to the Director's secretary for the reading file.

5.225

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842.5 12-17

December 17, 1984

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Executive Director
Puget Sound Health Systems
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Treuman Katz, Director, Children's Orthopedic Hospital
Jerry Schneider, Laurelhurst Community Council

CR:tbn

Treuman Katz, Director
Children's Orthopedic Hospital
4800 Sand Point Way N.E.
Seattle, Washington 98105

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8421.S 1647

December 17, 1984

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Puget Sound Health Systems
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CR:tbn

Treuman Katz, Director
Children's Orthopedic Hospital
4800 Sand Point Way N.E.
Seattle, Washington 98105

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CHILDREN'S ORTHOPEDIC HOSPITAL
AND MEDICAL CENTER
4800 Sand Point Way N.E.
Seattle, Wash. 98105 / Phone: 634-5000

UNIVERSITY OF WASHINGTON
School of Medicine
Department of Pediatrics / RD-20
Seattle, Wash. 98195 / Phone 543-3180

Oct. 14, 1983

To: Newborn Care Hotline Physicians

From: Craig Jackson

Re: INFANT TRANSPORTS: AIR VS. GROUND

While on call for the Hotline, I have been asked to arrange the transport of high risk infants to Seattle from hospitals that are outside the usual driving range of the CHMC-UW infant transport service, such as Bellingham (89 miles). I have found that the quickest way to move the patient to Seattle is for the referring hospital to assemble their own transport team (usually a nurse and respiratory therapist). Occasionally this is not possible and a ground or air transport team from Seattle is required. In the attached analysis, I have compared three modes of infant transport by compiling data from Sue Engman, Lori Kitchin, and some phone calls of my own. The total elapsed time required is given first. The second column is relevant when the patient requires stabilization by the Seattle team prior to leaving the referring hospital. The third column is relevant if the time "in transit" (outside either hospital) must be kept as brief as possible. Costs are included in the last column.

It is my hope that these data will help others who often wonder, "how long does it take?" and "how much does it cost?"

cc: Sue Engman, R.N.
Lori Kitchin, R.N.
Mike Copass, M.D.

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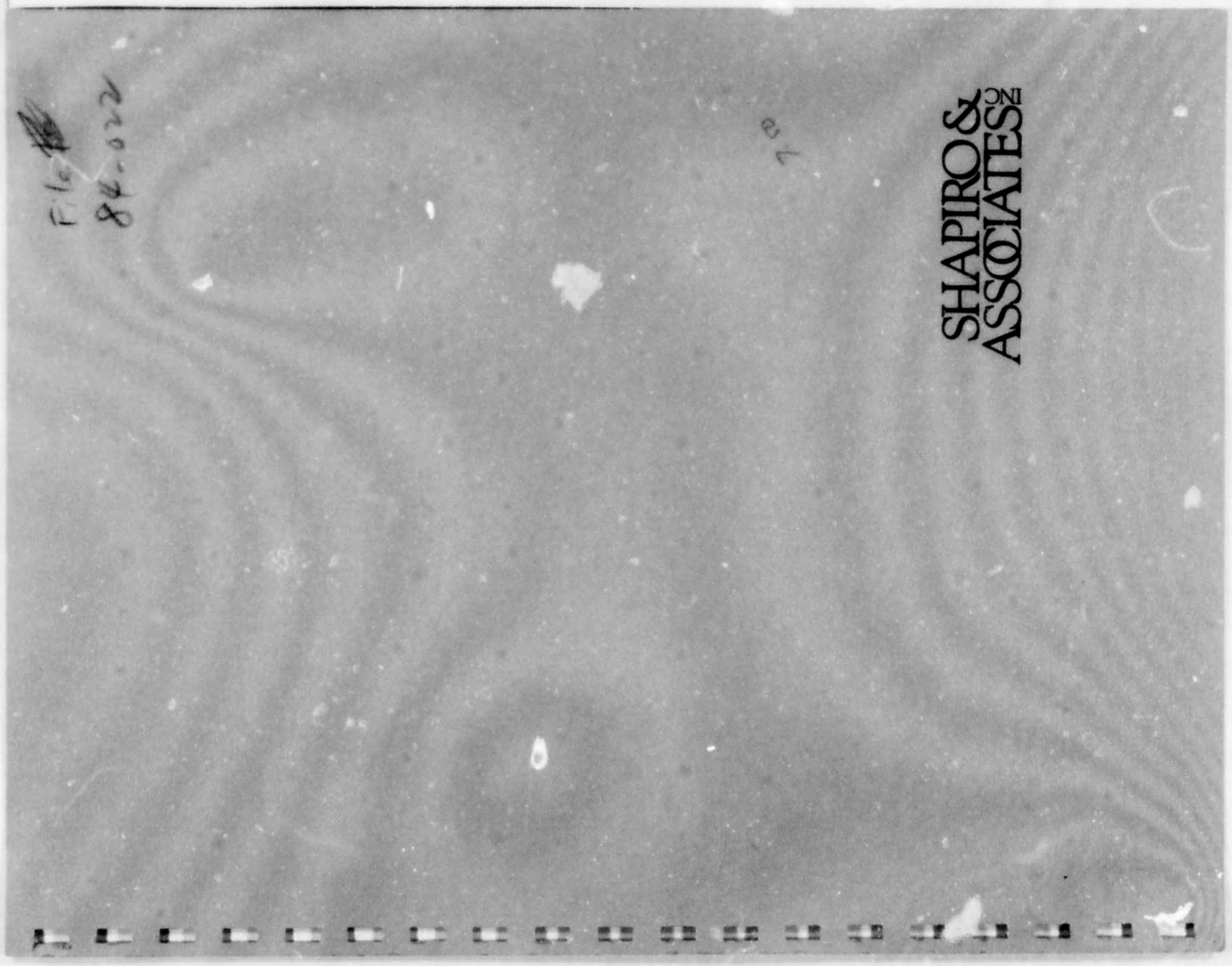

File
84-022

FINAL

ENVIRONMENTAL CHECKLIST
ON THE
PROPOSED
CHILDREN'S ORTHOPEDIC HOSPITAL
AND MEDICAL CENTER
HELISTOP

Prepared for

Children's Orthopedic Hospital
and Medical Center

Prepared by

Shapiro and Associates, Inc.
The Smith Tower, Suite 1812
Seattle, Washington 98104

16 October 1985

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25.05.960 ENVIRONMENTAL CHECKLIST.

ENVIRONMENTAL CHECKLIST

Purpose of Checklist.

The State Environmental Policy Act (SEPA), chapter 43.21 RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants.

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do no know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of Checklist for Nonproject Proposals.

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

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A. BACKGROUND

1. Name of proposed project, if applicable:
   Emergency Helistop for Children's Orthopedic Hospital and Medical Center

2. Name of applicant:
   Children's Orthopedic Hospital and Medical Center

3. Address and phone number of applicant and contact person:
   4800 Sand Point Way N.E.
   Seattle, WA 98105
   Contact: Dorothy Teeter
   (206) 526-2004

4. Date checklist prepared: October 16, 1985

5. Agency requesting checklist: City of Seattle, Department of Construction and Land Use

6. Proposed timing or schedule (including phasing, if applicable):

   Construct immediately after receiving all necessary approvals.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

   Children's Orthopedic Hospital and Medical Center submitted an earlier environmental checklist. This submission provides additional information requested by DCLU, and outlines COHMC's Mitigation Program.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

   Yes. Expansion of short stay unit to include a 720 square foot waiting room. Remodeling Third Floor, C Wing. Expansion of oxygen storage facility from 5,000 cubic yards to 9,000 cubic yards.

10. List any government approvals or permits that will be needed for your proposal, if known.

    City of Seattle Conditional Use Permit, Master Use Permit.
    City of Seattle Building Permit
    FAA Approval

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11. Give brief, complete description of your proposal, including the proposed uses and the site of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Refer to Attachment A.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range our boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The proposed helistop is located at Children's Orthopedic Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, in Section 15, Township 25 North, Range 4 East. Within the hospital grounds, the site of the proposed helistop is 85 feet due north of the existing COHMC emergency room.

Refer to Figures 1, 2 and 3.

TO BE COMPLETED BY APPLICANT: EVALUATION FOR AGENCY USE ONLY

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): Flat, (rolling), hilly, steep slopes, mountainous, other: _____.

b. What is the steepest slope on the site (approximate percent slope)?

10%

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Glacial till

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No. The hillslope at the proposed site appears stable with an existing retaining wall on the western periphery. There are no indications of landslides.

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Refer to Attachment A.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Refer to Attachment A.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?
18.7% of the fenced helistop site and walkway would be covered with concrete after project construction.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Refer to Attachment A.

2. Air

a. What type of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Refer to Attachment A.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Refer to Attachment A.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No

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TO BE COMPLETED BY APPLICANT:

EVALUATION FOR AGENCY USE ONLY

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Does not apply.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals ...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Does not apply.

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c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Refer to Attachment A.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No

d. Proposed measures to reduce or control surface, ground, or runoff water impacts, if any:

Refer to Attachment A.

4. Plants

a. Check or circle types of vegetation found on the site:

X deciduous tree: alder, maple, aspen, (other)
X evergreen tree: fir, (cedar), pine, other
X shrubs
X grass
__ pasture
X crop or grain (COHMC kitchen garden)
__ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
__ water plants: water lily, eelgrass, milfoil, other
__ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Refer to Attachment A.

c. List threatened or endangered species known to be on or near the site.

None

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Refer to Attachment A.

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5. Animals

a. Circle any birds and animals that have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, (songbirds,) other: _____

mammals: deer, bear, elk, beaver, other: _____

fish: bass, salmon, trout, herring, shellfish, other: _____

b. List any threatened or endangered species known to be on or near the site.
None

c. is the site part of a migration route? If so, explain.
See Attachment A.

d. Proposed measures to preserve or enhance wildlife, if any:
Not applicable

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Refer to Attachment A.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Refer to Attachment A.

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7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Refer to Attachment A.

1) Describe special emergency services that might be required.

Refer to Attachment A.

2) Proposed measures to reduce or control environmental health hazards, if any:

Refer to Attachment A.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment operation, other)?

Refer to Attachment B.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from site?

Refer to Attachment B.

3) Proposed measures to reduce or control noise impacts, if any:

Refer to Attachment B.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

Refer to Attachment A.

b. Has the site been used for agriculture? If so, describe.

Refer to Attachment A.

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c. Describe any structures on the site.

None

d. Will any structures be demolished? If so, what?

No

e. What is the current zoning classification of the site?

I-3

f. What is the current comprehensive plan designation of the site?

Hospital

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No

i. Approximately how many people would reside or work in the completed project?

None

j. Approximately how many people would the completed project displace?

None

k. Proposed measures to avoid or reduce displacement impacts, if any;

Not applicable

l. Proposed measures to ensure the proposal is compatible with existing and project land uses and plans, if any:

Refer to Attachment A.

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9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing?

Not applicable

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing?

Not applicable

c. Proposed measures to reduce or control housing impacts, if any:

Not applicable

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Refer to Attachment A.

b. What views in the immediate vicinity would be altered or obstructed?

Refer to Attachment A.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Refer to Attachment A.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Refer to Attachment A.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

c. What existing off-site sources of light or glare may affect your proposal?

None

d. Proposed measures to reduce or control light and glare impacts, if any:

Refer to Attachment A.

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12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
Laurelhurst playfield, school playground several blocks away. (Refer to Figure 1)

b. Would the proposed project displace any existing recreational uses? If so, describe.
No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Not necessary

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No

b. Generally describe any landmarks or evidence of historic, archaelogical, scientific, or cultural importance known to be on or next to the site.

None on or next to the site.

c. Proposed measures to reduce or control impacts, if any:

Not applicable

14. Transportation

a. Identify public streets and highways serving the site, and describe the proposed access to the existing street system. Show on site plans, if any.

Refer to Attachment A.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop.

Refer to Attachment A.

c. How many parking spaces would the completed project have? How many would the project eliminate?

The project would not add or eliminate any parking spaces.

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d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

No

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Refer to Attachment A.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Not applicable. Refer to Attachment A, Sections B.14.a and B.14.e.

g. Proposed measures to reduce or control transportation impacts, if any.

Refer to Attachment A.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No ,existing fire protection serving COHMC would be adequate.

b. Proposed measures to reduce or control direct impacts on public services, if any.

No

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16. Utilities

a. Circle utilities currently available at the site:
(electricity), (natural gas), (water), (refuse service),
(telephone), (sanitary sewer), septic system, other.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Electricity for emergency lighting would be provided by Seattle City Light.
Extending service lines at COHMC.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand the lead agency is relying on them to make its decision.

Signature: Jeanne Kalk, C.E.O.

Date submitted: Oct 22, 1985

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A.11 Children's Orthopedic Hospital and Medical Center (COHMC) proposes to construct a helistop on its campus. The helistop would be located 85 feet due north of the emergency room entrance on 9,552 square feet of landscaped property. The use of the helistop will be limited to the transportation of critically ill or seriously injured infants, children and adolescents. Based on COHMC projections, the number of patients brought to COHMC would average between 15 to 20 per month. Each trip would include a pick up of COHMC personnel to accompany the patient and a return trip with the patient to COHMC.

COHMC's Role as a Regional Health Care Provider

COHMC is a regional, tertiary care children's hospital serving the specialized medical needs of infants, children and adolescents. Because of the unique services offered at COHMC, it receives for treatment infants, children and adolescents who are critically ill or severely injured. These patients originate from a four-state region: Washington, Montana, Alaska and Idaho. They are admitted either directly or through referral from other hospitals and community physician.

Medical Situations Warranting Emergency Helicopter Transportation

The use of the helistop would be consistent with restrictions contained in the City of Seattle Code; that is, it will be used only for emergency helicopter transportation. The use of the helicopter would be limited to severely ill or injured children requiring transport. As a regional, tertiary care pediatric hospital, COHMC is, in many cases, the only hospital in the region with the facilities and equipment to provide the necessary care to avoid severe and permanent disability or death. This is a medical emergency identified by a physician at an outlying area, and helicopter transportation is agreed to by the Medical Director for Airlift Northwest. The need for an on-site helistop is substantially related to the increasing sophistication of medical care over the past several years. Delay in providing the most sophisticated care can mean the difference between successful recovery and death.

Examples of emergencies that could require helicopter transport are:

. Near drowning, in which time is of the essence to attempt to save the patient's life and to preserve the best chance to restore the patient to his or her capacities;

. Severed arteries, causing severe bleeding where delay in treatment could result in death;

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. Hypoplastic heart and lungs or other congenital anomalies;

. Premature and other births at outlying hospitals where transport is necessary for the survival of the infant;

. Overwhelming infection;

. Ingestion of toxic substances.

Howard Farley, Chief of the State Emergency Medical Services section, has stated that:

> "...he would like to see Airlift Northwest have full use of its helicopter ambulance, including a helipad at Children's. 'It makes good sense in terms of patient care to have it there,' he said. 'It would mostly be a rural to urban service, bringing patients from outlying areas into the city hospitals.'"
>
> Seattle Post-Intelligencer, July 24, 1985, page A6.

Existing Helicopter Transport/Landing Practice

Under the current system, helicopters land at the University of Washington soccer field and the patient is transferred from the helicopter to an ambulance for final transport to COHMC. This system is medically inferior and it substantially increases the patients' risk of death or injury. Preparing a critically ill or injured infant, child or adolescent for transport over any distance, such as that between the University of Washington soccer field and the COHMC emergency room, is a time-consuming procedure involving the following tasks:

. any of the various life-support and monitoring systems that were connected in the helicopter may have to be disconnected;

. the patient must be transferred into the ambulance and reconnected to the life support and other systems in the ambulance;

. the patient may require stabilization before the ambulance can leave the soccer field;

. and the patient's life support systems must again be disconnected at the hospital for final transfer to the emergency room.

Because this process is time consuming, it increases the potential for exacerbating the patient's life-threatening condition by delaying treatment. If stabilization is required before the ambulance can leave from the soccer field for COHMC, then the time delay before treatment can begin may increase. Depending on the time of day and the amount of traffic, the travel time between the soccer field and COHMC may be longer than at other times. Total

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travel time from helicopter landing at the soccer field to the patients' entry of the emergency room door is 20-30 minutes.

The University of Washington soccer field does not have sufficient lighting for safe helicopter operations at night or during inclement weather, thereby increasing the risk, not only to the patient, but to the pilot and transport team. The soccer field is not paved and is sometimes muddy, which has prevented the ambulance from driving onto the field. Such conditions require the patient to be unloaded and hand-carried to the waiting ambulance across the muddy and slippery field. This field has been so muddy, at times, that ambulances have been stuck in it.

Rationale for Proposed Helicopter Transport Landing Practice

By permitting helicopters to land on the COHMC campus at the proposed helistop location, the patient can be transferred directly from the helicopter to the emergency room without delay. The proposed helistop is located close enough to the emergency room entrance to preclude the need for patient transfer in and out of the ambulance, thereby averting the need for connecting the patient with ambulance support systems and/or stabilization; the patient can be brought directly from the helicpoter into the emergency room. The additional flight time between the soccer field and the proposed helistop is expected to be two minutes, with one to two minutes required for patient transfer from helicopter to emergency room. This three to four minute total is comparable to a minimum transfer time from the soccer field of 20 to 30 minutes. By allowing the helicopters to land at the proposed helistop location, the patient would be served by full emergency room staff and equipment 15 to 25 minutes sooner than if the helicopter lands at the soccer field. The reduced transport time reduces the risk of permanent disability or death.

Alternative Helistop Locations

In developing alternative site locations that could be considered for locating a helistop, both on-campus and off-campus sites were nominated. The alternative sites considered were: the continued use of the University of Washington soccer field, establishment of the helistop on the roof of the COHMC medical building, establishment of the helistop on the roof of the parking garage, and establishment of the helistop at the proposed location outside the emergency room.

As described above, the University of Washington soccer field site and any other off-campus sites were determined to be unsuitable because of the additional patient transfer time involved. The roof of COHMC, which is an on-campus alternative, lacks the structural integrity and rooftop elevator necessary for a helistop. The establishment of the helistop on the roof of the parking garage would require additional patient transfer time, structural improvements to the garage, interfere with traffic circulation and be more environmentally intrusive. The additional patient move-

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ment would warrant the use of an ambulance, which negates much of the advantage of establishing a new helistop. Other alternative sites, at grade, on the COHMC campus were examined. The area closest to the emergency room (COHMC's proposed site) was considered most suitable because of the short transfer distance. This site will not interfere with existing on-campus traffic circulation or parking on campus and does not have any existing structures.

Helistop Characteristics

The helistop would be less than one foot above grade. The landing pad would cover 1,600 square feet, and be constructed of alternating squares of concrete and turf. A new retaining wall would be built east of the existing wall. The concrete center of the pad would be marked with a red "H," 4'x7.5', to visibly designate the helistop from the air. The site also would include an obstacle-free peripheral area, 85 feet in diameter with the landing pad in the center. Existing walkways would be used for patient transfer. The helistop site would be enclosed by a fence with a locked gate. The fence would be 2.5 feet tall on the west and 3.5 feet tall on the remaining three sides. The kitchen garden and other vegetation would be moved to the periphery of the site. The remainder of the site would be landscaped to provide for visual screening.

The helistop would have ground lights that would be turned on at night for emergency landings. These lights would meet minimum FAA standards and would not have any light spillage off-site. The lighting would be occasionally visible from some houses adjacent to COHMC on the east. Any additional requirements for fire safety equipment measures, such as emergency foam, would be incorporated into the project.

Helicopter Operations

The helistop will be primarily used by a helicopter flown by Airlift Northwest, a consortium of hospitals, which includes COHMC. The helicopter that Airlift Northwest uses for emergency transport is an AGUSTA A 109A MARK 2, one of the quietest helicopters available on the market. The helicopter is a modern, fully enclosed twin-engine helicopter with a four-blade propeller and retractable landing gear. The helicopter has a velocity not to exceed (VNE) of 169 knots, indicated air speed (IAS), and a normal cruising speed of 160 knots IAS. As noted above, there will be approximately 15 to 20 patients brought to COHMC by helicopter per month. Each flight into and out of COHMC would last approximately 5-8 minutes. The helicopter transport would be limited to infants, children or adolescents who are critically ill or injured and who must be transported by air because delay in transport to a tertiary care hospital would result in permanent disability or death.

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Delivering a single patient by helicopter to the COHMC would require two trips. Upon contact, Airlift Northwest would dispatch the helicopter to COHMC to pick up the medical crew; the helicopter would then go to the patient's location, pick him/her up and return to the COHMC helistop.

The proposed flightpath would be along N.E. 45th Street and Sand Point Way N.E. from the west (under current operations, the helicopter flies over Union Bay and lands at the University of Washington soccer field), with a sharp turn to the southeast at the hospital entrance (Penny Lane) and then south to the helistop. The helicopter would fly at the highest altitude possible (no lower than 500 feet) along the route prior to its descent at COHMC. The helicopter, once unloaded, would leave COHMC at once.

B.1.e Approximately 410 cubic yards of earth would be used as fill for the proposed helistop site. This fill would be placed along the western portion of the site to bring the site nearly level as required for the placement of the helistop surface. A new retaining wall would be placed at the western edge of the project to provide stability prior to the placement of the fill. Excess soil would be removed from other parts of the COHMC grounds to provide sufficient fill. The helistop site, including the landscaped periphery, would cover approximately 9,552 square feet and create 1,788 square feet of impervious surface.

B.1.f The potential for wind or water erosion of soils to increase on the site would be limited to the two month construction period. This would occur in the early construction phase as the retaining wall is built prior to the addition of the fill. Following the construction of the helistop landing pad, the site would be landscaped with grass and shrubbery. Thus, there would not be any long-term erosion impacts. COHMC will require the helistop construction contractors to implement standard erosion control measures (such as filter fence, hay bales, plastic sheeting, etc.) in order to minimize construction-related erosion. No additional mitigation measures would be necessary.

B.1.h The early construction of a new retaining wall upland from the existing wall would reduce any potential erosion during the remainder of construction and mitigate any potential long-term impacts. Landscaping would also be placed at the site as early as possible during construction to help prevent any long-term erosion. Implementation of construction erosion control measures would reduce minor erosion impacts during the short construction period (see B.1.f., above). No additional mitigation would be necessary.

B.2.a The primary air quality concerns in the Puget Sound region are carbon monoxide and suspended particulates (From: PSAPCA, 1984 Air Quality Data Summary).

The monitoring station closest to the COHMC campus is located at 5701 8th Avenue N.E. This station monitors suspended particu-

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lates. Total suspended particulates (TSP) is a general term for particles composed of dust, soot, organic matter, and compounds containing sulfur, nitrogen and metals. Particulates are released from auto and truck traffic, and from other sources. The highest concentrations of particulates are generally found in the more heavily industrialized areas. The area around COHMC is not in violation of the standards (conversation with Stephen Fry, PSAPCA, May 23, 1985).

The carbon monoxide (CO) content of ambient air in the area is constantly monitored at Children's Orthopedic Hospital and Medical Center. Carbon monoxide, the pollutant of most concern in the nearby University District study, is attributed primarily to the operation of motor vehicles.

Temporary minor impacts on air quality could occur during construction. Grading and filling the site and construction vehicle traffic could generate dust (suspended particulates). As necessary, the proponent would sprinkle water on exposed soils to minimize any wind-blown dust during construction.

The long-term impact of any helicopter emissions in the Puget Sound region from COHMC's proposal would be insignificant for several reasons:

1. The additional emissions from helicopter flights would be minimal. Helicopter transports to COHMC exist currently. The use of the proposed helistop would add a distance of one mile (one-half of a mile in each direction) of helicopter flight while decreasing the number of ground ambulance trips. Therefore, a small increase in potential helicopter emissions would be offset, in part, by the discontinuance of use of an ambulance for trips to COHMC from the University of Washington soccer field.

2. Airlift Northwest maintains its helicopters for maximum operating efficiency. The proper maintenance of the engines by Airlift Northwest reduces potential emissions.

3. Any potential helicopter carbon monoxide concentrations will occur where there are a number of sources, such as cars, in a congested area. Emissions would be a single mobile source and some distance away from any sensitive receptors.

No additional mitigation would be necessary.

B.2.c Refer to Section B.2.a.

B.3.c.1 The rate and volume of surface water runoff primarily due to rainwater from the developed site would be slightly greater than the existing site due to an increase in the impervious surface. The impervious surface on the site would increase by 1,788 square feet or 18.7%. A grass and concrete surface was selected to add only the minimal amount of concrete/impervious surface necessary

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to delineate the pad and provide stable support for the helicopter. A majority of the runoff would infiltrate the lawn much as it does currently and subsequently enter the stormwater drainage system. The City of Seattle Engineering Department drainage inspector for the area of COHMC, Don Smith, indicated there is adequate capacity of the existing system to handle projected runoff (conversation, May 16, 1985). No additional mitigation would be necessary or are proposed.

Although the project would not be subject to the City of Seattle Drainage Control Ordinance (No. 108080) because it would have less than 2,000 square feet of impervious surface, a catch basin could be provided to regulate drainage of the helistop surface and to prevent oil from entering the storm water system. It should be also noted there is minimal oil expected from the helicopter because of continuous off-site aircraft maintenance and short ground time at COHMC.

B.3.d Refer to Section B.3.c.1.

B.4.b All of the existing vegetation, including three trees, shrubbery, grass and the kitchen garden, would be removed from the site during construction. The kitchen garden offers a unique therapeutic program and is not considered a significant food resource for COHMC. COHMC, however, maintains an active planting and landscaping program on its campus. As a part of this comprehensive program, a majority of the plants and shrubbery, including the kitchen garden, would be transplanted to the periphery of the site or other locations on the COHMC campus.

B.4.d To the maximum extent possible, vegetation would be removed prior to construction and replanted at the periphery of the site. In addition to these relocated plants and shrubs, COHMC would plant other vegetation to enhance the site (see Section 10 below). This vegetation would provide visual screening of the helistop and reduce the potential for soil erosion. The kitchen garden would continue to provide a therapeutic experience and provide a very small portion of food for the hospital. The fenced area would contain minimum amounts of impervious surface for a helistop, and would be planted with grass (81%).

B.5.c The site of the proposed helistop is not part of a migration route. The additional helicopter travel between the soccer field and COHMC would also not affect any migration routes. The helicopter would maintain an altitude above 500 feet as it approaches Union Bay and the soccer field.

B.6.a Currently there is no energy consumed on the helistop site; however, petroleum is consumed when transporting critically ill or injured children to COHMC via helicopter to the University of Washington soccer field and via ambulance from the soccer field to COHMC.

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Energy would be used in the mining, manufacturing, and delivery of raw materials and for assembly during construction. When completed, the project's energy needs would be met by petroleum and electricity.

The energy impacts resulting from the completed project can be separated into two categories: (1) petroleum consumed in the transportation of critically ill or injured children, and (2) electrical energy used during the nighttime operation of the helistop.

(1) Transportation. Petroleum would continue to be used by the helicopter for the transportation of patients directly to COHMC. The helicopter would continue its flight path from the vicinity of the soccer field (see Figure 1) directly to COHMC. The small increase in petroleum consumption by the helicopter traveling the additional half mile would be offset by the energy savings realized from the reduced ambulance trips/transfers at the soccer field. Helicopter engines would be maintained to optimize efficiency. No additional mitigation would be necessary.

(2) Operation. A minimal amount of electricity would be consumed during the occasional night operation of the helistop. The lighting would be designed according to Federal Aeronautics Administration (FAA) standards to be clearly visible to the helicopter pilot. It would not produce additional light of such intensity as to spill off site. The lighting operations would be limited to flights. No additional mitigation (energy saving) measures.

B.6.c Refer to Section B.6.a.

B.7.a There are no environmental health hazards, including exposure to toxic chemicals, spill, or hazardous waste that could occur as a result of this proposal. Any risk of fire and explosion is limited to the unlikely event of a helicopter accident. No toxic substances would be released into the environment and jet fuel would not be stored at or near the COHMC site.

Although the risk of explosion due to a helicopter crash is highly unlikely, the flight path has been selected to minimize potential obstacles and avoid densely populated areas. The most recent statistics available from the National Transportation Safety Board (NTSB) for all turbine-powered rotorcraft show the accident rate to be 5.48 per 100,000 aircraft hours flown (Annual Review of Aircraft Accidents Data, U.S. General Aviation, 1981 [page 84, Table 95]. According to Gene Hill (Airlift Northwest, September 12, 1985), the average total flight time to serve COHMC has been 48 minutes. Assuming this accident rate, flight time and numbers of flights, one can conclude that the probability of a helicopter accident related to the service to the hospital would be approximately one every 95 years. It should be noted that such a mishap could occur at any point in the trip. Because data kept since 1975 shows the accident rate decreasing by more than half

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over a seven-year period, one could project that the probability of an accident would be even lower.

A natural gas meter house is located 48 feet north of the site. Conversation with representatives of Washington Natural Gas (Joe Jainga, May 22, 1985), discloses that the current protection of the meter with a fence and a concrete structure is considered, by Washington Natural Gas, reasonable and adequate to prevent a fire in the unlikely event of a mishap. In the event of a major accident, from whatever source, Washington Natural Gas would shut off the main valve across from COHMC on Sand Point Way.

The site is located 85 feet north of the COHMC emergency room and a 5,000-gallon oxygen tank is located 30 feet west of the site below grade. In conversations with representatives of the Fire Department (A.J. Fenstermaker, February 22, 1985), the proximity of the oxygen tank to the proposed helistop site was discussed. There are no regulations or standards in the National Fire Protection Association or Uniform Fire Code directly related to the proposed helistop and design mitigation. As a mitigation measure, however, the tank will be "hardened" to specifications agreed to between COHMC and the Fire Department. Hardening refers to improved protection surrounding the tank. This is advisable, particularly on the east side, to cover the exposed portion of the tank and reduce the impact of any potential accidents.

Any additional requirements for fire safety equipment measures, such as emergency foam, would be incorporated into the project.

A fence with a locked gate would permanently surround the site. During the construction period, the site would be barricaded for safety, as well as security. Signage would clearly mark the site, and entrance would be strictly limited to authorized personnel. The fenced area will be greater than the span of the helicopter blade and will allow a sufficient margin to prevent accidents while the helicopter is moving.

B.7.a.1 Refer to Section B.7.a.

B.7.a.2 Refer to Section B.7.a.

B.7.b.1 The primary source of noise associated with the helistop would be the helicopter. The consulting engineering firm of Seton, Johnson and Odell was retained to prepare a noise report on the helistop. The technical report on which the following analysis is based is available for review at the Department of Construction and Land Use. Existing conditions were profiled and the noise impacts were measured and evaluated as part of this project.

Background

The Maximum Permissible Sound Levels (25.08.410) within the City of Seattle are:

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District of Sound Source	District of Receiving Property Within the City of Seattle		
	Residential	Commercial	Industrial
Rural	52 dBA	55 dBA	57 dBA
Residential	55 dBA	57 dBA	60 dBA
Commercial	57 dBA	60 dBA	65 dBA
Industrial	60 dBA	65 dBA	70 dBA

However, these regulations do not affect licensed transportation vehicles or apply to emergency vehicles, such as the subject helicopter.

No other federal, state, or local regulations were found to address helistop noise.

Five sites were selected as noise measurement sites and noise levels were measured between May 12 and May 15, 1985. These sites were selected by the consultant's consideration of the flight path, land use, topography and discussions with Curt Horner, the Noise Program Coordinator, King County Health Department. Final determinations were made by Hermia Ip, Land Use Technician with the Department of Construction and Land Use. The sites, shown in Figure 2, are:

Site 1: The east side of 44th Avenue N.E. between N.E. 47th Street and N.E. 50th Street

Site 2: The east side of 45th Avenue N.E. between N.E. 45th Street and N.E. 47th Street

Site 3: North of Sand Point Way, in a parking lot adjacent and to the west of a high rise residential condominium

Site 4: A low rise multiple family duplex located adjacent to the west of the hospital property on 41st Aven : N.R. just southeast of Sand Point Way N.E.

Site 5: The west side of 41st Avenue N.E. northwest of Sand Poin: Way N.E.

Each site was monitored intermittently at four different periods on one weekend day and one weekday: 9-10 a.m., 4-6 p.m., 10 p.m. to midnight, and 2-4 a.m. Additionally, a flyover, landing and take-off by an AGUSTA helicopter was performed during the noise monitoring in order to measure actual noise levels.

Existing Conditions

The approximated day-night sound level (DNL - average sound levels over a 24-hour period) at each site is as follows:

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Site	DNL (dBA)
1	52
2	53
3	68
4	55
5	63

These levels are slightly lower than the actual values, because they do not include the increased noise from traffic occurring during wet road periods. Thus, they establish noise levels that create a conservative basis for evaluating helicopter noise effects.

The helicopter to be used is an AGUSTA A-109-A Mark 2, selected, in part, because it is one of the quietest helicopters available. The flight path was chosen to fly over the highest background noise areas. The selected flightpath goes along N.E. 45th Street and Sand Point Way from the west, with a sharp turn to the southeast at the hospital entrance and then into the helistop. In addition, a "noise abatement approach" would be used to minimize noise: decreasing cruise speed and a gradual descent to reach 300 feet at the hospital entrance from Sand Point Way N.E. At this point, the speed would be decreased further, a turn would be executed and a steeper descent along with further speed reduction would begin down to the helistop.

The high noise levels are brief, with the highest levels occurring with take-off and landing. Each flight into and out of COHMC would last approximately 5-8 minutes. The maximum noise levels due to the helicopter expected at any measurement are not higher than the noise levels that are occasionally experienced by most suburban residents, although they are greater than the highest underlying background noise levels measured. The maximum level of noise expected to occur at the highest measuring site from the helicopter will not exceed the base level for a heavy truck or bus passing at a distance of 50 feet and traveling at 40 to 50 miles per hour (84 to 86 dBA). For flights during daytime hours, fly-over maximum levels are within 10 dBA of the highest existing level sampled, and below the highest levels at Sites 2 and 3.

Based on the criteria for noise-induced vibration perceivable structural vibrations are possible at all sites and probable at sites 1 and 4.

In summary, it can be concluded that (1) though helicopter noise will be noticeable, it should not cause significant impact during daytime hours due to infrequency and brief (less than five minute) duration of operation; (2) during sleeping periods, helicopter operation could cause sleep arousal of varying degrees for 15-20% of the closest line of sight residents, though frequency of occurrance would be low; (3) the impact of the average helicopter noise exposure (DNL) relative to existing noise environment will not be significant; (4) structural vibration will not be significant.

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Mitigating Measures

The methods of noise abatement and mitigation incorporated into the project and considered for the helistop include: (1) using quiet helicopters; (2) orienting flight path for minimum noise impact; (3) controlling flight pace to maintain highest altitude for the longest period of time and maintain lowest throttle settings practicable and minimize ground time; (4) locating the helistop to take advantage of shieldings by existing structures; (5) if possible, not pickup the medical crew at the helistop during the period from 10 p.m. to 6 a.m. COHMC has agreed to ensure that these measures are incorporated into project design, operations and contracts. Installation of noise barriers would have a negligible effect on noise exposure and maximum noise levels. No additional mitigating measures could be applied to reduce impacts.

B.7.b.2 Refer to Section B.7.a.1.

B.7.b.3 Refer to Section B.7.a.

B.8.a The proposed site of the helistop is currently used as a landscaped green space and kitchen garden. It is located 85 feet north of the emergency room on the COHMC grounds. The proposed site is zoned I-3. The surrounding land (refer to Figure 2) is zoned for single family, residential duplex, multiple family residential and community business. A group of multiple family dwellings are located to the west and northwest. Single family dwellings are located to the south, east and northeast. Also, there are other large institutional land uses in the neighborhood, including Battelle Research Institute, Laurelhurst school and playfield and several churches. Retail businesses and offices (e.g., finance, insurance, real estate) are located along Sand Point Way N.E. approximately two blocks west of the site.

B.8.b A small portion of the proposed site is used for the kitchen garden. The purpose of the garden is therapeutic not agricultural. Currently the garden vegetables include small amounts of onions, strawberries, artichokes, broccoli, rhubarb, and herbs. The garden does not provide a significant portion of the food supply for COHMC. The garden would be moved to the periphery of the helistop, outside the fenced area. No additional mitigation measures would be necessary.

B.8.1 To reduce impacts on the surrounding residential areas, the use of the helicopter is restricted to emergencies. To further reduce noise impacts on the neighborhood, the "quietest" model helicopter, the AUGUST A 109 Mark 2, will be used. In addition, a flight path over an existing transportation corridor, Sand Point Way, will be used to reduce potential noise impacts on residential properties.

The portion of COHMC's property on which the helistop is located is within the major institution boundary. This property has been

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the site of a children's hospital since 1953 and is projected for continued hospital use. The use of emergency helicopter transport for severely ill or injured children is a hospital-related use of this mode of transportation.

B.10.a The three large trees on the site would be removed and the existing shrubbery would be replaced by the helistop and additional grass surrounded by the fence and new landscaping. Due to the low height of the helistop above grade (less than one foot) and the fence (2.5 feet on the west and 3.5 feet on the remaining sides), there would be minimal visual impact. These are the only structures included in the project. The most obvious impact would be the absence of the trees and, until the shrubbery reaches maturity, the fence would be partially visible.

The views from residences directly west of the site across Sand Point Way N.E. would experience some visual change. The homes to the east on 44th Avenue N.E. and in the vicinity of the corner of 45th Avenue N.E. and N.E. 47th Street would have some visual change. Occasionally, at night, the lights would be visible for short periods of time. The pad and the red "H" would not be clearly visible off-site, but would be visible from the helicopter and possibly from the upper floors of COHMC due to the view angle. The visual appearance of the helistop would be mitigated by the placement of shrubbery to screen the fence.

B.10.b Refer to Section B.10.a.

B.10.c Refer to Section B.10.a.

B.11.a The proposal would produce light from two sources: the helistop and the helicopter. There are existing pole-mounted street lights along Sand Point Way N.E. and Penny Lane, and surface lighting in the parking lot. Additional lighting also comes from the hospital building and vehicles.

Helistop lighting would be designed to comply with the minimum FAA standards for helistop. It would be necessary to turn on the lights for occasional night landings at the site. The proposed helistop lighting would not produce any horizontal throw, therefore, there would be no lighting effects off-site. The shrubbery placed around the periphery of the site would prevent any light source being visible to the neighbors to the east. The elevation (uphill) would prevent any helistop light visibility from the west. COHMC structures obscure any views of the helipad from the north and south.

The helicopter is equipped with standard aviation lights: two small strobe lights, two side lights, two landing lights and a searchlight for use in unlighted areas. The helicopter pilot has indicated that a minimal amount of lighting would be used by the helicopter, especially at night, because of the existing lighting at COHMC (conversation with Gene Hill, Airlift Northwest, May 3, 1985). The helicopter would not produce light spillage onto the

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residential properties. No further mitigation measures would be necessary. There would not be any glare produced as a result of the project.

B.11.d Refer to Section B.11.a.

B.14.a Sand Point Way N.E. (also SR 513) is the major four-lane arterial serving the site from the west. This street is the main north-south route for the neighborhoods of Laurelhurst, Ravenna, View Ridge, and Windermere. The streets to the east, north and south are residential two-way streets.

During construction, vehicles would access the site from Sand Point Way N.E. Since the construction is minimal and the duration very short, the slight traffic increase would be insignificant relative to existing volumes.

The project would not result in any long-term impacts to the road system since there would not be any new traffic generated by ground vehicles. The project would, in fact, reduce (insignificantly) the number of ambulances currently traveling on surface streets to COH since an ambulance would no longer transport patients from the soccer field to the hospital. No mitigation measures would be necessary.

B.14.b COHMC is served by Metro routes 30 and 32 on N.E. 45th Street, providing direct access to the University District and downtown Seattle. Metro route 8, running along Sand Point Way, also provides service to downtown Seattle, University District, Sand Point and Lake City areas.

The project would not affect bus service. No mitigation measures would be necessary or are proposed.

B.14.e The project would use air transportation, specifically helicopter transportation, for critically ill and injured children. The helicopter would fly directly to COHMC instead of the current practice, which is to land and transfer the patient at the U.W. soccer field (one-half mile from the site). An average of 30-40 helicopter trips would be generated per month along this additional distance.

The flight path would be defined to minimize impacts on residential properties. The helicopter would approach the soccer field using the same flight plan as today only continue east (still above 500 feet) along Sand Point Way, turning into COHMC at the Penny Lane access and beginning the descent at that point (see Figure 1).

Helicopter transportation would not be considered the best method of transport to COHMC in the case of unsafe flight conditions, as defined by FAA guidelines for extreme winds or fog. The helicopter would not be used to land at COHMC under those conditions.

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Airlift Northwest would use an AGUSTA A 109 A Mark 2 to serve the COHMC helistop. This is a quieter and more efficient helicopter than many alternative helicopters for use in flying in the vicinity of residential areas. The helicopter would be based at the Seattle Jet Center, Boeing Field. No maintenance, cleaning or fueling would occur on the site.

The use of the helicopter would be limited to very seriously ill or injured children requiring transport.

No further mitigation would be necessary.

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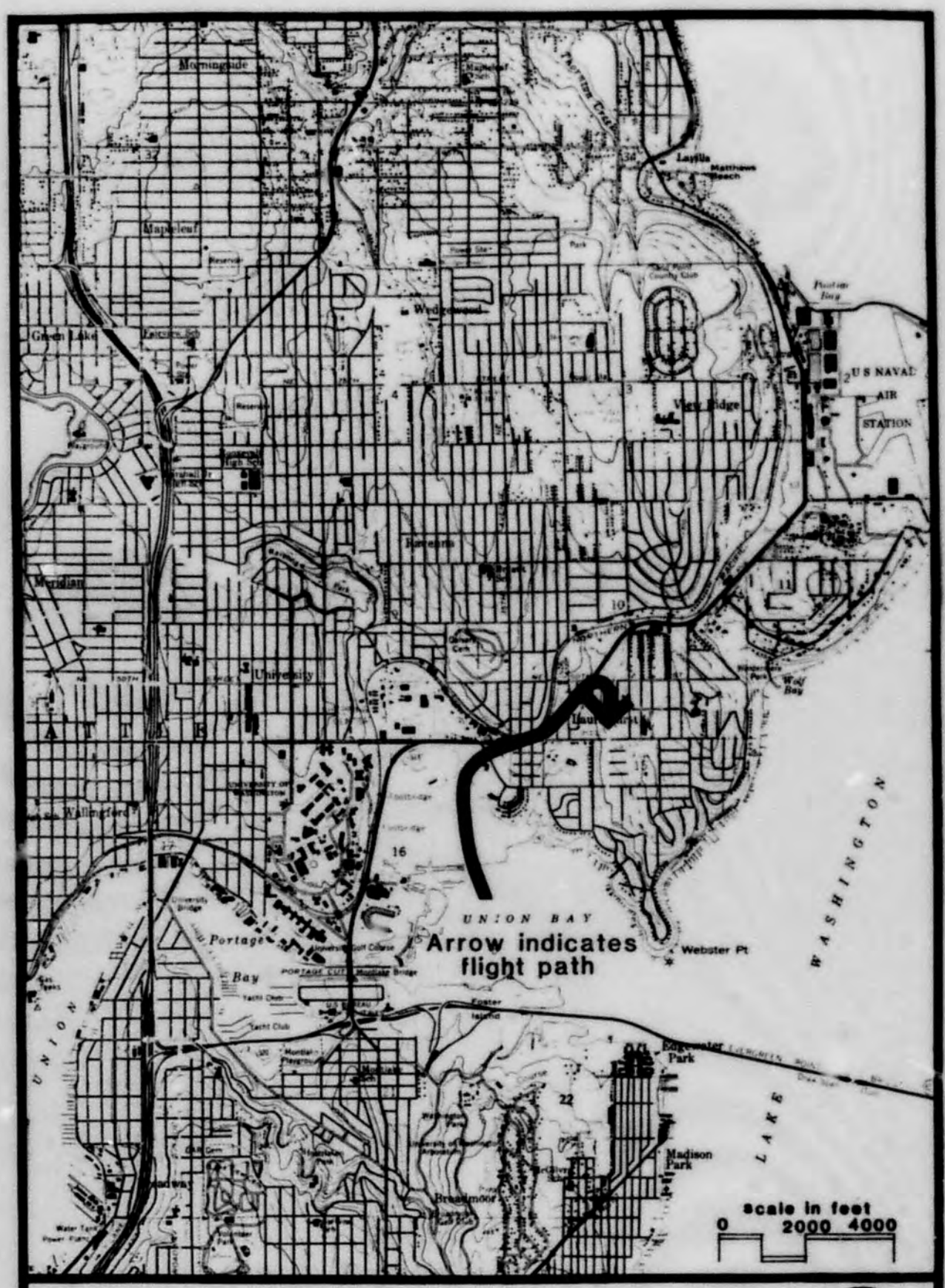

Figure 1 **Vicinity Map**

Children's Orthopedic Hospital Helipad

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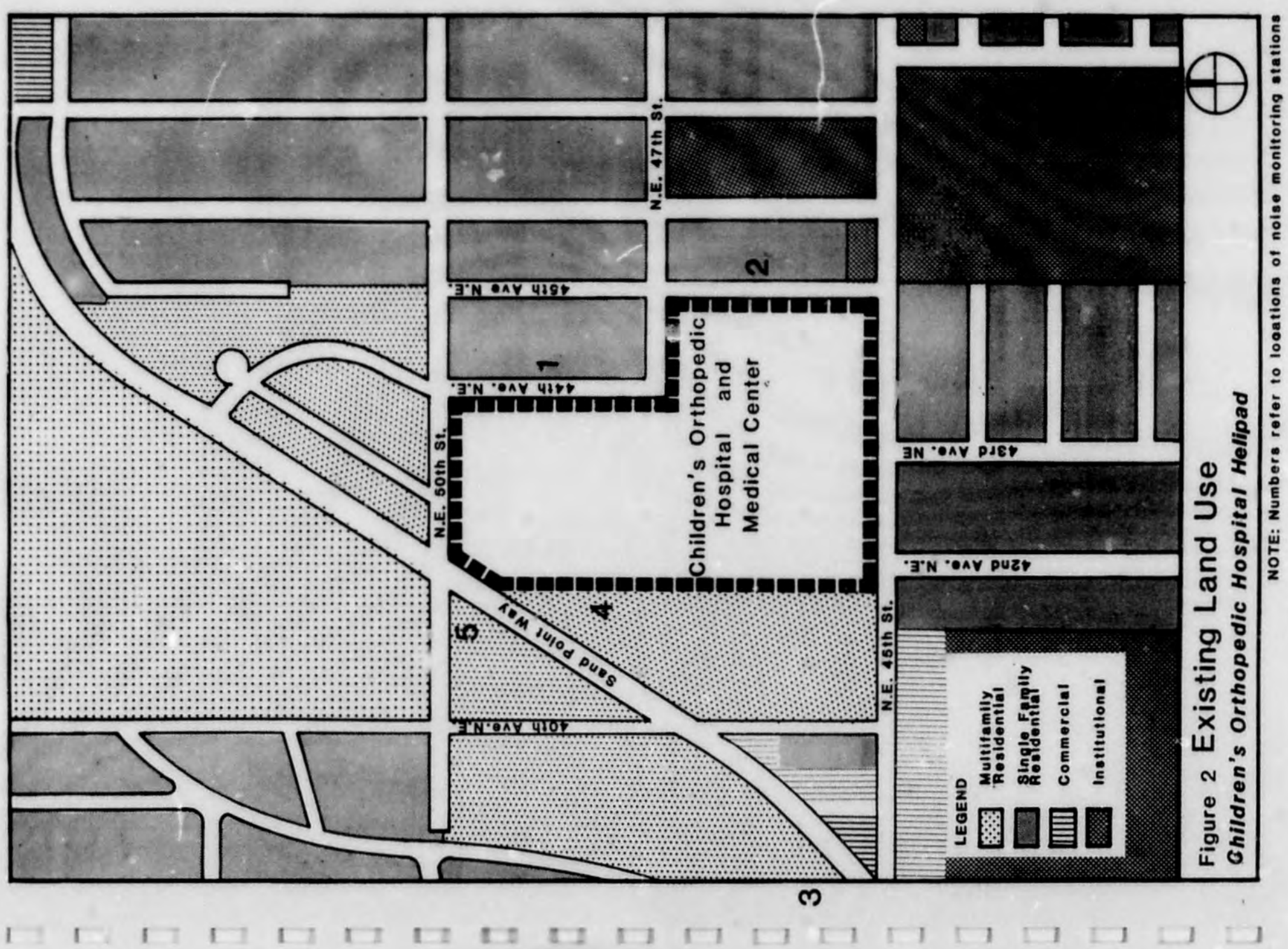

Figure 2 Existing Land Use
Children's Orthopedic Hospital Helipad

NOTE: Numbers refers to locations of noise monitoring stations

HELIPAD NOISE EVALUATION

Children's Orthopedic Hospital
Seattle, Washington

Prepared For

Shapiro & Associates

By

Seton, Johnson & Odell, Inc.



October 8, 1985

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1.0 INTRODUCTION

This report summarizes measurements and evaluations of noise effects of a new emergency helipad proposed for installation and use at Children's Orthopedic Hospital in Seattle, Washington. The helipad will be located on the north side of the facility, near the emergency entrance at parking lot level. Use of the helipad is predicted at 20 to 40 flights per month.

Topics addressed in this report include existing ambient noise conditions, helicopter and helipad noise characteristics, helipad noise impact, and noise mitigation strategies.

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2.0 RELATED NOISE LEVEL CRITERIA

2.1 Community Noise

The common measure for noise is the sound pressure level in decibels (dB). The decibel scale relates the ratio of a given sound pressure to a reference pressure (20 micro Pascals). The scale is logarithmic. Therefore, decibel levels cannot be directly added or subtracted from each other.

Sound pressure levels in decibels according to the A-weighting scale (dB(A)) are commonly used as an environmental noise measure. The A-scale corrects for the varying sensitivity of the human ear with frequency. When A-weighted readings are described, the term "sound pressure level" is often shortened to "sound level." The remainder of this report will use this convention.

Subjectively, an increase in sound level of 1 dB(A) would be judged insignificant, an increase of 3 dB(A) would be perceptible by most people, and an increase of 10 dB(A) would generally be judged as twice as loud and having significant impact.

The Leq (equivalent energy continuous level, or average sound level) in dB(A) for a given hour is often used to determine the Day-Night Sound Level (DNL). The DNL is a representation of the 24-hour average sound level with an extra 10 dB(A) added to levels between 10 p.m. and 7 a.m. before averaging to account for greater potential annoyance of sound during sleeping hours. The DNL of 55 dB(A) was recommended in 1974 by the Environmental Protection Agency as a base for evaluating speech interference and annoyance of outdoor noise levels (2). The DNL is the standard metric for evaluating overall community noise impact of aircraft (3).

Table 1 presents average sound levels of common sounds.

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TABLE 1

SOUND LEVELS OF COMMON SOURCES

Sound Pressure (Pa)	Sound Pressure Level (dBA)	Sound Source
200	140	Jet Aircraft, Artillery
63	130	Threshold of Pain
6.3	110	Orchestra Fortissimo (peak)
0.63	90	Orchestra; loud street noise
0.063	70	Inside auto at high speed
0.02	60	Normal conservation
0.006	50	General office
0.002	40	Quiet home; private office
0.0002	20	Rustling leaves, empty theatre
0.000063	10	Threshold of good hearing
0.00002	0	Threshold of excellent youthful hearing

Regulations governing environmental noise have been established by Washington State, King County, and The City of Seattle. The quantitative limits in regulations of these agencies are the same. No other federal, state, or local regulations were found to address helipad noise.

The pertinent regulations of the City of Seattle noise code are:

25.08.400 Unlawful Sounds

It is unlawful for any person to cause sound, or for any person in possession of property to permit sound originating from such property, to intrude into the real property of another person whenever such sound exceeds the maximum permissible sound levels established by this subchapter.

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25.08.410 Maximum Permissible Sound Levels

For sound sources located within the city or King County, the maximum permissible sound levels are as follows:

District of Sound Source	District of Receiving Property Within the City of Seattle		
	Residental	Commercial	Industrial
Rural	52 dB(A)	55 dB(A)	57 dB(A)
Residential	55 dB(A)	57 dB(A)	60 dB(A)
Commercial	57 dB(A)	60 dB(A)	65 dB(A)
Industrial	60 dB(A)	65 dB(A)	70 dB(A)

25.08.420 Modifications to Maximum Permissible Sound Levels

The maximum permissible sound levels established by this subchapter shall be reduced or increased by the sum of the following:

A. Between the hours of 10 p.m. and 7 a.m. during weekdays, and between the hours of 10 p.m. and 9 a.m. on weekends, the levels established by section 25.08.410 are reduced by 10 dB(A) where the receiving property lies within a residential district of the city.

B. For any source of sound which is periodic, which has a pure tone component, or which is impulsive and is not measured with an impulse sound level meter, the levels established by this subchapter shall be reduced by 5 dBA; provided, however, that

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this 5 dB(A) penalty for the emission of sound having a pure tone component shall not be imposed on any electrical substation, whether existing or new.

C. For any source of noise which is of short duration, the levels established by this subchapter are increased by:

1. 5 dB(A) for a total of 15 minutes in any one-hour period; or

2. 10 dB(A) for a total of 5 minutes in any one-hour period; or

3. 15 dB(A) for a total of 1.5 minutes in any one-hour period.

These regulations do not affect licensed transportation vehicles or apply to emergency vehicles, including helicopters. However, they are useful in indicating the local acceptance of community noise sources. It is important to note that the indicated sound level maximums apply to each source property and not to the combination of all sound source properties affecting a specific location.

No other federal, state, or local regulations were found to address helipad noise.

2.2 Noise-Induced Structural Vibration

Structural vibration and "buzz" or rattle in building floors, walls and windows may be induced by sound of sufficiently high level at frequencies below 100 Hz. These frequencies correspond to the various resonant frequencies of building

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components and substructures. Based on a review of available literature, (2), (3), (6), (7), the following criteria, as suggested by the American Society of Heating, Refrigerating, and Air Conditioning Engineers, are appropriate indicators of the potential for noise to induce vibration in structural components:

	Sound Level (dB) of Octave Band with Center Frequency (Hz)		
	16	31.5	63
Noise source vibration in lightweight walls may be detectable by touch, slight possibility of rattles in light fixtures, windows, etc.	65	65	70
Noise source vibration in lightweight walls probably detectable by touch; audible rattles and windows probable.	75	75	80

Actual structural damage would not begin to occur until much higher levels were reached, such as those which may occur during sonic booms (110+ dB peak levels), (4) (8).

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3.0 EXISTING CONDITIONS

The hospital is situated on a site which slopes upward toward the southeast from approximately 80 feet above sea level at Sand Point Way to 155 feet above sea level at 44th Ave N.E. and N.E. 49th St. The helipad is proposed to be constructed at ground level on the north side of the hospital near the current emergency entrance (See Figure 1). Residential properties surround the area.

N.E. Sand Point Way is a heavily traveled, 4-lane arterial. Traffic noise from this arterial dominates the background noise of adjacent residential areas.

3.1 Noise Measurement Sites

The existing noise environment was measured between May 12 and 15, 1985 at the five sites described below and indicated on Figure 1. These measurement sites were chosen to be representative of noise sensitive properties which would receive the greatest potential impacts of helipad-related noise. They were selected with consideration for helicopter flight path, review of land use, local topography, and after discussions with Kurt Horner of the Seattle/King County Health Department. Final determinations were made by Hermia Ip, land use technician with City of Seattle Department of Construction and Land Use.

Site 1: The parking strip on the east side of 44th Ave. N.E. between N.E. 47th Street and N.E. 50th Street. The location was between the adjacent residences at 4724 and 4720 44th Ave. N.E. Shrubbery adjacent to the west of 44th Ave. and the slope of the hill provided a limited visual barrier from the hospital campus. The grade rises from 122 feet at the helipad to 150 feet along 44th Ave. N.E. The area to the east and north is predominantly single-family residences.

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Site 2: The parking strip on the east side of 45th Ave. N.E. between N.E. 45th Street and N.E. 47th Street. The address location was 4530 45th Ave. N.E. This site was at a slightly higher altitude than Site 1. The view toward the helipad location is partially obscured by hospital parking lot landscaping. This area is also single-family residential.

Site 3: North of Sand Point Way, in a parking lot adjacent and to the west of a high rise residential condominium. This area directly adjacent to Sand Point Way is predominantly commercial in use.

Site 4: A low-rise, multi-family complex located adjacent to the west of the hospital property on 41st Ave. N.E. just southeast of Sand Point Way. The grade slopes steeply upward from 55 feet at this site to 92 feet at the edge of the hospital property and then gradually to the 122 foot level of the proposed helipad. This complex includes a high percentage of elderly residents.

Site 5: The west side of 41st Ave. N.E. northwest of Sand Point Way. The location address was 4757 41st Ave. N.E. This location is the east edge of a mixed, single and multi-family residential area directly northwest of Sand Point Way and opposite the hospital campus entrance.

3.2 Instrumentation and Procedure

The noise measurement instrumentation included a Bruel and Kjaer Model 2209 Sound Level Meter with Bruel and Kjaer Model 4165 1/2-inch random incidence microphone meeting ANSI S1.4-1971 (R1976) requirements for a Type I (Precision) sound level meter. A windscreen was positioned on the microphone for

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all measurements. The measurement set was field calibrated immediately prior to each measurement period with a Bruel and Kjaer Model 4230 Sound Level Calibrator.

Each site was monitored on one weekend day and one weekday. For a given day, each site was monitored for 10 to 15 minutes during four different time periods: 9-10 a.m., 4-6 p.m., 10 p.m.-12 midnight, and 2-4 a.m. These periods, though short and infrequent, were chosen to provide sufficient indication of maximum and minimum sound levels along with general trends at each site.

The instrumentation was used to sample the instantaneous A-weighted sound level at each site at 10-second intervals over a period of 10 to 15 minutes. The data assembled was then used to determine Leq (equivalent energy continuous level, or average level) for the site and measurement period. Additional statistical levels that were determined included the L90 (sound level equaled or exceeded 90% of the time), the L50 (sound level equaled or exceeded 50% of the time), and the L10 (sound level equaled or exceeded 10% of the time). The standard deviation of levels measured during the sample period was also determined. This data is summarized in Table 2. (The complete data analysis is compiled in the appendix.)

The Leq data were used along with a typical 24-hour pattern of noise fluctuation for sites not located near airports or freeways (presented in reference (3)) to approximate a monthly DNL for each site.

3.3 Analysis

For all measurement sites, traffic was the dominant noise source. However, at Sites 1 and 2 and to some extent Site 5, the lowest noise levels were controlled by hospital building equipment noise.

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TABLE 2
AMBIENT NOISE MEASUREMENT SUMMARY

(A-weighted sound pressure levels in dB(A))

Weekend						Weekday					
Site 1											
Time	90	50	10	Leq	S.D.*	Time	90	50	10	Leq	S.D.*
957	40	42	45	44	2.5	1007	44	47	50	49	2.8
1707	42	44	52	49	4.1	1703	45	46	52	49	3.3
2311	43	44	46	44	1.5	2241	45	46	48	47	1.1
240	40	41	41	41		238	41	42	43	42	0.8
Site 2											
935	40	42	47	44	2.8	902	44	47	54	50	3.5
1643	42	45	55	54	5.5	1638	45	49	52	51	3.4
2251	42	44	52	49	4.2	2220	45	46	50	48	2.6
220	40	40	41	40		218	41	42	43	42	0.9
Site 3											
1100	53	61	66	62	4.9	931	58	64	70	66	4.9
1803	51	62	68	64	6.2	1755	58	65	70	67	4.7
2353	39	47	62	57	8.2	2324	45	57	66	62	8.0
319	33	35	44	44	5.3	316	36	39	50	50	6.4
Site 4											
1037	41	45	54	50	5.1	No measurement due to lawn mowing					
1651	43	47	54	51	4.4	1607	48	52	57	54	3.6
2230	42	46	52	48	3.8	2153	44	49	55	51	4.0
158	37	37	41	40	2.8	200	39	40	44	43	2.7
Site 5											
1061	45	54	65	60	7.9	1130	53	59	64	61	4.6
1733	45	56	64	59	6.7	1730	55	63	69	65	5.3
2331	42	48	58	53	6.0	2300	44	50	63	58	7.0
300	38	39	40	40	1.2	257	40	41	43	43	2.5

*S.D. - Standard Deviation of sample

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Superimposed over all daytime measurements was distant light aircraft and commercial jet noise that dominated noise levels when present. These events averaged one light plane and one jet per measurement per site. Site-specific results are detailed below:

Site 1: The barrier action of the hospital parking structure to the west effectively reduced traffic noise from Sand Point Way at Site 1. This explains the small difference in minimum to maximum measured Leq levels. Hospital traffic noise, however, was a contributor to ambient levels. The lowest noise levels were controlled by hospital building equipment noise and remained relatively constant day and night. Minimum Leq: 41; Maximum Leq: 49.

Site 2: The noise character at Site 2 was similar to that at Site 1. Although this site was sufficiently barriered from the distant Sand Point Way, the noise levels were dominated by traffic on the arterial N.E. 45th Street and the hospital parking lot directly across 45th Ave. N.E. Again, minimum noise levels were from hospital equipment noise. Minimum Leq: 40; Maximum Leq: 54.

Site 3: All noise levels at Site 3 were dominated by traffic noise from Sand Point Way. The fluctuation in levels was significant and is indicated by the high values of standard deviation. Minimum Leq: 44; Maximum Leq: 67

Site 4: The noise levels at Site 4 were dominated by traffic noise from nearby Sand Point Way. Minimum Leq: 40; Maximum Leq: 54

Site 5: Site 5 was adjacent to Sand Point Way, as was Site 3, and experienced noise levels dominated at all times by traffic noise. Minimum Leq: 40; Maximum Leq: 65

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The approximated monthly Day-Night Sound Level (DNL) at each site, calculated as previously described, is presented in Table 3 below.

TABLE 3
EXISTING BACKGROUND NOISE
MONTHLY, DAY-NIGHT LEVEL (DNL
(Dry Conditions Only)

Site	DNL (dBA)
1	52
2	53
3	68
4	55
5	63

These levels are lower than the actual values, because they do not include the increased noise from traffic ocurring during wet road periods. Thus, they establish a conservative reference for evaluating helicopter impacts.

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4.0 HELICOPTER AND HELIPAD NOISE

The helicopter to be used for flights to the hospital helipad is an Agusta Model A-109-A-Mk2 based at the Seattle Jet Center, which would be under contract to Airlift Northwest. This helicopter is a modern, fully-enclosed design with 4-blade propeller and retractable landing gear. It has a Velocity Not to Exceed (VNE) of 169 knots Indicated Air Speed (IAS) and a normal cruise speed of 160 knots IAS. The Agusta A-109 represents near-current low-noise helicopter design.

A minimum-noise approach path for a helipad would require the helicopter to fly over the highest background noise areas in order to keep the increase in background noise to a minimum. The proposed flight path was therefore selected to be along N.E. 45th Street and Sand Point Way from the west, with a sharp turn to the southeast at the hospital entrance and then in to the helipad (See Figure 2). Noise impact will also be minimized by maintaining the highest altitude possible for the longest time period possible, subject to requirements of aircraft and patient safety. In this case, a "Noise Abatement Approach" would include decreasing cruise speed to 120 knots IAS and a gradual descent to reach 300 feet at the hospital entrance from Sand Point Way. At this point, speed would be decreased to 60 knots, a turn would be executed to the south, and a steeper descent along with further speed reduction would follow until touchdown at the helipad.

During the ambient noise measurement period, the specific helicopter proposed for use at the hospital executed a flyby followed by a landing and takeoff at the site of the proposed helipad. The helicopter, with pilot and nurse aboard, used the proposed flight path and procedures described above. (Sound levels of the helicopter with an additional one or two passengers should be nearly the same as this measured condition.) Sound level measurements of the helicopter were made from Site 1, which would be expected to experience the highest levels of helicopter noise.

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During the flyby, at an altitude of 500 feet above Sand Point Way and a speed of 160 knots IAS, the maximum noise level measured was 73 dB(A). For the same distance from the helicopter, noise levels were lower from the tail aspect than from the front aspect. Levels increased gradually to the peak as the helicopter approached and decreased rapidly after passby.

During the approach and landing, the noise level increased gradually up to 70 dB(A) when the helicopter was over Sand Point Way at the hospital entrance. After the helicopter turned and began its descent to the helipad, the noise level increased up to a peak of 80 dB(A) experienced with the helicopter directly opposite the measurement site and approximately 50 feet above the hospital parking lot structure. This highest level occurred as additional power was applied to decrease descent rate prior to landing. The noise level then decreased slowly until the helicopter passed below the visual edge of the parking structure and touched down. (The helicopter was visible from Site 1 while it was on the ground.) From a level of 67 dB(A) at touchdown, the noise level decreased further to 60 dB(A) at idle before shutoff. Approximate time durations of these approach and landing events were:

1.	Duration of detectable helicopter noise during approach over N.E. 45th Street and Sand Point Way up to the turn at the hospital entrance	60 seconds
2.	Descent to position of peak noise level opposite measurement Site 1	10 seconds
3.	Descent to landing	25 seconds

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4.	Throttle back to idle	15 seconds
5.	Idle before shutoff	20 seconds

On takeoff, initial noise level after start-up was 58 dB(A). During takeoff preparation, the noise level rose gradually to 70 dB(A), at which point the helicopter cleared the ground. As the helicopter rose into full view, the noise level rose rapidly to 84 dB(A). At this point, the helicopter hovered with a slightly lower noise level (77-80 dB(A)), executed a clockwise turn to the west, and departed with a quite rapid decrease in noise level to 55 dB(A). Approximate durations of takeoff events were:

1.	Time between start-up and liftoff	70 seconds
2.	Rise to maximum level	10 seconds
3.	Hover	40 seconds
4.	Turn and depart	10 seconds

Using the data from these measurements and extrapolating via standard distance attenuation methods to other sites relative to Site 1, an estimate was made of maximum sound levels that would be experienced by each site during: 1) Flyover, 2) Landing of the helicopter, and 3) Takeoff of the helicopter. Finally, using the sound level versus time data taken for the approach/departure and flyover, an estimate was made of the monthly DNL for the helipad. For this calculation, 40 flights per month were assumed, 29 uring daytime hours (7 a.m. to 10 p.m.), and 11 during nighttime hours (10 p.m. to 7 a.m.). (The resultant data must be carefully viewed as only approximate since it is based on limited data from one flight measurement.)

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The estimated maximum helicopter noise levels for overflight, approach and takeoff are presented in Table 4. Also, for comparison, background noise levels at each site are summarized. Background DNL and helipad DNL approximations are presented in Table 5.

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5.0 HELIPAD NOISE IMPACT

The maximum noise levels due to the helicopter, expected at any measurement site, are higher than the highest background noise levels measured and significantly so at Sites 1, 2 and 4. However, they are not higher than levels occasionally experienced by most suburban residents. In comparison to more familiar transportation sources, based on the source levels used in the Federal Highway Administration Highway Noise Prediction Model (4), the base level for a heavy truck or bus passing at a distance of 50 feet and traveling at 40 to 50 miles per hour is 84-86 dB(A), the same level as the maximum expected to occur at the most impacted site. For flights during the daytime hours, flyover maximum levels are within 10 dB(A) of the highest existing levels sampled, and below these highest levels at Sites 2 and 3.

Regarding sleep arousal, the maximum noise levels expected during landing and takeoff are sufficient to cause awakening from sleep. Assuming an exterior level of 80 dB(A) and a building noise reduction factor of 25 dB(A), the resultant interior level of 55 dB(A) would awaken 15% of a normal population sample (2). Additionally, susceptibility to sleep arousal varies with depth of the sleep, with the lighter sleeper tending to be aroused the easiest. Since elderly persons sleep lighter on the average, they are more susceptible to sleep arousal (2).

The monthly DNL estimate for helicopter operation is not substantial relative to ambient DNL due to the small number of flights predicted. In all cases, the helicopter DNL is comparable to or below the estimated background DNL. (Note that the background DNL will actually be higher than the estimate due to substantial increases in traffic noise when roads are wet.) Based on the estimated background noise and helicopter DNL's, the net effect of averaged helicopter noise would be the increases indicated in Table 5.

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Sound level measurements by frequency of the Agusta helicopter were not possible in the limited measurement period. Review of sound level measurements of other similarly-configured helicopters suggests that the sound level of the Agusta may be expected to be 0 to 10 dB less in the 31.5 Hz ocatave band than the overall A-weighting. Based on this approximation of expected helicopter sound levels, the potential sound levels at 31.5 Hz for the measurement sites are:

Site	Potential Maximum Sound Level at 31.5 Hz (dB)
1	74-84
2	68-78
3	64-74
4	74-84
5	69-79

Based on the criteria for noise-induced vibration of Section 2, perceivable structural vibrations are possible at all sites and probable at Sites 1 and 4. However, any noticeable vibration should be of short duration and not cause any damage.

Impact Summary

Based on the preceding analysis, the following conclusions can be drawn:

1. Though the helicopter noise will be noticeable, it should not cause significant impact during daytime hours due to its infrequent short-term nature.

2. During sleeping periods, helicopter operation may cause sleep arousal of varying degrees to 15-20% of the closest, line-of-sight residents.

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3. The impact of the average helicopter noise exposure (DNL) relative to existing noise environment will not be significant, although the existing backbround noise DNL in some locations may increase by up to 5dB (A).

4. Structural vibrations will not be significant.

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TABLE 4
NOISE LEVEL SUMMARY

	Noise Measurement Sites				
	1	2	3	4	5
Background Noise Level:					
Range of samples	40-62	39-68	33-75	36-65	38-72
Highest Leq (Day)	49	54	67	54	65
Lowest Leq (Night)	41	40	44	40	40
Helicopter Noise:					
Helicopter Flyby Maximum Level	70	64	74	75	76
Landing Maximum Level	80	73	N.A.	80	76
Take Off Maximum Level	84	78	N.A.	84	79
Land on Ground	60	54	N.A.	55	55

TABLE 5
MONTHLY DAY-NIGHT LEVEL SUMMARY (DNL IN dB(A))

	1	2	3	4	5
Existing Background	52	53	68	55	63
Helicopter (40 Flights)	55	48	50	56	52
Combined	57	54	68	59	63
Increase Due to Helicopter	+5	+1	0	+4	0

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6.0 NOISE ABATEMENT AND MITIGATION

Methods of noise abatement and mitigation considered for application to the helipad include: 1) Use quietest type of helicopter, 2) Orient flight path for minimum noise impact, 3) Control flight pace to maintain highest altitude for longest period of time, and maintain lowest throttle settings possible, 4) Locate helipad to take advantage of shieldings by existing structures, and 5) Construct noise barriers in appropriate locations around helipad. Specific evaluations of these measures are as follows:

1. The helicopter to be used for flights into the helipad was chosen because it is a modern design, multi-blade unit, and represents near-current low-noise technology.

2. Minimum-noise impact results when the increase in noise level above normal background noise is minimized. The flight path causing least noise impact would be over the highest background noise areas. The proposed path along N.E. 45th street and Sand Point Way until reaching hospital property meets the goal. (This path was flown during helicopter noise measurement on May 14, 1985.)

3. The helicopter flight plan should include, a "Minimum Noise Approach" plan which maintains highest altitude possible for as long as possible. (This procedure was followed during helicopter noise measurements.) The helicopter should execute a clockwise turn (south to west) on takeoff to the degree required.

4. The helipad is to be located adjacent to the hospital building to the north. The building will shield helicopter noise to the south while the helicopter is on the ground. This location is closest to the highest noise, Sand Point Way corridor, and will minimize background noise increases.

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5. Concrete wall noise barriers up to a height slightly above the engine level could be placed around the helipad. However, since the maximum noise levels were measured with the helicopter hovering approximately 30 feet above ground, these levels would not be reduced. The site already provides some shielding by land contours and the parking structures. Any additional noise barrier would provide 0-5 dB additional noise reduction of on-ground levels. Since these levels represent a small contribution to the overall sound exposure experienced by any site, the mitigative effect of the barrier would be small. In addition, the extra care required for a pilot to land clear of a barrier would increase the exposure time to higher noise levels.

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6. Systems Guide, American Society of Heating, Refrigeration and Air Conditioning Engineers, 1984.

7. "Noise Induced House Vibration and Human Perception," by Harvey H. Hubbard, Noise Control Engineering, Sept.-Oct., 1982.

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Time and Cost Analysis of Ground vs. Air Transports of Short Distances, eg. Bellingham

	Elapsed Time	Time for COH Transport to Arrive There	Time Patient is in Transit	Cost to Patient	
Ground Transport (Bellingham Team)					
Transfer patient to transport isolette				Hubbard Amb:	
Arrange for staff to go on transport	40'	0'		base chg	$100
Arrange ambulance				$3.30/mi x 180 mi	$594
Drive from Bellingham to COH (89 mi)	90'		90'	O_2 use	$ 15
	2°10'			15% discnt	($106
				St. Joe's:	
				$30/hr x4 h	$120
					$723
Ground Transport (COHMC Team)				Shepard:	
Assemble team and equipment	(40')	130'		base chg	$112
Drive to Bellingham	90'			team pickup	$ 33
In-hospital care	60'			$3.50/mi x 180 mi	$630
Drive to COHMC	90'		90'	$45/hr wait x 1 hr	$ 45
	4°40'			COHMC:	
				base chg	$2??
					$10?4
Airlift Northwest					
Assemble team & equipment @ Boeing	45'	85'		Air NW:	
Fly to Bellingham	25'			$3.63/mi x 180 mi	$653
Airport to hospital	15'			$169.60/mi x 3 hr	$509
In-hospital care	60'			Hubbard Amb:	
Hospital to airport	15'			base chg	$100
Flight to Boeing	25'		65'	$3.30/mi x 10 mi	$ 33
Boeing to COHMC	25'			$30/hr wait x 1 hr	$ 30
	3°30'			15% discnt	($ 24
				Shepard:	
				base chg	$11?
				$5/mi x 10 mi	$ 50
					$140

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Guidelines for Perinatal Care, American Academy of Pediatrics and American College of Obstetricians and Gynecologists, 1983.

chapter 8

Interhospital Care of the Perinatal Patient

The transport of pregnant women, mothers, and neonates between hospitals is a recognized and essential component of modern perinatal care. As noted in Chapter 1, transportation is one of the systems approaches to obstetric and newborn care. There are three types of patient transport: maternal-fetal, neonatal, and return.

Maternal-fetal transports involve pregnant women who are to be admitted for delivery, unlike obstetric consultations, which involve ambulatory evaluation without admission. Neonatal transports usually employ a team to evaluate and stabilize the neonate's condition, as well as to provide care when indicated. Return transports take patients back to their original or local hospital for further care when the problems that required transport have been resolved. Return transports should be recognized as an important benefit to the individual patient and system.

The Committee on the Fetus and Newborn of the American Academy of Pediatrics has established a policy on Level II neonatal units, stating that "Level II neonatal units must have ongoing liaison with a Level III neonatal intensive care unit." That firm support for a network can logically be extended to all perinatal services. The referral of high-risk mothers, as well as sick newborns, to regional centers for care has a positive impact on local perinatal care and makes it necessary to set guidelines for regional perinatal networks. The rising costs of care, the ascending expectations of consumers, and the constraints on spending are relevant considerations in a movement toward firmer guidelines for interhospital care of the perinatal patient.

Interhospital transport and care of high-risk perinatal patients make it reasonable to expect that every patient in a region will be cared for in an appropriate manner. A successful program of interhospital care should incorporate the following components:

1. Risk identification, which includes active anticipation of needs that will require the movement of patients in order to provide optimum care
2. Recognition that patient care is a continuous process
3. Local physicians who know the resources that are available and how to gain access to them
4. Physicians at all levels who have the knowledge and skills needed to identify the high-risk patient, to evaluate the patient's condition, and to stabilize and prepare the patient for transfer
5. An organized, appropriate, and available interhospital transport service
6. A political and economic environment that provides support for the interhospital transport system
7. Data collection and analysis for purposes of monitoring and evaluating the program

From the moment a perinatal problem is recognized, to the point of its resolution and follow-up, there should be a continuum of care. Because disease processes do not become static while a patient is being transferred, management is necessary during transport. The objective of interhospital care thus becomes the provision of the maximum degree of care possible within the constraints imposed by a moving ambulance, its restricted space, and its lack of support facilities (e.g., laboratory, blood bank, and radiology services).

INDICATIONS FOR TRANSPORT

The circumstances in which patients are transported vary according to the distribution of care facilities in each region. The decision should be made by the initial physician and a consultant, both of whom should be well-informed of the resources at each center. In general, transport should be considered when the resources immediately available to the maternal, fetal, or neonatal patient are not adequate to deal with the patient's actual or predicted medical or surgical complications.

The following patient conditions require more specialized care and may require patient transfer. The specific values are to be considered guidelines only. They will vary with individual patient needs or institutional capabilities.

I. Maternal Conditions
   A. Obstetric complications
      1. Premature rupture of membranes (at less than 34 weeks' gestation or less than 2000 g expected birth weight)
      2. Premature labor (at less than 34 weeks' gestation or less than 2000 g expected birth weight)
      3. Any condition creating the probability of birth at less than 34 weeks' gestation or less than 2000 g expected birth weight
         a. Severe preeclampsia or other hypertensive complication
         b. Multiple gestation
         c. Intrauterine growth retardation
         d. Third trimester bleeding
         e. Rh isoimmunization
         f. Premature dilation of the cervix
   B. Medical complications
      1. Infections in which the degree or nature of maternal illness may result in premature birth
         a. Hepatitis
         b. Pyelonephritis
         c. Influenza
         d. Pneumonia
         e. Other febrile or hypermetabolic conditions
      2. Severe organic heart disease, functional class III or IV
      3. Poorly controlled diabetes mellitus
      4. Thyrotoxicosis
      5. Renal disease with deteriorating function or increased hypertension
      6. Drug overdose
      7. Miscellaneous severe illnesses
   C. Surgical complications
      1. Trauma requiring intensive care or surgical correction beyond the capabilities of local facilities or where the procedure may result in the onset of premature labor
      2. Acute abdominal emergencies at less than 34 weeks' gestation or with a fetus weighing less than 2000 g
      3. Thoracic emergencies requiring intensive care or surgical correction

II. Neonatal Conditions
   A. Gestation less than 34 weeks or weight less than 2000 g
   B. Neonatal sepsis or infection

C. Respiratory distress and metabolic acidosis persisting after 2 hours of age
D. Neonatal blood loss
E. Hypoglycemia
F. Hemolytic disease of the newborn
G. Neonates of mothers taking hazardous drugs
H. Neonates of diabetic mothers
I. Neonatal seizures
J. Sepsis or meningitis
K. Congenital malformations requiring surgical care or observation
L. Shock or asphyxia persisting beyond 2 hours
M. Neonatal cardiac disorders with persisting cyanosis
N. Progressive, increasing respiratory distress syndrome
O. Any neonatal condition requiring ventilatory support for more than 1 hour
P. Neonates needing more than routine observation or care

THE ORGANIZED APPROACH TO TRANSPORT

The provision of adequate life support during the transport of critically ill mothers and neonates requires considerable knowledge, skill, experience, and specialized equipment not readily available in all hospitals. Many perinatal centers that provide Level III services have developed transport systems for their service regions because only experience with a large number of patients can maintain the skills required for care during transport. The referring staff can help the mother and neonate most by calling for assistance as soon as the need for transport becomes apparent and by using the time before transport to stabilize the patients and prepare for transport. This practice ameliorates the immediate problems and reduces the time that the transport team must be in the referring hospital.

In certain circumstances, it is reasonable for the referring physician to manage the transfer personally. Maternal-fetal transports are frequently conducted in this fashion. The procedure whereby transport originates at the referring hospital, frequently termed one-way transport, functions effectively in some locations; however, two-way transport systems, which operate from a base at the center, are more common. Any transport procedure is acceptable if the guidelines given here are utilized and its goals and objectives are attained.

Informal, poorly organized interhospital care is hazardous. In order to avoid compromising the patient, to ensure a predictable response for transportation requests, and to provide the highest quality of care, the approach to transport must be logical and organized. When the number of patients who require interhospital care is small, efforts to monitor and maintain the skill levels of the team become even more important. It is advisable in such instances to consider the consolidation of care programs.

An interhospital care system has five identifiable components: (1) organization, (2) communications, (3) personnel, (4) equipment, and (5) transport vehicles.

Organization

Interhospital care should be available 24 hours/day, in a program with defined response time and minimum capabilities of personnel. The director should be a specialist in maternal-fetal medicine or neonatal medicine, or a board-certified pediatrician or obstetrician with a special interest in these subspecialty areas. The director's responsibilities are:

1. Quality control of patient care through regular case review
2. Personnel training and supervision
3. Development and utilization of patient care protocols
4. Development and utilization of record-keeping systems and subsequent collation and evaluation of data for analysis
5. Review of operational aspects, e.g., response times, effectiveness of communications, and equipment maintenance

Communications

The transfer of a patient from one hospital to another and from one care team to another requires a reliable communications system. It is essential that the referring physician provide the receiving physician with specific clinical information on the patient being referred. For a maternal patient, the following information should be included:

Reason for admission
Age
Date of last menstrual period
Estimated date of confinement
Gravida, para, and abortion
Relevant health problems
Perinatal history

Blood type
Results of amniocentesis
Reasons for transfer
Therapy administered, including drugs
Intake and output

For a neonatal patient, the following information should be included:

Gestational age and weight
Perinatal history
Temperature
Color
Hematocrit
Oxygen requirement and blood gas levels
Respiratory activity (particularly presence of apnea or need for assisted ventilation)
Blood glucose or Dextrostix
Pertinent radiologic findings
Reasons for transfer
Therapy administered, including drugs

This information allows the receiving facility to prepare for the patient's stabilization, transfer, and admission. Appendixes F and G contain sample record formats for information that can be provided conveniently by telephone. For large service areas, toll-free lines should be established by the referral center for referring physicians and families. In metropolitan areas or over short distances, direct hotlines may link referring obstetric units and nurseries to the center. These lines should be open 24 hours/day and should be well publicized throughout the service region. The liaison between the referring and the receiving centers should include telephone or radio communication during stabilization and transfer.

Appropriate historical data should accompany the patient. This information should include appropriate laboratory data and x-rays. In most neonatal transports, 10 ml clotted maternal blood to be used for cross-matching purposes should be obtained and should accompany the transport team. Cord blood and the placenta may be helpful in certain clinical situations, such as multiple gestation or intrauterine growth retardation.

Dispatching services should provide rapid coordination of vehicles and personnel, as well as communication links between referring

and receiving hospitals and the transfer team. Referring physicians should be given an estimated arrival time to allow them to arrange for laboratory studies on which to base therapy in transport and ensure their availability at the time of transport. The receiving hospital should also be given an estimated arrival time to allow the staff to prepare for the patient's arrival. When flights must connect with ground ambulances, it is desirable for a single dispatching center to coordinate the movements of all vehicles. The complexity and sophistication of the dispatching operation vary considerably with the nature of the service.

Personnel

The interhospital care team members should have the collective expertise sufficient to provide the necessary supportive care for a wide variety of emergency conditions in high-risk mothers and neonates. Team members may be drawn from appropriately trained physicians, registered nurses, respiratory therapists, and emergency medical technicians. One member should usually be a physician or registered nurse. Neonatal nurse clinicians are often specifically identified with this role. In addition to being highly knowledgeable in care and procedures for perinatal patients, transport personnel should be thoroughly familiar with transport equipment; any malfunction en route must be managed without the assistance of hospital maintenance staff.

Equipment

Powered equipment should have "stand alone" capability, i.e., it should be battery-operated. Batteries should have sufficient power to operate the equipment for the duration of the transport if no alternative power source is available. Furthermore, critical equipment should be adaptable to 12- and 24-volt DC and 110-volt AC power for use in a hospital or ambulance.

In addition to equipment for monitoring, resuscitation, and support of both mother and neonate, a transport kit containing essential drugs and special supplies should be continuously available during stabilization and transfer of the patient. A list of equipment and drugs that should be included in a transport kit is found in Appendix H.

Transport Vehicles

The main concern during transport is to maintain optimum care. The choice of a ground or air ambulance is based on distance from one hospital to another and facilities available to support the patient during

the transfer. Ground ambulances are most useful for distances up to 80–100 miles of flat terrain in low traffic density areas. Beyond 100 miles, aircraft may be faster or less expensive, even though ground ambulances provide more direct transfer between regional centers. The pressurization of aircraft is an important consideration during management, since adequate oxygen levels of the mother and fetus or newborn must be ensured.

Helicopters are used in some areas to transport patients up to a few hundred miles or to reach patients in difficult terrain or high traffic density areas. Helicopters are not pressurized, are generally noisier and more confined, and have less range than fixed wing aircraft, however. These limitations should be considered whenever a helicopter is used.

TRANSPORT PROCEDURE

Evaluation

The patient's condition should be carefully evaluated at the referring hospital, both in regard to the primary diagnosis and the presence of complicating conditions. Steps should be taken to correct these conditions to the extent possible prior to transfer.

Stabilization

Transport of the maternal patient may require hemodynamic stabilization; the initiation of tocolytic agents, anticonvulsants, or antihypertension agents; or demonstrated arrest or diminution of active labor. Patients with active bleeding, rapidly progressive preeclampsia, and rapidly progressive labor should not be transported until appropriate medical management has been initiated and, in the opinion of the medical team, the possibility of acute crisis or delivery in transport is significantly diminished. In some situations, maternal transport may not be advisable; it may be preferable to coordinate neonate transport in such a fashion that the transport team arrives at the referring hospital immediately prior to or shortly after the birth. Transport teams may, by prior agreement between the referring physician and the dispatch center, participate in the initial stabilization at birth. In the fully stabilized neonate, temperature, blood gas levels, blood pressure, tissue perfusion, and blood glucose level are normal. Complete stabilization of a newborn is not always possible, but transport of an extremely unstable newborn is contraindicated.

Although there have been no controlled trials, experience indicates that stabilization prior to departure is probably the most critical aspect of interhospital care because it minimizes subsequent deterioration in an environment that may not permit detection or treatment of problems.

Medicolegal Concerns

There are many legal considerations in perinatal transport. Many details are not well defined, but all involved parties, including the referring hospital and personnel, the receiving hospital and personnel, and commercial ambulance and aircraft charter corporations, assume responsibilities. As spokesperson for the transport team, the physician should thoroughly explain to the patient or the parents of the newborn the patient's condition and reasons for transfer. Informed consent for transfer, admission, and care should be obtained. The newborn should be clearly identified.

Perinatal transport teams are involved in very special transport situations, and prior attention to potential legal problems is advised. In most situations, the institution that employs the team is responsible for its actions, and professional duties are performed under the direction and authority of a physician-director at the receiving hospital. Many hospitals consider neonates admitted to their institution while en route and under the care of the transport team. Physician-directors and hospital administrators should recognize the potential administrative or legal problems that may arise in certain situations, for example, when transport teams cross one or more state lines during a transport.

The referring physician preferably should remain at the hospital until the neonatal transport team arrives and should be there while the team is present in order to ensure complete communication. The patient must pass from the official care of the referring physician to that of the transport team at some point; the departure of the transport team from the physical premises of the referring hospital might be considered the official point of transfer of responsibility. Individual hospitals and regions should investigate the use of transfer agreements, which might include granting of emergency privileges to members of transport teams.

The referral center should receive a report on the patient's condition prior to departure. In the case of newborn transport, the mother and father should be offered the opportunity to see and touch the neonate before the transfer, even if the neonate is in a transport incubator or on a respirator. In addition, an instant picture of the

neonate may be taken for the family prior to transport. This has proved particularly helpful when parents and their neonates are to be separated for a long period or when the mother is recovering from a cesarean delivery and may not remember the time spent with the neonate prior to transport. The family of the patient should also receive written information about the receiving hospital, names of staff members, visiting hours, telephone numbers, and places to stay in the vicinity of the hospital. Brochures about the hospital can be helpful. A desire to breast-feed should be reinforced, and the mother should be taught how to express milk until nipple feeding becomes possible. Early attention to family needs and concerns at this critical time can reduce anxiety and ease the transition to a new medical center.

Records are essential for the continuing care of the patient and for the evaluation of the referral transport process. Records should include the following information:

- Patient's name
- Referring hospital
- Receiving hospital
- Referring physician
- Attendants' names and professional status
- Mode of transport
- Time data, including arrival at the referring hospital, departure, ground or air ambulance time, and arrival at the receiving hospital
- Patient's age, weight, gestational age, and sex
- Diagnosis and condition
- Procedures performed
- Medication administered
- Periodic vital signs
- Special comments

PATIENT CARE IN TRANSIT

A well-stabilized patient requires little or no intervention during transport. The patient should be under continuous observation, however. The key factors to be monitored in the maternal patient include blood pressure, uterine contractions, cervical dilation, fetal heart rate ultrasonography, deep tendon reflexes, infusion rate of intravenous fluids, and the administration of tocolytic agents or anticonvulsants. For the

newborn, temperature, respiration, heart rate, blood pressure, color, activity, and oxygen concentration should be monitored frequently by noninvasive means. A neutral thermal environment should be maintained. It may be necessary to monitor other parameters as well, such as the blood glucose level. Monitoring of blood gases during transport is feasible with the availability of portable transcutaneous monitoring.

The patient, attending personnel, and all equipment should be safely secured in the transport vehicle. Although it may be necessary to respond rapidly to an emergency, high-speed ground travel greatly increases the risk of accidents. In the majority of cases, there is little need for excessive speed if the patient is stabilized.

RECEIVING AND COMPLETING TRANSFER

The receiving staff should be prepared to deal with any unresolved problems or emergencies. The patient's history and clinical status, as well as all the plans for current management, should be communicated directly by the transport personnel. Therapies provided during transport should not be changed unless the transport team is consulted.

Family members are extremely anxious when a patient is transferred. If they have not been able to accompany or follow the patient, they should be called as soon as possible after the transfer and given a report on the patient's condition. The referring physician and the nursing staff at the referring hospital should also be informed about the patient's arrival at the receiving hospital and the patient's progress on a continuing basis thereafter.

The transfer is not complete until equipment on the transport vehicle has been restocked and prepared for the next call. Reusable equipment that has come into contact with the patient should be appropriately sterilized or decontaminated.

OUTREACH EDUCATION AND THE REGIONAL TRANSPORT SYSTEM

Since interhospital care of the high-risk perinatal patient requires the cooperation and coordination of many skilled persons, outreach education efforts should include discussions of the regional transport system. Outreach education can be used to reinforce that cooperation and coordination.

Outreach education related to transport should focus on the following objectives:

1. Informing perinatal care providers in the region of the specialized resources available to them through the perinatal network
2. Assisting primary physicians in developing their abilities to anticipate complications, to identify high-risk perinatal patients, and to stabilize these patients before transport
3. Facilitating effective quality assurance through the continuing education of perinatal care providers
4. Establishing 24-hour consultation and referral sources
5. Promoting a regionalized care system designed to ensure high-quality care to all patients in a cost-efficient fashion

PLANNING AND EVALUATION

The planning of the perinatal transport system requires the participation of both those who will use the service and those who will provide it. The creation of regional advisory councils with representatives from the various perinatal programs facilitates planning and evaluation, as such a group can identify and verify the particular region's needs for interhospital perinatal transport and the specific characteristics of the service that should be designed in response to those needs. The characteristics of the successful system, as described earlier, can be used as a guide for program development and subsequent evaluation. Other criteria should be considered in planning and evaluating the transport system:

1. Availability: Does the system provide all services that may be needed by the perinatal patient?
2. Accessibility: Is the capacity to "connect" the patient quickly and appropriately with the services needed ensured? Do those who will need the services know where to go to get them?
3. Responsiveness: Is there a mutual commitment from referring care providers and specialized care providers to honor and accommodate each other's special needs as they may arise?
4. Effectiveness: Are perinatal patients being given the appropriate care in the appropriate setting? Do care users, physicians and patients, and care providers regard the perinatal transport service as useful and effective?

As basic as these questions may appear, their answers are often assumed without testing. The purpose of the evaluation of the system is to collect the evidence that will confirm that the system provides high-quality care to high-risk mothers and neonates.

RESOURCES AND RECOMMENDED READING

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1992

1024-10th Street Ala.
Port Townsend, Washington
98368
June 10, 1992

Office of Hearing Examiner
1320 - Alaska Building
618 - Second Ave
Seattle, Washington 98104

RECEIVED BY
92 JUN 15 PM 12:15
OFFICE OF
HEARING EXAMINER

Sir:

I live immediately ajacent to the helipoint used by Jefferson General Hospital, its a busy helipoint, probably twice a day or more the Medic Evac chopper uses this landing pad.

We have grown accustomed to what noise this chopper makes, plus we are well aware that those evacuated by chopper are generally desperately ill patients, we do resonate critically for children to Childrens Orthopedic Hospital, new born infants are the most commonly sent there.

I would hope those whom complain the loudest would give some thought to the many lives saved by the opportune available of C & H.

I would ask you to approve this helipoint and save many dangerously ill infants.

Sincerely
Gerald K. Sandquist
Linda K. Sandquist

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Peter J. Eglick
Barbara A. Flemming
Bob C. Sterbank

RECEIVED BY
92 JUL -2 PM 4:49
OFFICE OF HEARING EXAMINER

Carol Eychaner
Land Use Planner

July 2, 1992

Sent via FAX to 684-0182
and via Special Messenger

Ruperta Alexis
Deputy Hearing Examiner
Room 1320, Alaska Building
618 Second Avenue
Seattle, Washington 98104

Re: NEFRN's Post-Hearing Statement on CHMC Helistop; CF File 297288 and 298740

Dear Hearing Examiner Alexis:

After submittal of NEFRN's Post-Hearing Statement to the Hearing Examiner yesterday, we found that Condition No. 6 was not revised in the final document as intended. As described in the discussion section following Condition No. 6 in NEFRN's Post-Hearing Statement, the condition was to have been revised to eliminate the automatic requirement for an Environmental Impact Statement and to establish an alternative public review process for any substitute helicopters.

We have enclosed a replacement page 6 that contains NEFRN's intended revised Condition No. 6, which is consistent with the discussion that follows on page 7 of the Post-Hearing Statement. Please substitute this page 6 for that which was submitted yesterday in NEFRN's Post-Hearing Statement.

Sincerely,

PETER J. EGLICK & ASSOCIATES

Carol Eychaner
Land Use Planner

CE:rp
Enclosure: Corrected page 6
cc: NEFRN w/enc
Faith Lumsden w/enc

NEFRN\SUBSTITU.P6

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Since the hearing, NEFRN has once again reviewed EIS, DCLU and community information regarding the average and maximum number of landings that have so far occurred on the CHMC campus. It has also closely reviewed the proposal and projected landings as described in the EIS and the DCLU analysis. Based on this more recent review, NEFRN proposes to revise its Condition No. 5 in an effort to balance the community's need for certainty (which is based on CHMC's and DCLU's representations regarding the number of landings that will occur at the Kitchen Garden site) with CHMC's need for flexibility. The Condition as revised now allows an average of 9 landings per month, with a maximum limit of 18 landings during any given month. This represents a 50% increase over the 1991 actual monthly average (which, at 6.33 landings per month, was the most ever recorded on the CHMC campus), and the maximum number of landings that have occurred during any given month (twelve, in May 1990). It also exceeds by 50% or more the projections reported in the EIS and DCLU analysis and recommendation for the average monthly landings.

(For a more detailed discussion regarding this Condition, and for potential findings and conclusions, see pages 7-9 of NEFRN's June 24 Statement.)

Condition No. 6:

Only Augusta 109 helicopters, with a four-bladed rotor, shall be permitted to land at the CHMC campus helistop, in order to reduce noise impacts and reduce the potential for helicopter accidents in the CHMC area. Two-bladed rotor helicopters, such as but not limited to the Huey helicopters typically used by the Military Assistance to Safety and Traffic (MAST), Coast Guard, and Navy, are prohibited from landing at the CHMC campus.

Should Airlift Northwest or another aeromedical vendor seek to establish regular flights to CHMC in helicopters other than the Augusta 109 studied in the EIS, supplemental environmental review (including an expert noise analysis based on actual field measurements of helicopter noise) must first be prepared to evaluate the noise impacts of the new equipment. After receipt of the noise analysis, DCLU shall provide public notice, and solicit and consider public comment, on the new helicopter proposal and noise analysis. Public notice shall include written notification of the Laurelhurst Community Club and surrounding residential community. If requested, DCLU shall conduct a public hearing on the proposal. Any helicopter that exceeds the noise generated by the Augusta 109 shall be prohibited on the CHMC campus.

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June 23, 1992

RECEIVED BY
92 JUL -1 PM 4:52
OFFICE OF
HEARING EXAMINER

Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

To the Hearing Examiner:

I am writing on behalf of NEFRN, North East Families for Residential Neighborhoods, a group of families living in the vicinity of CHMC who have recently formed because of our concern about the impact of CHMC on the surrounding community. These remarks reflect the position of NEFRN, a group that is now supported by a large proportion of the families living in close proximity to Children's Hospital and Medical Center.

Our name speaks for itself. We are convinced that Seattle as a city will only survive if it maintains and protects its residential neighborhoods. We are concerned that the continual increase in activities and scale of CHMC on its Laurelhurst Campus will destroy the residential quality of housing surrounding the hospital, and provide a precedent for other Seattle hospitals to do the same in other city neighborhoods. The city of Seattle has a clear and present interest in protecting its residential neighborhoods from activities that harm residential values and reduce the already-threatened quality of life for neighborhood residents. Seattle's neighborhoods--like those of most large, central cities--are under siege. High housing costs, taxes, crime, deteriorating schools, noise, and pollution have driven residents from the city in droves. For this reason most Puget Sound families live in suburbs outside Seattle. Planners keep railing against urban sprawl, and Mayor Rice has recently suggested that Seattle absorb more residential density to combat this sprawl, but unless the City of Seattle gives present residents the protection they need to live peaceful, productive lives in their present neighborhoods, no one is going to stay. Sprawl will continue to increase, along with the taxes, crime, deteriorating schools, noise and pollution that have driven residents from cities like Detroit, Philadelphia, and St. Louis.

<u>Reasons that NEFRN has opposed a heliport at CHMC:</u>

Regarding the heliport proposed for CHMC's Laurelhurst campus, it is important to focus on the main issue. The issue is <u>not</u> one of appropriate care for children, but <u>is</u> one of appropriate land use. This does not seem to be widely understood outside the community of neighbors of CHMC. As an example of the way the issue has been addressed among the media who have never bothered to find out the basis of community opposition to CHMC's heliport plan I cite Brian Basset's cartoon on the editorial page of last Sunday's <u>Seattle Times</u>. It shows two gentlemen standing in front of a baronial fireplace above which a helicopter is mounted as if it were a hunting trophy. Above it is captioned "Meanwhile in Laurelhurst . . ." and below one of the gentlemen is saying, "Bagged this baby on a lifeflight to Children's Hospital." Although the Sunday <u>Times</u> made no mention of today's hearing or any of the issues involved, the message is clear: Opposition to CHMC's plans is a plot of the super rich--everyone knows that everybody in Laurelhurst is super rich--trying to maintain their exclusive lifestyle.

What's the reality? Although there are some super rich residents of Laurelhurst, those people who live near CHMC are not. The homes around CHMC threatened by low-flying helicopters are not million dollar view homes, but primarily modest, middle-income houses, multifamily apartments, and senior housing. Nobody in our group has deep pockets. We barely eke by on contributions of $20-$30 made by a large number of citizens who are concerned about CHMC's lack of consideration for the neighborhood in which they are

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located. We do not have the resources that CHMC has to hire one of the largest corporate law firms in town, or get an editorial in the newspaper with a phone call from our PR Office.

I cite this unfortunate example of mud-slinging to illustrate the level of hysteria generated by CHMC's supporters on this issue. Rather than deal with the issue on its land use merits, they attack the messenger. As a result, many people are afraid to speak out. I would not expect a parent of a child who has been critically ill to be able to make a rational analysis of the issues involved in this case. A parent rightly wants their child saved, and can't be expected to worry about whether others are endangered or harassed in the process. I would feel the same way in the same situation and don't hold it against them. This does not mean, however, that an analysis of the issue based on such emotions will lead to the best solution. And it is cynical for a large institution such as CHMC, that has a financial interest in the outcome of a land use issue, to manipulate natural parental feelings in the media in order to avoid addressing legitimate land use concerns of some Seattle citizens.

It shouldn't be necessary to say this, but it is NEFRN's hope that the issue of CHMC's heliport will be decided on the basis of reason and facts. NEFRN--composed primarily of families with children--obviously is not, and never has been, opposed to children receiving the best and most timely care available for all their illnesses. We acknowledge that swift means of getting children to proper care facilities are sometimes required. We are well aware that CHMC has on staff fine physicians and other health care workers that have provided many children and their families with superior medical care. We recognize also, however, that children getting good medical care is not synonymous with centralization of care at the Laurelhurst Campus of CHMC, and that the desires of CHMC as an institution in competition with other medical institutions in the Seattle Area are not synonymous with the welfare of children in general. CHMC is a wealthy and powerful institution that exercises planning and makes choices about where among the numerous properties owned by it and its affiliates to locate its various medical programs. It makes choices about the other hospitals in the Seattle area with whom it chooses to cooperate. It has never been the case that if a particular medical program is not located at CHMC's Laurelhurst campus, the children of Seattle will thereby necessarily be deprived of needed medical services, although CHMC has often implied that this is true. It is within CHMC's power to make land use decisions that will provide good medical care for children and recognize the legitimate right of residents near the hospital to live in peace and security. That they have not chosen to do so is an institutional, rather than medical, problem.

It is NEFRN's position that, in making choices about what programs and services to locate on their Laurelhurst Campus, CHMC must be flexible and take into account the fact that their Laurelhurst campus is located in a residential neighborhood under severe developmental pressure--not simply from CHMC, but also from nearby University of Washington. We believe CHMC should recognize that all programs they may wish to implement are not appropriate for a residential location, and that in cases where planned activity is not appropriate for a residential location--such as in the case of the heliport--CHMC has the resources and ability to locate those facilities more appropriately, either through cooperation with other hospitals in the area or through the use of alternative sites for activities that adversely affect the surrounding residents.

We have been opposed to granting a conditional use permit for the construction of a heliport at CHMC's Laurelhurst campus because we believe its location endangers the residents of the neighborhood, creates noise at unpredictable hours, and damages property values in the vicinity of the hospital. Though CHMC deems the risk to the neighborhood of low-level helicopter flights to be 'acceptable', that risk remains. Neither CHMC or any other institution can guarantee that a helicopter won't crash down on a family in the supposed

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safety of their home. The proposed flight path down Sand Point way, and even more the proposed secondary flight path from the east, involves inevitable low-level overflight of residences. When the large 'Huey' helicopters come by, all the houses near the proposed heliport sight shudder perceptibly. Particularly heavy impact is experienced by the residents of the Laurelon Terrace condominiums on Sand Point Way down the hill from the hospital and also the multiple family units located along NE 50th Street who regularly experience low-level overflights. The residents of these condominiums are primarily senior citizens--a group of people that the EIS notes is particularly susceptible to sleep disturbance from noise (Vol I:108). A proportion of these senior citizens are in extremely poor health, making overflights that much more disturbing. A heliport under such conditions is simply a nail in the coffin of a Seattle residential neighborhood.

We believe that less dangerous and disruptive alternatives that will provide equivalent levels of protection for children exist. NEFRN is not convinced, however, that CHMC has ever made a good faith attempt to consider the alternatives with less impact on the neighborhood than locating emergency helicopter service on their Laurelhurst Campus. We are in particular disappointed that CHMC has not taken seriously the option of cooperating with Harborview Hospital--a hospital located on the edge of downtown near Interstate 5 with an existing heliport that already takes some pediatric emergencies. Although CHMC supposedly addressed this option in their EIS, they in fact only considered using the Harborview heliport with direct ground transport to CHMC. They did not consider the option of admitting patients to Harborview and stabilizing them until it is safe to transport them by ground to CHMC. (see EIS volume I:70-71). CHMC has never identified in any specific way the equipment necessary for emergency treatment of children, or whether any of that equipment already exists at Harborview. They have never explored in any specific way whether rotating some of their staff through Harborview might be feasible, and whether such a rotation might in fact provide an opportunity for improving emergency care for all children of Seattle, not simply those sent to CHMC. We believe the reasons CHMC has been inflexible and not chosen to explore these options have more to do with concerns for market share and rivalry with other medical institutions than with the welfare and treatment of children.

NEFRN believes that heliports do not belong <u>in any residential neighborhood in Seattle</u>. They are a frightening, dangerous, noisy assault on those citizens unfortunate enough to live nearby. Heliports for emergency medical use may be used at any time of day or night--with noise levels high enough to wake nearby residents, particularly if they should be so rash as to leave their windows open on a balmy night. The heliport proposed by CHMC for their Laurelhurst campus will be the first heliport in a residential area of Seattle. If approved, it will assuredly not be the last. Another heliport proposal has been made in the Delridge area of Seattle. Contrary to what is asserted in the draft recommendation of DCLU (page 15 par 3), all full members of the Airlift Northwest consortium will not have established heliport operations on their respective campuses if CHMC establishes a heliport. Providence Hospital, another hospital located in a residential area of Seattle, is a full member of the Airlift Northwest consortium that does not yet have a heliport on their campus. They have not sought one, but this may change if the CHMC heliport is approved. The issues of the CHMC heliport, then, are not confined to the Laurelhurst neighborhood, but apply to all residential neighborhoods in the city that also have a hospital. A short list of potentially threatened neighborhoods, then, would include the Central Area, Capital Hill, and Beacon Hill. Whether or not any of the hospitals in these areas presently have plans for a heliport or not, the CHMC heliport will be a precedent for all of them.

When CHMC moved to its present Laurelhurst site from Queen Anne Hill in 1953, the land on which they moved--as is all the surrounding land--was zoned for single family residential use. As CHMC well knows, the underlying zoning of

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CHMC is still residential. Each time CHMC has expanded and provided new services, they have assured the neighborhood that they will design them in such a way as to preserve the residential quality of the neighborhood. What began as a small neighborhood hospital, however, is now a behemoth institution. It is unlikely that the city would even permit CHMC as it is currently developed to locate at its present residentially zoned and developed site. However, though incremental expansion, such as the medical office space and now the heliport, CHMC has been allowed to create cumulative and significant impacts on the surrounding neighborhood. CHMC has recently begun the master plan process for yet another expansion--a 45% expansion in size that will only further increase the pressure for more and more overflights into CHMC.

We believe that CHMC will continue to expand and increase the range of services they offer on their Laurelhurst Campus, and that the already considerable impact of the hospital--an impact that is reflected in lowered property values and increased difficulty in selling houses in the vicinity of CHMC--will only increase. Between January 1991 and June 1992, houses adjacent to CHMC took an average of 198.3 days to sell (and several were taken off the market without selling) at a time when houses in close-in areas of Northeast Seattle sold in an average of 41 days. We give this data not because property values are our primary concern--we bought in this area because we want to live here. Some of us were here long before CHMC came to the neighborhood, and most of us will be living here long after the current CHMC administration has retired or taken jobs elsewhere. The data on house sales (or the lack thereof), however, is evidence that the impact of CHMC on adjacent residential areas is real and recognized by potential new residents to the community.

NEFRN's Response to the DCLU May 14, 1992 Recommendation on the CHMC Heliport

We recognize that DCLU has accepted CHMC's heliport EIS, and has recommended that CHMC be granted a conditional use permit to build a heliport at the Laurelhurst campus. We also recognize that DCLU has tried to make a good faith effort to limit the conditional use permit so that the impact on nearby residents of helicopter overflights is somewhat mitigated. Given the importance of the CHMC heliport as a possible precedent for other heliports in residential neighborhoods in the City of Seattle, however, NEFRN believes the conditions proposed by DCLU are less than the bare minimum level of reasonable protection for the neighborhood. If the heliport is approved, the conditions must be strengthened. The specifics of our proposed minimum conditions will be presented by our attorney after NEFRN has had an opportunity to hear CHMC's position on the heliport and the DCLU-proposed conditions. Here I will highlight the positions NEFRN has taken at a meeting of its board of directors.

If a heliport is to be built at CHMC's Laurelhurst campus, it should only be built at the Kitchen Garden site as described in the EIS. The present master-plan proposal indicates that CHMC intends to ask for a zoning change in the kitchen garden site for future expansion. This makes us wonder if CHMC really plans to use the Kitchen Garden site for a heliport at all. As the information in the EIS and DCLU recommendation is predicated on the use of the Kitchen Garden site we believe that no substitute sites should be allowed without CHMC having to prepare another EIS and obtain another conditional use permit.

Because CHMC is presently preparing a master plan for very significant expansion, we wonder about the relationship of the heliport to this expansion. Presently the heliport is not included in the master plan process. We think it should be so included. We therefore recommend that a Conditional Use Permit, if granted, should be temporary until the full twenty year master plan for CHMC is completed and the heliport has been considered in conjunction with CHMC's plans for expansion. The final decision regarding the heliport must be addressed in the CHMC Master Plan and in the context of CHMC's additional

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proposed development.

(1) We support DCLU recommendation No. 1 that helicopters, including MAST helicopters, should be allowed to land at the intermural field site. If a heliport is allowed at CHMC, only critically ill patients should ever be directly landed on the Laurelhurst campus of CHMC. We think this position, which is the same as that the DCLU, meets the need for critically ill children while minimizing the impact on the neighborhood.

No one can guarantee that a medical helicopter will not crash at take-off or approach to CHMC--and possibly even take a neighborhood family with it. The EIS finding of sufficient 'safety' is a statistical one--that is, given the number of flights involved, the odds of a medical helicopter crashing and harming neighborhood residents are low enough to constitute 'acceptable risk.' Even if the odds for any particular flight crashing are low, however, the possibility of a crash actually happening at the CHMC site goes up with each take off and landing. 'Acceptable risk' must be confined to the number of flights actually assumed in the EIS, and an absolute ceiling on the number of flights must be imposed.

(2) We agree with DCLU recommendation No. 2 that the 'Huey' helicopters used by MAST, Coast Guard, and the Navy should not be permitted to land at CHMC. We believe that this regulation as written, however, is unenforceable. MAST have only Huey helicopters and requires military personnel and dependents to use them. While they have told us they are willing to abide by this regulation, they have also told us they will land at CHMC if the medical officer on board the helicopter deems it necessary. We see no reason in principle why bureaucratic rigidity in the military should prevent the use of smaller helicopters for transports to CHMC by military personnel as well as civilian. The only realistic way to prevent regular landing of Huey helicopters with their frightening noise and vibration is to require the heliport be no larger than 20' by 20'. This size will safely accommodate the smaller Augusta helicopters of Airlift Northwest while discouraging Hueys from landing (EIS Volume III: Table B-1).

(3) We generally agree with the DCLU recommendation No. 3 that a medical review committee be established to monitor compliance of CHMC with the DCLU recommendations. We believe the composition, frequency of reporting, responsibility, and duration of the committee should be modified, however, and that concrete sanctions for non-compliance should be adopted. The Committee should be co-chaired by an appointee of CHMC and Laurelhurst Community Club, respectively, and two primary (not tertiary) care physicians with no professional ties to CHMC be added that are acceptable both to CHMC and Laurelhurst Community Club.

(a) The composition of that committee should be altered to more fairly and even-handedly represent the diversity of views of the medical and residential communities. The proposed review committee consists primarily of physicians with close ties to CHMC. This is putting the fox in charge of the henhouse! Pediatric tertiary care physicians, while no doubt fine persons as individuals, are a tightly knit community of specialists who must work with CHMC and each other. They have no material interest in keeping helicopter transports to a minimum except to avoid community pressure, and are subject to social pressure from each other to avoid criticism. In addition such specialists necessarily must work through CHMC, an institution that in the past ten years has not hesitated to freeze out physicians who disagree with its administration.

(b) The committee should meet and report quarterly. Less frequent reporting will make the time lead between possible non-compliance and notice of non-compliance too long for effective action to take place.

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(c) The committee should remain in existence so long as CHMC continues using the heliport. CHMC through its present master plan proposals has put the community on notice that they intend to continue to expand. The conflict of interest between a community that wants to protect its safety and peace, and a hospital whose material interest lies in expanding and increasing its services will not go away in two, three or a dozen years. Rather, as the Seattle area grows, the pressure for more intensive use of the heliport will increase. There is thus no justification for discontinuing the oversight committee even if CHMC exhibits perfect compliance for two or three years.

(5) We agree with DCLU recommendation No. 5 that medical staff should not be picked up at the CHMC campus, since staff could get to the IMA site as quickly as a helicopter could. Pick up or delivery of medical equipment, or organs for transplant should also be prohibited at the CHMC campus.

(6) DCLU recommended condition No. 6 should be revised so that DCLU has a defined ability to enforce the provisions of the Conditional Use Permit based on the findings of the monitoring committee report. Since the purpose of the committee is to monitor the compliance of CHMC with the conditions of their permit, this compliance can only be guaranteed if concrete sanctions for non-compliance are imposed. We believe the review mechanism proposed by DCLU is too weak to be capable of effective enforcement.

(7) We agree with DCLU recommendation No. 7 that only helicopters with four-bladed rotors should be permitted to land at the CHMC campus helistop. To ensure this is the case, the size of the pad should be limited to 20' by 20' as proposed in (2) above.

(8) We do not believe it is possible to sufficiently avoid residences in the built up area around CHMC no matter what flight plan is used to the CHMC campus. However any flight plan used must completely avoid Laurelhurst School and Laurelhurst Playfield. Helicopters have crashed in schoolyards more than once in this country. We therefore believe that only the primary approach as outlined in the EIS page 57 should be allowed for normal flight conditions. The secondary approach which involves low flights directly over homes uphill from the proposed heliport should be allowed only when weather conditions require its use.

Sincerely,

Clark W. Sorensen

Clark W. Sorensen
President
North East Families for Residential Neighborhoods, Inc.

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HEARING EXAMINER

July 8, 1992

Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104
Sent by Fax to: 684-0182

Re: CF File No. 297288 and No. 298740; CHMC's July 7, 1992 Comments on NEFRN-Proposed Conditions

Dear Hearing Examiner Alexis:

We received by fax yesterday after the close of business hours a copy of a July 7 letter to you from CHMC's legal counsel objecting to NEFRN's proposed conditions that were detailed in our Post Hearing Statement.

It is our understanding, based on the schedule announced to the public, that the record on this matter is closed. Thus, it would be inappropriate to reopen the record to allow the applicant the opportunity for additional comment, as suggested by the CHMC letter, but not provide the same opportunity (with sufficient notice) for the general public and for specifically interested parties such as NEFRN. If CHMC objects to the Hearing Examiner's recommended decision and/or conditions for the helistop, it will have the same opportunity as the other interested parties to request City Council reconsideration of the Hearing Examiner recommendations, and can detail any objections to conditions at that time (SMC 23.76.054).

We will assume that the record before the Hearing Examiner will remain closed and that no additional CHMC comments will be accepted at this time. However, please inform us if any decision to the contrary is made.

Sincerely,

PETER J. EGLICK & ASSOCIATES

Carol Eychaner
Land Use Planner

CE:ag

cc: Faith Lumsden
John Keegan/Craig Gannett/Ilona Bray
NEFRN
NEFRN\ALEXIS-L.7-7\1

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Group Health Cooperative
of Puget Sound

RECEIVED BY
92 JUL -8 PM 1:06
OFFICE OF
HEARING EXAMINER

July 1, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 - 2nd Avenue
Seattle, Washington 98104

Dear Sirs:

As a practicing Pediatrician in the Olympia area and past chairman of the Pediatrics Department at St. Peter Hospital, I was interested to learn of the possibility of helistop outside the emergency room of Childrens Hospital and Medical Center. I feel that the ability to land directly at the facility for all transport cases would greatly enhance patient care. I understand that only the most critical patients can land there currently. However, most patients who are transferred to Childrens by helicopter are quite ill. I would be very much in support of this helistop. As with most seriously ill patients, time is of the essence and I personally feel that the transport time involved in landing at another facility and being transported by ground through Seattle is unacceptable for optimum patient care. As Childrens Hospital is the regional referral center for the entire state for critically ill and injured children, the presence of helistop at the hospital would enhance patient care state-wide for these children. I am speaking on behalf of my colleagues in the Olympia area in support of this request for a helistop.

Sincerely,

Sheila B Brown MD

Sheila B. Brown, M.D.
Past Chairman
Department of Pediatrics
St. Peter Hospital

SBB:da

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Washington Ambulance Association

2123 Wedgewood Drive S.E.
Olympia, Washington 98501
(206) 786-8127

June 30, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Madam or Sir:

At their meeting last week, members of the Washington Ambulance Association asked me to write to you expressing our support for the construction of a helistop next to Children's Hospital and Medical Center.

It is our feeling that a considerable amount of thought and compromise has brought about the proposal from CHMC and others, and that it is now time to build this much-needed landing pad. Its limited use should bring about the necessary rapid care for the most critically ill or injured children without excessive hardship for others in the community.

We hope that you and the Seattle City Council will concur with our position. If we can be of assistance in any way, please don't hesitate to let us know.

Sincerely,

Susie Tracy

Susie Tracy
Executive Director/Lobbyist

cc: Robb Childs
Airlift Northwest

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RECEIVED BY
92 JUL -2 AM 11:53
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DAVIS WRIGHT TREMAINE

LAW OFFICES

2600 CENTURY SQUARE • 1501 FOURTH AVENUE • SEATTLE, WASHINGTON 98101-1688
(206) 622-3150

FAX COVER SHEET

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If you are not receiving our transmission clearly or do not receive the total number of pages noted below, please notify Stan Pitcn as soon as possible at 206/628-7581. Thank you.

FROM: John E. Keegan/sjp **DATE:** July 7, 1992

TOTAL PAGES TO BE SENT: 2 (including this cover sheet)

OUR FAX NO.: (206) 628-7040

SEND TO:

NAME	FIRM/LOCATION	FAX NUMBER
Ms. Ruperta Alexis	Deputy Hearing Examiner/Seattle	684-0182
Ms. Carol Eychaner	Peter J. Eglick & Associates/SEattle.	382-3450
Ms. Faith Lumsden	Seattle DCLU	233-7901

COMMENTS/SPECIAL INSTRUCTIONS:

Sent From Floor ____ @ _____ AM PM \ RETURN VIA I/O MAIL \ Operator: _____

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TOTAL P.02

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Bank of California Building
900 Fourth Avenue
Seattle, Washington 98164
(206) 464-1435
FAX 382-3450

Peter J. Eglick
Barbara A. Flamming
Bob C. Sterbank

Carol Eychaner
Land Use Planner

RECEIVED BY
92 JUL -8 PM 1:04
OFFICE OF
HEARING EXAMINER

July 8, 1992

Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104
Sent by Fax to: 684-0182

Re: CF File No. 297288 and No. 298740; CHMC's July 7, 1992 Comments on NEFRN-Proposed Conditions

Dear Hearing Examiner Alexis:

We received by fax yesterday after the close of business hours a copy of a July 7 letter to you from CHMC's legal counsel objecting to NEFRN's proposed conditions that were detailed in our Post Hearing Statement.

It is our understanding, based on the schedule announced to the public, that the record on this matter is closed. Thus, it would be inappropriate to reopen the record to allow the applicant the opportunity for additional comment, as suggested by the CHMC letter, but not provide the same opportunity (with sufficient notice) for the general public and for specifically interested parties such as NEFRN. If CHMC objects to the Hearing Examiner's recommended decision and/or conditions for the helistop, it will have the same opportunity as the other interested parties to request City Council reconsideration of the Hearing Examiner recommendations, and can detail any objections to conditions at that time (SMC 23.76.054).

We will assume that the record before the Hearing Examiner will remain closed and that no additional CHMC comments will be accepted at this time. However, please inform us if any decision to the contrary is made.

Sincerely,

PETER J. EGLICK & ASSOCIATES

Carol Eychaner
Land Use Planner

CE:ag

cc: Faith Lumsden
John Keegan/Craig Gannett/Ilona Bray
NEFRN
NEFRN\ALEXIS-L.7-71

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JUL-08-1992 13:01 FROM PETER EGLICK & ASSOC. TO 9684018232O P.02

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Peter J. Eglick & Associates
Suite 1212
Bank of California Building
900 Fourth Avenue
Seattle, Washington 98164
(206) 464-1435
FAX 382-3450

Peter J. Eglick
Barbara A. Flemming
Bob C. Sterbank

Carol Eychaner
Land Use Planner

FAX TRANSMITTAL COVER SHEET

DATE: 7/8/92

TO: Puperta Alexis, Deputy Hearing Examiner

FROM: Peter Eglick & Assoc.

CONTENTS: Comments on NE FBN - Proposed Conditions

COMMENTS:

Number of Pages Sent, Including Cover Sheet: _____

If questions arise regarding this transmittal, please call _____ ***at (206) 464-1435.***

An original is being mailed _____

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JUL-08-1992 13:01 FROM PETER EGLICK & ASSOC. TO 9684018232Ø P.01

DAVIS WRIGHT TREMAINE
LAW OFFICES
2600 CENTURY SQUARE · 1501 FOURTH AVENUE · SEATTLE, WASHINGTON 98101-1688
(206) 622-3150

JOHN E. KEEGAN
(206) 628-7688

RECEIVED BY
92 JUL -8 PM 1:04
OFFICE OF
HEARING EXAMINER

July 7, 1992

HAND DELIVERED

Ms. Ruperta Alexis
Deputy Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Re: NEFRN's Proposed Conditions

Dear Ms. Alexis:

I have just obtained a copy of the "NEFRN Post-Hearing Statement and Proposal for New Minimum Conditions for the CHMC Helistop," dated July 1, 1992, and the follow up letter dated July 2, 1992.

Children's generally objects to NEFRN's request for change in the DCLU conditions. We are prepared to provide reasons for our objections if you determine such comments would be helpful.

Thank you for your consideration.

Very truly yours,

DAVIS WRIGHT TREMAINE

John E. Keegan

JEK:ajp
pc: Carol Eychaner
Faith Lumsden
Suzanne Petersen
Craig A. Gannett, Esq.
Ilona M. Bray, Esq.

F:\DOCS\17722\160\00040.D20
Seattle

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THE MEDICAL STAFF

Auburn General Hospital

June 19, 1992

RECEIVED BY
92 JUL 13 PM 12:53
OFFICE OF
HEARING EXAMINER

Office of the Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle WA 98104

Dear Sirs:

Please Help! We at Auburn General Hospital deal with a significant amount of very sick children through our Emergency Department on a daily basis. It unfortunately becomes a regular occurrence when these children are too sick to go home and often times need emergency transportation from our facility to Childrens Orthopedic Hospital for their definitive pediatric care.

Given the problems with traffic, ground transportation can sometimes take an hour and a half, to an hour and 45 minutes for transportation of a sick child or infant from the Auburn General Hospital Emergency Room to Children's Orthopedic Hospital. This often times makes Airlift Northwest Transport a necessity. Sometimes in these cases every second can make a difference to a child's life. To us, it is absolutely imperative that the most efficient manner to getting the children from our facility to Children's Orthopedic Hospital be explored and intervened. Of late, I know of some specific transportations that have been delayed simply due to the logistics problems associated with the ground transportation once the helicopter has been in the region of Children's Hospital.

It seems very obvious to us on the transporting end of this scenario that a helipad at Children's Hospital would markedly improve this glitch in the system. We therefore strongly support the building of a helipad at Children's Hospital for immediate landing and transportation of the children from the Air Evacuation Helicopter into the emergency facility at Children's. We strongly therefore urge that everyone who has any concern about overall pediatric care in the King County area support this as well. Both myself, as the Assistant Director of the Emergency Services Department at Auburn General Hospital, and all of my colleagues in the Emergency

20 Second Street Northeast • Auburn, Washington 98002 • 206-833-7711

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Department feel as strongly as I do about this. We would be happy to supply any further emphasis that might be needed in order to see to the construction of this.

If you have any further questions please call us at Auburn General Hospital. In the meantime, we will continue to keep our fingers crossed with every transportation that we make - that no scenario develop en-route that could cause a delay therefore a complication to a child's health. Thank you.

Very Sincerely,

Stephen H. Anderson, M.D.
Assistant Director
Emergency Services Department

SHA:gml

cc: Michael Gherardini, Managing Director

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Law Offices
Peter J. Eglick & Associates
Suite 1212
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900 Fourth Avenue
Seattle, Washington 98164
(206) 464-1435
FAX 382-3450

Peter J. Eglick
Barbara A. Flemming
Bob C. Sterbank

Carol Eychaner
Land Use Planner

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FAX TRANSMITTAL COVER SHEET

DATE: 2 July 1992

TO: Hearing Examiner Ruperta Alexis
FAX #684-0182

FROM: Carol Eychaner

CONTENTS: page 6 of NEFRN's Post Hearing Statement

COMMENTS: please substitute

Number of Pages Sent, Including Cover Sheet: 3

If questions arise regarding this transmittal, please call Carol *at (206) 464-1435.*

An original is being ~~mailed~~ delivered ✓

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900 Fourth Avenue
Seattle, Washington 98164
(206) 464-1435
FAX 382-3450

Peter J. Eglick
Barbara A. Flemming
Bob C. Sterbank

Carol Eychaner
Land Use Planner

July 2, 1992

Sent via FAX to 684-0182
and via Special Messenger

Ruperta Alexis
Deputy Hearing Examiner
Room 1320, Alaska Building
618 Second Avenue
Seattle, Washington 98104

Re: NEFRN's Post-Hearing Statement on CHMC Helistop; CF File 297288 and 298740

Dear Hearing Examiner Alexis:

After submittal of NEFRN's Post-Hearing Statement to the Hearing Examiner yesterday, we found that Condition No. 6 was not revised in the final document as intended. As described in the discussion section following Condition No. 6 in NEFRN's Post-Hearing Statement, the condition was to have been revised to eliminate the automatic requirement for an Environmental Impact Statement and to establish an alternative public review process for any substitute helicopters.

We have enclosed a replacement page 6 that contains NEFRN's intended revised Condition No. 6, which is consistent with the discussion that follows on page 7 of the Post-Hearing Statement. Please substitute this page 6 for that which was submitted yesterday in NEFRN's Post-Hearing Statement.

Sincerely,

PETER J. EGLICK & ASSOCIATES

Carol Eychaner
Land Use Planner

CE:rp
Enclosure: Corrected page 6
cc: NEFRN w/enc
Faith Lumsden w/enc

NEFRN\SUBSTITU.P6

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NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Since the hearing, NEFRN has once again reviewed EIS, DCLU and community information regarding the average and maximum number of landings that have so far occurred on the CHMC campus. It has also closely reviewed the proposal and projected landings as described in the EIS and the DCLU analysis. Based on this more recent review, NEFRN proposes to revise its Condition No. 5 in an effort to balance the community's need for certainty (which is based on CHMC's and DCLU's representations regarding the number of landings that will occur at the Kitchen Garden site) with CHMC's need for flexibility. The Condition as revised now allows an average of 9 landings per month, with a maximum limit of 18 landings during any given month. This represents a 50% increase over the 1991 actual monthly average (which, at 6.33 landings per month, was the most ever recorded on the CHMC campus), and the maximum number of landings that have occurred during any given month (twelve, in May 1990). It also exceeds by 50% or more the projections reported in the EIS and DCLU analysis and recommendation for the average monthly landings.

(For a more detailed discussion regarding this Condition, and for potential findings and conclusions, see pages 7-9 of NEFRN's June 24 Statement.)

Condition No. 6:

Only Augusta 109 helicopters, with a four-bladed rotor, shall be permitted to land at the CHMC campus helistop, in order to reduce noise impacts and reduce the potential for helicopter accidents in the CHMC area. Two-bladed rotor helicopters, such as but not limited to the Huey helicopters typically used by the Military Assistance to Safety and Traffic (MAST), Coast Guard, and Navy, are prohibited from landing at the CHMC campus.

Should Airlift Northwest or another aeromedical vendor seek to establish regular flights to CHMC in helicopters other than the Augusta 109 studied in the EIS, supplemental environmental review (including an expert noise analysis based on actual field measurements of helicopter noise) must first be prepared to evaluate the noise impacts of the new equipment. After receipt of the noise analysis, DCLU shall provide public notice, and solicit and consider public comment, on the new helicopter proposal and noise analysis. Public notice shall include written notification of the Laurelhurst Community Club and surrounding residential community. If requested, DCLU shall conduct a public hearing on the proposal. Any helicopter that exceeds the noise generated by the Augusta 109 shall be prohibited on the CHMC campus.

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DAVIS WRIGHT TREMAINE

LAW OFFICES

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(206) 622-3150

RECEIVED BY
92 JUL -1 PM 1:29
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HEARING EXAMINER

JOHN E. KEEGAN
(206) 628-7688

July 1, 1992

HAND DELIVERED

Ms. Ruperta Alexis
Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Re: Children's Hospital and Medical Center
Applications for Council Conditional Use Permits

Dear Ms. Alexis:

Enclosed please find Children's proposed Findings of Fact and Conclusions in the above matter. Also enclosed is a hard disk containing the same document, for your use.

If you have any questions regarding the enclosed, please do not hesitate to call or write me or Ilona M. Bray. Thank you again for your consideration of this matter.

Very truly yours,

DAVIS WRIGHT TREMAINE

John E. Keegan

John E. Keegan

JEK:sjp
Enclosures
pc: Faith Lumsden
Treuman Katz
Craig A. Gannett, Esq.
Ilona M. Bray, Esq.

17722\160\00038.D20
Seattle

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June 29, 1992

RECEIVED BY
92 JUN 30 AM 11:11
OFFICE OF
HEARING EXAMINER

Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Street
Seattle WA 98104

Dear Ms. Alexis:

We are writing about the current request from Children's Hospital (CHMC) for helipad facilties. We support all of the conditions proposed by NEFRN and hope that you will adopt them without major change.

There are two issues that need some further thinking. One deals with Revised DCLU Condition #3 (NEFRN #7). We think that strong consideration should be given to finding a way to provide medical expertise to the review panel without having to appoint pediatric practitioners to the panel directly. Perhaps pediatric practitioners who are retired and not currently practicing could fulfill this role adequately.

A second issue has to do with determining what parties should be required to carry what kind of insurance to cover a possible helicopter crash. We can think of several situations that need to be covered:

1. A crash into one or more homes or apartments near the hospital,
2. A crash into Laurelhurst Elementary School, which is near CHMC,
3. A crash at the helipad at Childrens Hospital or Graves Field,
4. A crash into an open area (street, park, etc.).

In each case, people aboard the helicopter may be killed or injured as may people on the ground. Who may be held responsible? Might the City of Seattle be liable because it issued the permit for helipads? Or, would only Airlift Northwest and/or CHMC be liable? What type and amount of insurance is currently carried by the City, Airlift NW and CHMC? Is it adequate? If not, we believe that one or more conditions should be added to those proposed by NEFRN that requires all potentially liable parties to carry an appropirate type and amount of insurance to cover any one of the crash types noted above.

Again, we urge you to include all of the conditions proposed by NEFRN in your recommendation to the City Council. We believe them to represent a reasonable compromise that deals fairly with this complex issue.

Yours sincerely,

Anita Francis
Anita M. Francis

Jerry Schneider
Jerry B. Schneider
5003 45th Ave NE
Seattle Wa 98105

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To: Ruperta Alexis, Deputy Hearing Examiner
Room 1320 Alaska Bldg.
618 Second Avenue, Seattle, WA. 98104

6/23/92

My name is Marvin O. Christman, my home address is 4350 53rd NE, in the Laurelhurst community which is immediately adjacent to two plus sides of Childrens Hospital.

I am representing the eight story LAURELHURST WEST Condominium at 4545 Sandpoint Way NE having two and three bedroom homes, with 54 seperate families. This neighborhood residence has a DIRECT line of sight with the Hospital. As a condoninium owner there and a member of the Board of Directors I speak for them that we DO NOT want and adamantly oppose the building of and use of a HELIPORT AND PAD at Childrens Hospital.

Childrens Hospital was dedicated in the late '40's at which time and on many occasions since, the NE communities have been told, " This is a small building we are constructing and it will continue to enhance the neighboring communities with our services." Therefore, every year the facility continues to grow higher and wider with increases in traffic and congestion.

My earliest recollection of Helicopter landings at the Hospital is 1981 when my Mother moved into the Laurelon Terrace Condominium, immediately adjacent to the Hospital on the South Side. There are approximately 120 Units there, with many ownerships by retired Northeast citizens. At this time the noise and vibration caused by Helicopter landings, which we were told by the FAA and others to be illegal, but done in the interest to SAVE A LIFE, OCCURED on a regular 2-3 per month.

We knew, since my Mother being very hard of hearing, she would feel the vibration of the landing helicopter and many times she would ask me to replace her wall pictures that had fallen from the wall to the floor.

Additionally, on the North side of Childrens. home residences are immediately adjacent to the street, adjacent to their property line. There is very little open space to accomodate Childrens Hospital from the the surrounding neighborhood...especially during the night ..when landings are definately an intrusion to their privacy. The situation is almost to the point where the City will have to pay the close-by neighbors to move, as has happened at SEA-TAC Airport. This would not only reduce an excellent city tax base but lower the value of the rest of the NE homes affected by the Hospitals encroachment of quiet Airspace.

Over Please

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This community, as one of Seattles finest residental communities deserves more.....we pay above average residental tax revenues.....we are proud of our homes, we tolerate the enlargement of the Hospital...even though we are constantly at odds with the Hospitals administration and the various City Officals.

We do not want to move or to have out residences de-valuated because of the dangers due to congestion, helicopter traffic or plant size facility in the center of our community homes.

For ten years the NE community has defended this position... no helicopter pad or landings at Childrens Hospital.....and have <u>had the support</u> of City Officals and the present LAW. We sincerely request your continued consideration of our interests.

Marvin O. Christmas

4350 53rd NE
Seattle, WA. 98105
(206) 525-6966

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June 24, 1992

Ms. Ruperta Alexis:

As a lifelong resident of Laurelhurst I watched with dismay for many years as the Laurelhurst Community Club became a mouthpiece for a handful of residents who oppose any and all change or growth no matter how helpful or progressive it may be.

For too long I stood by silently as this group pretended that most residents of Laurelhurst share their narrow, xenophobic views. I did not speak out when the Community Club used scare tactics in an attempt to turn the people of Laurelhurst against the Battelle Institute. The time has come to set the record straight: the Laurelhurst Community Club does not represent the views of the majority of Laurelhurst residents. It is time for the silent majority of Laurelhurst citizens to be silent no longer.

The issue of a helicopter landing pad at Children's Orthopedic Hospital has moved me to action. I am a student at Duke University, this past year my residence hall was directly across the street from Duke Hospital and its helipad, which serves as a Life-Flight Center for all of Central and Eastern North Carolina. Two to three life-saving flights a day were routine. It took me just about a week to adjust to the flight noise. After that, my sleep was never interrupted by helicopter noise. Each time a daytime flight went overhead I thanked God that I lived so close to such a fine medical institution. After the first week the noise never interfered with my studying, sleeping or socializing. Not once ever.

When I was growing up I was rushed several times to COH for treatment of various ailments. I have always considered Children's to be a major asset to the Laurelhurst Community. It is indeed ironic that the very same NIMBY's who oppose a helipad also reap the considerable benefits of living within a one minute drive of a world-class medical facility. If one of their children fell ill they would not think twice before rushing them to the emergency room which is so close by.

It is only when a sick or injured child from a poor or rural area needs to be flown in for life-saving treatment that these residents protest. Such conduct is selfish and meanspirited. I urge in the strongest terms, as a resident of Laurelhurst and one who has lived across the street from a helipad, that the COH Master Plan be approved. Don't sacrifice critically ill children to appease a handful of overprivileged zealots.

Sincerely,

Mark C. Lamb
3109 East Laurelhurst Drive N.E.
Seattle, Washington, 98105
(H) 522-8734
(W) 453-7961

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Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

RECEIVED BY
92 JUN 30 AM 11:12
OFFICE OF
HEARING EXAMINER

June 29, 1992

Dear Ms. Alexis:

After reading the results of the hearing meeting which took place last week, as a neighbor, I support all of NEFRN's proposed conditions for the helistop at Children's Hospital and Medical Center.

Currently, the disruptions to the neighborhood is very great.

Best regards,

Joni Morishita

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RECEIVED BY
92 JUN 30 AM 11:12
OFFICE OF
HEARING EXAMINER

4036 NE 45th Street
Seattle, WA 98105
June 29, 1992

Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

RE: Hearing on DCLU's recommendations on the final environ-
impact statement for a helipad at Children's Hospital

My name is Patricia Ann Wood.
I reside at 4036 NE 45th Street, Seattle in Laurelon Terrace, a condominium. I have lived in Laurelon Terrace, at two different locations, since 1955 (from 1978 at the present address).

I have attended many discussions on the helipadissue and have attended every public hearing on the matter, including the morning session on June 23.

I strongly support NEFRN-proposed conditions numbers 2-4, 6-9 and 11-13/. I philosophically support #10, as I WANT a continuing DCLU overview of these activities. But since I feel #5 is rather unworkable, I would support #10 only if #5 is stricken. I am in sympathy with the concept in #5, but emergency landings do not lend themselves to 'averages' an more than do helicopter saftey records---i.e. 'statistics of medical helicopter safety translate into "only" one crash every 69 years'!!

I understand by some happenstance the records of the 1986 hearing were lost! Thus I am taking the opportunity to enclose materials I submitted for the record at that meeting. I still strongly support a main helipad at Gravs Field, used by both Children's and the University, with an 'emergency only' pad at Childrens.

I was most gratified to hear, from the personreporting for DCLU on June 23, that it is unlikely any other hospitals in the city will be requesting helipads in the near future.

Sincerely
Patricia Ann Wood
Patricia Ann Wood

Encs: 2
(Submitted as testimony at 1986 hearing, from which I hear the records were lost)

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PUBLIC HEARING
KING COUNTY BOARD OF HEALTH
KING COUNTY COUNCIL CHAMBERS
DECEMBER 2, 1986

My name is Patricia Ann Wood.
I reside at 4036 N.E. 45th Street, Seattle, 98105 in Laurelon Terrace.

Laurelon Terrace is a condominium of 136 townhouse style units nestled just below Children's Hospital, sharing a three-block boundary with the hospital on our eastern perimeter.

I have lived in Laurelon since 1955 and have witnessed the growth of the hospital from a small institution that chose to relocate into the midst of a residential area to the expanded campus that now exists. I share with most of Seattle, and, indeed, the region, an appreciation of the fine care that is given at the hospital and recognize it as an asset to our community.

At the same time, I am very concerned about the safety factors involved in creating a permanent and authorized helipad in the midst of this densely populated residential area. I have attended every public hearing on this matter during the several years that the hospital has been seeking permission for a helipad. I have also met, in a smaller group, with a member of the hospital's administration. Thus I have heard eloquent presentations from various points of view.

I am not convinced that a helipad just outside the hospital door is truly necessary, nor that the statistics for medical helicopter safety translate into "only" one crash every 69 years. Accidents do not happen on predictable timetables---and newer evidence continues to support the fact that medical helicopter flights have higher accident rates than commercial helicopter service.

I can speak for many of my neighbors in Laurelon in endorsing an alternative plan eloquently and completely presented by Mr. Jerry Schneider at the public hearing on the DEIS on September 23, 1986 at the Laurelhurst School. The alternative plan----preparing a permanent, paved, well-lighted, well-secured helipad on a portion of the UW soccer field area would provide good service to both CHMC and University Hospital. It would answer our safety concerns without transferring our fears to any other neighborhood, as the helicopters would be able to approach and leave over water, not over heavily populated residential areas.

I covet your serious consideration of this alternative.

Patricia Ann Wood

Resubmitted 6/29/92 as partial replacement of documents lost from the 1986 hearing

Patricia Ann Wood

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4036 N.E. 45
Seattle, Washington 98105
January 27, 1986

225

Beatrice Ryan
Interim Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

RE: Helipad, 4800 Sandpoint Way N.E. PROJ #8495870/Kroll

I have lived in Laurelon Terrace (at two different addresses) since 1955. I am a Medical Technologist (recently retired) and have worked at the University of Washington in medical research for 25 years, followed by 10½ years as supervisor of a division in the clinical laboratory. Thus I have some background, knowledge and understanding of: (1.) the development and past changes in the residential area surrounding Children's Orthopedic Hospital and (2.) the changing patterns and pressures of health care and health care delivery.

I have attended every meeting regarding the helipad issue for the past two years and, though I feel well informed on the pros and cons of the issue, I do still have some concerns:

Laurelon Terrace is a condominium of 136 units covering a three block area immediately west of COH. The buildings were built in the late 1940's (prior to COH's move into the area) and converted to a condominium in 1978, well in advance of any public knowledge that a helipad might be in the picture.

The enclosed map shows the 19 buildings that comprise Laurelon Terrace and demonstrate its proximity to the hospital. Also, the complex is downgrade from the hospital (separated only by a firelane) so that the helicopter approach to the proposed pad has a significant bearing on the noise level, vibration and safety hazard to various homeowners.

There have been at least seven unauthorized landings at COH since November. Instead of the helicopter following the prescribed flight path---which we understand to be over Sandpoint Way NE and up the COH drive to the 'Kitchen Garden"---it has been coming in LOW at an agle over buildings 13, 14, 9, 10 and 18. Again, because of the topography, when the helicopter comes in so low it is not only much more dangerous to us, but the reverberations are intensified! From talking with some people at the hospital we understand: (1.) the new helicopter does not have to circle; it can come in high and drop straight down to the pad; (2.) there is no reason for the pilot not to take the prescribed route over Sandpoint Way rather than over residences.

Resubmitted 6/29/92 as partial ~~copy~~ replacement of hearing document lost in 1984.
Patricia Ann Wood

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The items we feel should be addressed in the Environmental Impact Statement are:

1. NEED. If the community could be assured that the helicopter would be used only for truly critcal cases, we would live with that. At the same time, if the pad permit is granted we request that there be a workable, effective and timely process to assure the helicopter is not being misused. There should be knowledgeable community representatives included in any such "Peer Review" committee.

2. FREQUENCY: This is an adjunct of 'Need'. One can predict that if there are 15 flights the first year, the number of flights in subsequent years will increase even if the tool is not abused, simply because of increasing advances in technology. This expected growth underlines the importance of only one flight per patient, having the medical crew picked up either at the 'soccer field' or at Harborview (rather than the possible two flights per case into COH).

3. FLIGHT PATH: We strongly urge the pilots be instructed to adhere to the prescribed flight path, and come in high rather than almost level with our roofs which has happened on several recent occasions. The solid red line on the enclosed map indicates the presecribed flight path; the broken red line denotes the path taken by 5 of the last 7 flights. We realize that adhering to the Sandpoint Way route may impact other neighbors. We have no desire to better our situation at the expense of others. The chosen route should take all residents' situations into account. We do feel, however, that our topography makes it mandatory that the helicopter come in high!

4. SAFETY: Helicopters, unfortunately, do crash. The hospital assures us that the statistics indicate there would be only one crash in 64 years. Please note the recent crash of a medical emergency helicopter (in another state) 5 minutes from its landing. Who is going to pay for this insurance? Even without helicopter hazards the current state of insurance premiums is a disaster in itself! Another strong point, we think, for restricted flights and controlled flight paths.

5. VIABLE ALTERNATIVES: The UW 'soccer field' has served for some years as an emergency landing field for both UW and COH. Here the approach can be over water, marsh, parking lots---not homes. Rather than say the field is too soggy, a decent, lighted helipad could be constructed here to serve both institutions. Helipads should be looked at as regional facilities--- no matter what the future medical technology, can we afford to have the service at every hospital?

Sincerely

Patricia Ann Wood

Patricia Ann Wood

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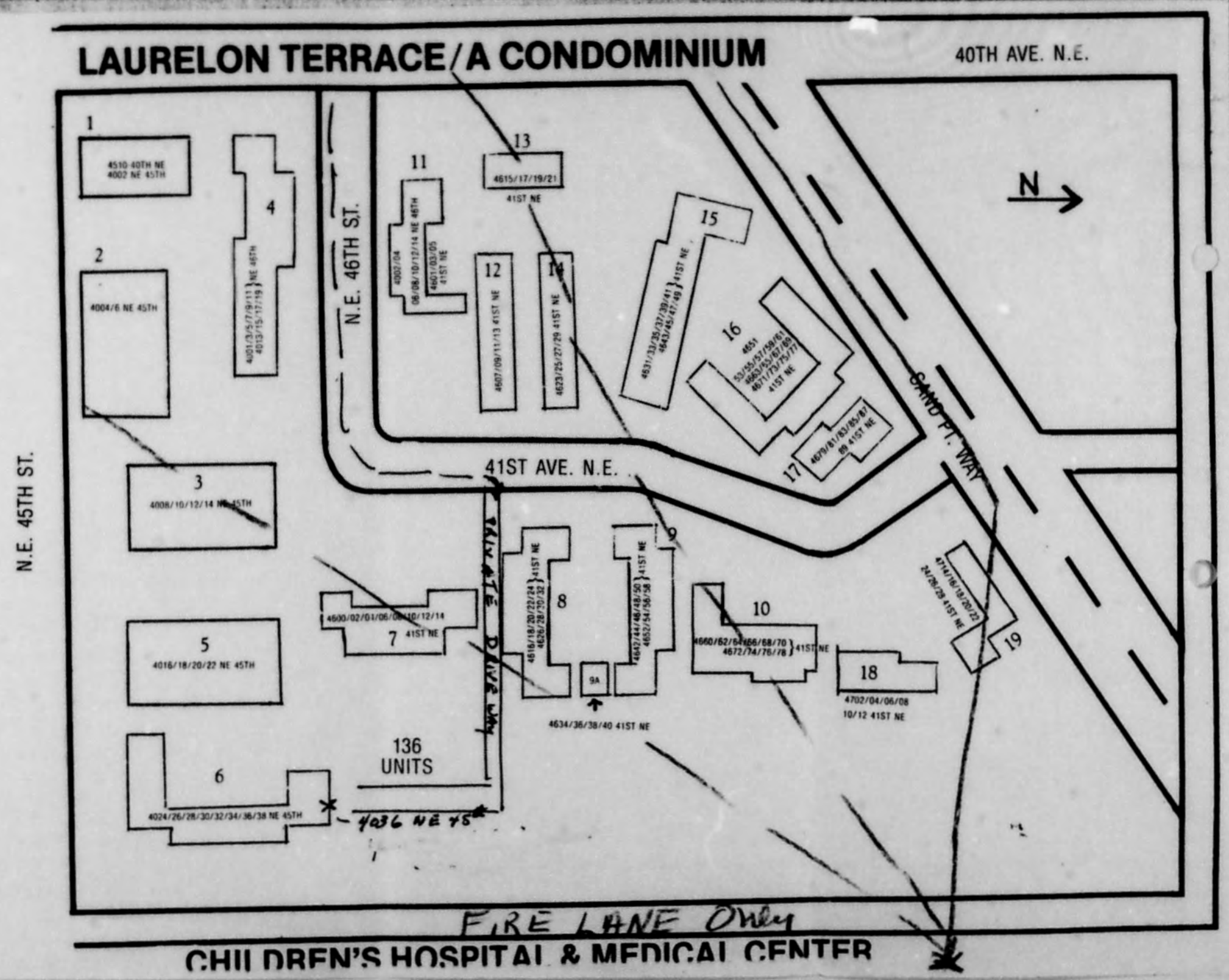

Patricia MacElveen-Hoehn, R.N., Ph.D.
3848 43rd Ave. N.E. Seattle, WA 98105 (206) 524-7093

Ms Rupirta Alexis
Deputy Hearing Examiner
Rm 1320, Alaska Bldg
618 Second Ave
Seattle, WA 98104

RECEIVED BY
92 JUN 30 AM 11:13
OFFICE OF
HEARING EXAMINER

Dear Ms Alexis:

I support all NEFRN's proposed conditions regarding the Lifestop at Children's Hospital Medical Center.

Thank you for your considerations.

Sincerely,

Patricia MacElveen-Hoehn, RN, PhD

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KAY E. STIMSON
4715 45TH AVENUE N.E.
SEATTLE, WA. 98105

RECEIVED BY
92 JUN 30 AM 11:14
OFFICE OF
HEARING EXAMINER

June 28,1992

Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Avenue
Seattle, Wa. 98104

Dear Ruperta Alexis,

I am writing to urge you to support all of the DCLU and North East Families for Residential Neighborhoods [NEFREN] conditions that were proposed at the hearing for the Children's Hospital helipad.on June 23 and 24, 1992.

It is vitally important that these conditions be adopted as part of the final recommendation.

These decisions will not only make an impact on the quality of life in our neighborhood, but will set precedents for all neighborhoods in this city for the years to come. Make your recommendations with the thought in mind, that what happens here, will be where the next major institution development will begin. Make your decision so that there will be protection for our neighborhoods to continue to be a place where families want to live.

Children's Hospital has a past record of not living by the rules. If they are given an inch they will take a mile.They are a major institution that wants to continue to grow, no matter what impact it has on the community around them. Please look at this matter as a business decision and leave the emotions out of it. Just as they arbitrarily moved the temporary helipad during their current construction without informing anyone, they will continue to do as they please unless the city is willing to make rules and to enforce them.

Please support all of the proposed conditions made by the DCLU and NEFREN.

Sincerely,

Kay Stimson

Kay Stimson

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June 27, 1992

RECEIVED BY
92 JUN 30 AM 11:14
OFFICE OF
HEARING EXAMINER

Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Bldg.
618 Second Ave.
Seattle, WA 98104

Dear Ms. Alexis:

I write to voice my agreement and support of the NEFRN Proposed Conditions for a helistop at Children's Hospital & Medical Center (CHMC), with the following exceptions:

#5. Total landings per month reduced to 4 (approximately 1 per week).

#7. Paragraph 8 - I completely disapprove of paying individuals for monitoring CHMC flights. Might this even encourage the number of flights?

#11. The flight pattern mentioned (N.E. 45th & Sand Point Way) is not followed. Flights in turn over N.E. 50th (residential) and flights out turn and fly diagonally over Laurelon Terrace Condominiums. Instead, all flights (in and out) should follow CHMC main entrance; i.e., over Sand Point Way, turn at Sand Point entrance to CHMC, and follow CHMC road to helistop.

Thank you.

Sincerely,

Helen Newman
4252 N.E. 50th
Seattle, WA 98105

cc:

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May 16, 1992

Office of Hearing Examiner
1320 Alaska Bldg.
618 Second Ave.
Seattle, WA 98104

Dear Sir:

I, an individual, totally object to a helistop on the campus of Children's Hospital & Medical Center (CHMC). I live nearby. Each flight in and out makes a low-flying turn right over my roof. The whole house vibrates. The dishes clink. My nerves are shattered. I never know whether the plane will make the turn or crash (this any time during day or night).

Our lives are endangered, our health is endangered, our property is at risk.

I find it completely unnecessary to have two helistops within a mile location. The University of Washington intramural field is adequate and accessible in open space whereas the CHMC campus is surrounded by residential areas.

We the taxpayers have not been given fair consideration. Our rights to a safe neighborhood have been totally disregarded.

Please stop this helistop plan and construction on the campus of CHMC. Thank you.

Sincerely,

Helen Newman

Helen Newman

cc: Mayor Norm Rice
City Council members
File

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Richard B. Counts
4131 42nd N.E.
Seattle WA 98105

RECEIVED BY
92 JUN 30 AM 11:16
OFFICE OF
HEARING EXAMINER

June 27, 1992

Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Ave.
Seattle WA 98104

Re: COHMC Heliport

Dear Ms Alexis:

I am writing about the proposed helicopter landing proposal for Children's Hospital Medical Center. I urge the attachment of the NEFRN-proposed mitigating safeguards and restrictions to the DCLU recommendation. They are important to prevent excessive use. The use of the COHMC site should be restricted to life-threatening emergencies and to times when travel from the University landing site would introduce serious delay. In 1991, half of the COHMC landings took place after seven p.m. and before the morning rush hour. At these times the travel time from the Graves Field site is five minutes or less. The majority of 1991 flights were at times outside the peak traffic times for 45th Street and Sandpoint Way.

Continued review of the use of the heliport is needed in order to ensure its appropriate use only for true emergencies.

Sincerely yours,

Richard B. Counts

Richard B. Counts

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I am writing to express my concern about project 105870, an emergency helistop on the CHUC campus.

Helicopters using this helistop come in over my condominium on their descent. It is a densely populated neighborhood and full of trees and telephone wires. Project 9106441, the primary helistop on the U.W. campus has a clear access route and should be sufficient on its own.

Claire L—

Claire L. Peterson
4819 F Terrace Drive NE
Seattle, WA 98105

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June 16, 1992.



To whom it may concern:

I am writing concerning th
proposal. My husband and I
go on record as being in full
of the emergency helistop. O
daughter, Abigail Rachel Kauff
transferred June 29, 1991 by helicopter
to Children's Hospital at 24m. She was
a surprise breech at homebirth. She
was born dead after being without air
for 20 minutes. Abigail is a miracle
case as she has retained no problems
due to her birth. The quick medical
attention given her was a tremendous
advantage. Abigail is our fourth child
and a joy. We can't imagine life
without her.

We would like to ask you to consider
the helistop as a tremendous life
saving tool our technology has provided.
There is a tremendous value to human
life. Too often, we don't pay attention to
its value until we face the death of
our own loved ones. The greatest
gift we can give all our children is life.
It is both our responsibility and privilege.
Often it must be with great inconvenience;
but with sacrifice comes tremendous joy
and reward. Abigail and all our children
have been ours. We ask you to consider
the true values involved in this issue

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to the proposed helistop. Life. We all have the right to the best care technology can provide -- even children.

Thank you for your consideration,

David and Melissa Kauffman
7710 NE 101st Avenue
Vancouver, WA. 98662
(206) 253-2459

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92 NOV 19 AM 11:04
OFFICE OF
HEARING EXAMINER

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From the desk of
DAVE DEMAREST

We support all the proposed conditions of NEFRN. CHMC has been a very bad neighbor and needs to have restrictions + controls or it exceeds its boundaries.

Peggy + Dave Demarest

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92 JUN 30 AM 11:15
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4736 44 NE
Seattle
Wa 98105
June 27-92

RECEIVED BY
92 JUN 30 AM 11:43
OFFICE OF
HEARING EXAMINER

re-extended growth
boundary comment

Ruperta Allen
Deputy Hearing Examiner,

We support all N.E.F.R.N's proposed conditions on June 23rd and 24th at the hearing. We find that the continued flying of the helicopters as they are now - are a distinct danger to all of those living in the surrounding neighborhood especially the schools and playgrounds —

Sincerely,
Mr. & Mrs David Serebrin

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RECEIVED BY
92 JUL -1 AM 10:43
OFFICE OF
HEARING EXAMINER

4525 51st Ave., N.E.
Seattle, WA 98105-3830

June 30, 1992

Ms. Ruperta Alexis, Hearing Examiner
618 Second Avenue
Seattle, WA 98104

Re: Children's Hospital and Medical Center
Application Number: 8405870, 9106441
C.F. No. 297288 and 298740

Dear Ms. Alexis,

I have been a resident of Laurelhurst for many years, and I am concerned about the proposed helipad at Children's Hospital.

I strongly urge that the IMA field site be approved as it is a superior and safer landing site. I trust you will agree after your on-site visit to Children's.

After two days of hearings on June 23, and June 24, 1992 and listening to a lot of testimony I still feel that the IMA site should be used. If you do approve the Children's site for landings in extreme emergencies please ensure that the conditions imposed for the landings are similiar to those proposed by Mr. Peter Eglick.

Please place my name on your mailing list for matters concerning this permit process.

Yours sincerely,

Barbara H. Davis

Mrs. Barbara H. Davis

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June 27, 1992

RECEIVED BY
92 JUN 29 AM 11:11
OFFICE OF
HEARING EXAMINER

Ms Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Bldg.
618 Second Ave.
Seattle, WA 98104

Re: Proposed helistop at Children's Hospital & Medical Center (CHMC)

Dear Ms Alexis:

As a long-time resident near CHMC, I have become dismayed then alarmed then angry over the institutional expansion of CHMC in a residential neighborhood. I have been and remain actively opposed to a helistop on CHMC campus.

Enclosed is copy of my letter to Office of Hearing Examiner, dated May 16, 1992. Please refer to item #7. Update: On June 21, 1992 an air ambulance crashed in Connecticut (reported on CNN news on KING 1090).

I have read the NEFRN-proposed conditions on the helistop at CHMC. Please note the following observations:

#5. "Landings...shall not exceed an average of 6 landings per month...shall not exceed 15 landings in any given month. Additional landings...due to catastrophic events shall not be subject to the above limitations."

a. Consider that each landing involves two overflights (in & out). Each overflight poses endangerment of lives. An average of 12 overflights, a number of 30 overflights in any given month is too many. In extreme emergency, these numbers would escalate per the DCLU Condition No. 1, item #5. These numbers need to be reduced. Safety is the prime factor.

#7. Medical Review Committee - I find the suggested make-up of this committee equitable and operational. If flights are to be allowed, stringent monitoring by other-than CHMC must be followed. [NOTE: I have a complete log of all flights with dates, times, comments beginning on 10-15-85 through 6-20-92.]

I am concerned about a monetary compensation of service on this committee. However, if this could work toward curtailment of number of flights, it would be a positive factor. CHMC must be made more aware of its responsibilities to the surrounding residential neighborhood where it chose to locate. Furthermore, CHMC must be made accountable for its choices and actions.

Thank you for your consideration of the above comments and of the enclosed letter.

Sincerely,

Maryann E. Spangler

Maryann E. Spangler
4013 N.E. 46th St.
Seattle, WA 98105

cc:

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May 16, 1992

Office of Hearing Examiner
1320 Alaska Bldg.
618 Second Ave.
Seattle, WA 98104

Re: Helistop at Children's Hospital & Medical Center, #'s 8405870 and 9106441. (CHMC)

I have received the Notification of the Conditional Use Recommendation of the above project. I object and appeal the recommendation.

A helistop at CHMC is unsafe, unwise, unnecessary as follows:

1. CHMC is co-financing and using helistop with University of Washington at the Intramural Field. (UW)
2. UW helistop at the Intramural Field is less than a mile from CHMC. This site has been used prior to helicopters at CHMC for many, many years with no loss of patient lives as acknowledged by CHMC.
3. Clear approach to UW helistop at the field site.
4. Approach over dense residential neighborhood at CHMC campus.
5. Low-flying and turning on both in and out flights at CHMC over homes and condos pose extreme danger to residents. CHMC personnel and patients also at risk.
6. Endangerment of innocent, individual citizens' lives is being disregarded.
7. Documented history of helicopter malfunction and crashes, including medical helicopters. Most crashes occur at time of take off or landing. As recently as March, 1992, 3 medical helicopters crashed--March 5, 6, 7. These crashes occurred in Arizona, Michigan, Alaska. SEE news articles in the Seattle Times.
8. Planned expansion (45% of present buildings) at CHMC--both vertical and horizontal--lessens maneuverability space for helicopter landings, turning, take off at CHMC.
9. The expanded building at CHMC is basically for research labs and doctor offices. Patient beds are becoming secondary as CHMC becomes an adjunct of UW Hospital & Medical Center & School.
10. Harborview Hospital already has a helistop in place and a well-developed trauma center and pediatric department.
11. Noise pollution and vibration is high and at any time of day or night.
12. Institutional encroachment in a residential neighborhood destroys the quality of life for the neighborhood.
13. In the FEIS it is stated CHMC cannot refuse any helicopter landings, even the Army MAST planes, which are clearly oversize for residential neighborhood landings and for size of proposed helistop site at CHMC.
14. The estimated average of 15 to 21 patients per month landing at CHMC, meaning 30 to 42 overflights (in & out), could be exceeded as competing helicopter service occurs, according to the FEIS.
15. Omitted in the FEIS are clear, exact criteria/guidelines for helicopter usage, decision-making process as to who determines when and where and which hospital the helicopter uses.
16. Airlift Northwest and CHMC will keep a log of flights but should not be allowed to monitor their own work/decisions. Who will monitor the flights and landings?
17. We who live near and/or contiguous to CHMC property are alarmed over the expansion, including the helistop, at CHMC. In 1952 the hospital outgrew its site on Queen Anne. It has now outgrown its site at Sand Point and Laurelhurst residential area. It is time this property revert to its original residential status.

PLEASE STOP A TRAGEDY FROM HAPPENING (CRASH AND/OR CONFLAGRATION) IN A RESIDENTIAL NEIGHBORHOOD BEFORE IT OCCURS.

Mrs. Maryann E. Spangler
4013 N.E. 46th St.
Seattle, WA 98105

Maryann E. Spangler

cc: Mayor Norm Rice
Seattle City Council
Files

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MS RUPERTA ALEXIS
DEPUTY HEARING EXAMINER
ROOM 1320 ALASKA BLDG
618 2ND AVE
SEATTLE WASH 98104

DEAR MS ALEXIS

PLEASE BE ADVISED THAT WE SUPPORT ALL NEFRN'S PROPOSED CONDITIONS FOR THE PROPOSED HELISTOP AT THE CHILDRENS HOSPITAL,

THANK YOU
Harold L Kurtz
Mildred L. Kurtz

5043 SAND POINT PL NE.
SEATTLE WASH 98105

RECEIVED BY
92 JUN 29 AM 11:11
OFFICE OF
HEARING EXAMINER

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RECEIVED BY
92 JUN 29 AM 11:12
OFFICE OF
HEARING EXAMINER

June 27, 1992

Ms. Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Ave.
Seattle, WA 98104

Dear Ms. Alexis:

I am writing to support all of the conditions NEFRN has proposed for the CHMC helistop. As a biomedical researcher I certainly believe that truly life threatening conditions require direct transport to the hospital. However, as a concerned citizen and nearby resident I wish to be sure that the facility is not abused by CHMC. Having been a neighbor of CHMC for 3 1/2 years I have no confidence that CHMC will not abuse the helistop.

For this reason it is essential that there be a permanent oversight board composed of people independent of CHMC. There is a clear and obvious conflict of interest in having people associated with CHMC composing a majority of the board. It is inconceivable that they would ever challenge the hospital management. The citizens of Seattle are not well served by a rubber stamp board. If CHMC truly complies with the DCLU conditions they would have nothing to fear from a truly independent and impartial oversight board.

For these reasons I most strongly support all of the conditions NEFRN has proposed.

Sincerely,

Gary L. Schieven, Ph.D.

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4101-. 7th Ave NE
Seattle, WA 98105
June 27, 1992

Ms. Lugenta Alexis
Deputy Hearing Examiner
Dept 8 Second Ave. Rm 1320
Seattle, WA. 98105-5601

RECEIVED BY
92 JUN 29 AM 11:
OFFICE OF
HEARING EXAMINER

Dear Ms. Alexis:

I should like to go on record that I feel a helistop atop Childrens Hospital Center would be a great mistake. The area is just too congested and residential to take the risks inherent to helicopter traffic.

Furthermore there is the already viable Graves Field site.

If the helistop proposal must go through then I do support all NEFRN's proposed conditions.

Sincerely
Barbara C. Peterson
Laurelhurst resident & home owner -

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RECEIVED BY
92 JUN 22 AM 11:31
OFFICE OF
HEARING EXAMINER

June 19, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sirs:

I would like to add my "voice" to those who support the helicopter landing pad proposed for Children's Hospital and Medical Center. It would seem to me that a few moments of inconvenience in the form of noise is well worth the saving of a child's life. The staff at the hospital has done an admirable job of informing the people in our neighborhood (Laurelhurst) about the use of the helicopter to bring patients to the hospital. Very few patients seem to be brought in this way but I feel that it is important to have this facility available when it is needed.

Thank you for your consideration of this matter and I hope that your decision will be in favor of Children's Hospital.

Sincerely,

Rosemary H. Newell

Rosemary H. Newell
4830 N.E. 42nd
Seattle, WA 98105-5114

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[redacted]

CAPITAL
MEDICAL
CENTER

June 12, 1992

RECEIVED BY
92 JUN 22 AM 11:32
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, Wa. 98104

Dear Office of Hearing Examiner:

This letter is in support of the application by Children's Hospital and Medical Center for a permit to build a helicopter landing pad.

It amazes me that the people of the neighborhood around the Hospital do not realize the work that the Hospital performs and the lives that can be saved by the rapid transport to the Children's Hospital. Only a helicopter can effect many of these transports, and I think it selfish, with the constraints the Hospital is willing to impose on itself, that people would object to the few flights a month that need to land at the Hospital.

The inclusion of Children's in the State EMS and Trauma System is very important as one of the few hospitals effective in handling such critically ill children. Helicopter capability is crucial, and landing areas in remote sites from the Hospital can unnecessarily delay lifesaving treatments.

All my colleagues in the Emergency Department at Capital Medical Center endorse and support the application submitted by Children's Hospital & Medical Center. I hope the City of Seattle will have the foresight to look to the greater need of the children of Washington.

Sincerely,

Sydney W. Schneidman, M.D., FACEP
Emergency Department Medical Director

D. Kelly Munson, M.D.
Assistant Medical Director

Kelly H. Adams
Chief Executive Officer

Robert Taylor, D.O.
Emergency Department Physician

Constance Vasek, M.D.
Emergency Department Physician

3900 Capital Mall Drive S.W.
P.O. Box 19002
Olympia, Washington 98507-0013
Telephone (206) 754-5858
Fax (206) 943-4130

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Stevens
Memorial Hospital
PUBLIC HOSPITAL DISTRICT NO. 2 SNOHOMISH COUNTY

RECEIVED BY
92 JUN 22 AM 11:32
OFFICE OF
HEARING EXAMINER

June 18, 1992

Office of the Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sir:

On behalf of the Board of Commissioners of Stevens Memorial Hospital, Public Hospital District No. 2 of Snohomish County, I would like to indicate that we are in support of Children's Hospital building a helicopter landing pad, a helistop, outside the Emergency Room on the Children's Hospital campus.

Children's Hospital and Medical Center provides a valuable resource to this suburban community hospital and we periodically are required to transport critically ill and/or injured children by air to Children's Emergency Department. This does not occur frequently; however, we are all aware of the emotional impact associated with pediatric emergencies. It is in the Pacific Northwest's best interest to have this type of emergency capacity located at the region's childrens' hospital.

Thank you for the opportunity to comment on this project.

Respectfully,

Steve C. McCary
Administrator/CEO

SCM:js

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21601 76th Avenue West, Edmonds, WA 98026 (206) 744-4000
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2921 36th Avenue South
Seattle, WA 98144
June 18, 1992

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92 JUN 22 AM 11:34
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

To the Hearing Examiner:

I am writing to voice my strong support of Children's Hospital and Medical Center's petition for construction of a helicopter landing pad on their Laurelhurst campus. As a child advocate, I find it hard to believe that this debate is taking place.

I am a pediatric emergency physician, the director of the Washington Emergency Medical Services for Children demonstration project, a member of the Seattle-King County EMS and Trauma Care Council, a member of the the Washington State EMS and Trauma Steering Committee, and the Chair of its Pediatric Techical Advisory Committee. Perhaps most importantly, I am a parent. In all of those capacities, I recognize the tremendous advantage conferred on a critically ill or injured child by rapid transport to a definitive care setting.

I have worked long and hard to revise Washington Administrative Code to better address the emergency medical service needs of the children of our state. My crusade has been not to afford children special privileges, but to improve pediatric emergency care so that children receive the same benefits of early stabilization and transport as do their adult counterparts. To date, this has not been the case. The fact that there has been no secure landing zone for medical helicopters delivering the very sickest children to the regional pediatric specialty center is a sad reflection of our inattention to the needs of a group that cannot speak for itself.

We all respect the rights to privacy and a noise-free environment for property owners. However, the right of critically ill children to receive expert, expeditious and life-saving care must not be undervalued. Children requiring emergency landing at Children's constitute a small fraction of the patients served by the institution, but are among the most vulnerable. I believe that Children's Hospital can work with the surrounding community to develop a plan for helicopter transport which will minimally impact the neighborhood, and maximally impact the outcome for our most

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precious resource, our children.

I urge you to approve the helicopter landing zone at Children's Hospital. It is a critical part of the emergency medical system, and will allow that institution to better serve the children in Western Washington.

Sincerely,

Dena Brownstein MD

Dena Brownstein, M.D.

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ST. PETER HOSPITAL
413 LILLY ROAD NORTHEAST
OLYMPIA, WASHINGTON 98506-5166
PHONE: (206) 491-9480
TELECOPY: (206) 456-7924

SISTERS OF PROVIDENCE
SERVING IN THE WEST SINCE 1856

RECEI BY
92 JUN 22 29
OFFIC
HEARING E INER

June 19, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle WA 98104

Dear Sirs:

As the Administrator of St. Peter Hospital, a regional referral hospital in Southwest Washington, I wish to express my support and that of St. Peter Hospital on behalf of the request from Children's Hospital and Medical Center for a permit to build a helistop outside the Emergency Room on the Laurelhurst campus. It is my understanding that only the most critically ill or injured patients land at Children's Hospital and that other patients are transported by ambulance to Children's from other helistops in the Seattle community.

The request from Children's Hospital appears very consistent with 1990 legislation adopted by our State Legislature, authorizing the creation of a State-wide trauma network. Children's Hospital and Medical Center is certainly a very important part of that network and the availability of a helistop at the Hospital site would appear to be of critical value to the Hospital's mission with regard to trauma care.

Our own helipad is located just outside our Emergency Department, and has proven to be a distinct asset in the timely transport of critically ill or injured patients. In as much as Children's Hospital serves our area as well as other areas of the State, I want you to be aware of our support for their request.

Sincerely,

David L. Bjornson/ks

David L. Bjornson
Administrator

DLB/pb

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SISTERS OF PROVIDENCE INSTITUTIONS—ALASKA: PROVIDENCE HOSPITAL, ANCHORAGE—OUR LADY OF COMPASSION CARE CENTER, ANCHORAGE—**WASHINGTON:** PROVIDENCE CENTRAL MEMORIAL HOSPITAL, TOPPENISH—PROVIDENCE HOSPITAL, EVERETT—PROVIDENCE MEDICAL CENTER, SEATTLE—MOUNT ST. VINCENT NURSING CENTER & RETIREMENT APARTMENTS, SEATTLE—ST. ELIZABETH MEDICAL CENTER, YAKIMA—ST. PETER HOSPITAL, OLYMPIA—PROVIDENCE CHEHALIS, CHEHALIS—PROVIDENCE HOSPITAL, CENTRALIA—**OREGON:** PROVIDENCE CHILD CENTER, PORTLAND—PROVIDENCE MEDICAL CENTER, PORTLAND—ST. VINCENT HOSPITAL AND MEDICAL CENTER, PORTLAND—PROVIDENCE SEASIDE HOSPITAL, SEASIDE—PROVIDENCE HOSPITAL, MEDFORD—PROVIDENCE MILWAUKIE HOSPITAL, MILWAUKIE—**CALIFORNIA:** PROVIDENCE HOSPITAL, OAKLAND—PROVIDENCE HIGH SCHOOL, BURBANK—SAINT JOSEPH MEDICAL CENTER, BURBANK.

STATE OF WASHINGTON

TRAUMA ADVISORY COMMITTEE

RECEIVED BY
92 JUN 22 AM 11:28
OFFICE OF
HEARING EXAMINER

June 19, 1992

Office of the Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

Dear Sir:

I was pleased to hear of Children's Hospital plan to build a helipad at their facility. Children's has had an important role of leadership in the critical care of children in Washington State for many years. Their example and the teaching programs and projects that have been generated by their staff have no doubt improved the quality of pediatric care throughout Washington State.

Air transport is a critical element in a comprehensive system of emergency care. The ability to send and receive patients and to utilize an expertly trained staff is absolutely essential to providing optimal care for critically ill children. I was quite surprised to learn that they do not yet have a formal landing zone in proximity to their facility. It is an important issue regarding safety as well as reducing the time to arrival at their facility. All major facilities receiving critical patients via helicopter need to have a formal designation landing zone.

It is quite common that initiating the development of a landing zone is met with community concerns regarding noise and safety factors. This has been the case with many programs as they have developed in our state and across the nation. However, these concerns must truly be of secondary importance when compared to the life saving mission of critical care teams and their air transport vehicles. I have no doubt that your community, given the facts, will embrace this proposal for it will benefit children, our most precious patients, for many years to come.

Sincerely,

James M. Nania M.D.

James M. Nania, M.D., FACEP
Chairman, Washington State Governor's
Steering Committee on EMS & Trauma

cc: John Ness, Administrator
Children's Hospital
4800 Sandpoint Way N.E.
Seattle, Washington 98105

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Jefferson General Hospital

834 Sheridan Avenue · Port Townsend, WA 98368 · (206) 385-2200

June 10, 1992

RECEIVED BY
92 JUN 22 AM 11:29
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

To whom it may concern:

We, the undersigned professional employees of Jefferson General Hospital, strongly support the building of a permanent helipad at Children's Orthopedic Hospital. As a rural hospital, we depend on the ability to airlift critically ill or injured patients to Seattle hospitals. It is imperative that Children's Orthopedic Hospital be one of these resources. These kids don't often have the extra time it takes to off load, on load and transport by ground vehicle. We urge you to hear our voices, and understand the need for this invaluable asset.

Barbara Wilson
Cynthia L Rondeau
Barbara Stephenson RN
Nancy Clough RN
Joanne Reed, RN
E Eplingra
P Hamadeh
E Bop RT
Milly McKeand
Julie Jobe Lee
Kent Johns RN.
Frank McNabb
Gail Brest, RN

Sue Jeffs sew manager
Florida Rueda RN Dir Surgical Services
Cheri Marsh RN
Ruth Burns RN
Margaret Tollefson RN
Mary Olson RN
Irma Worthington, RN
Enid E Offerin RN (OB)
Pamela Stephenson RN
Jill Cooley, RT
Alan Cooley
Theresa RNC (OB)
Jackie Coulter RN
Phyllis McLean
Judy Ellis, RNC (OB)

PET-2.COH

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Olympia Multi-specialty Clinic †

406-A Black Hills Lane SW
Olympia, Washington 98502
(206) 754-1727 FAX (206) 754-1783

June 19, 1992

Office of Hearing Examiner
City of Seattle
1329 Alaska Building
618 2nd Avenue
Seattle, Washington 98104

RECEIVED BY
92 JUN 23 PM 12:54
OFFICE OF
HEARING EXAMINER

TO WHOM IT MAY CONCERN:

I am a physician specializing in the areas of general and vascular surgery and my practice location is Olympia, Washington. Although we have a relatively sophisticated medical community and the appropriate support services in our area, we do have some deficiencies in the category of pediatric care. There are certainly occasional complicated surgical emergencies that arise in which it is definitely in the child's best interest to be transferred to a tertiary care center.

In my practice, I would certainly consider Children's Hospital in Seattle to be one of the tertiary care referral centers that I would utilize. I feel that it is critically important that we have quick access to that hospital and this access is in part dependent on having air transport via helicopter. I strongly support Children's Hospital and Medical Center's application to build a helicopter landing pad outside the emergency room on their Laurelhurst Campus. The presence of such a landing pad might well be responsible for saving a child's life in the future.

Thank you for your attention to this matter.

Sincerely,

David M. Deitz, M.D.
OMC, Vascular and General Surgery

DMD/EMT/ksc

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CARDIOLOGY
Philip W. Berger, D.O.
Phillip E. Jones, M.D.
W. Theodore Steudel, M.D.

GASTROENTEROLOGY
Marshall E. McCabe III, M.D.
Thomas F. O'Meara, M.D.

GENERAL SURGERY
David M. Deitz, M.D.

ORTHOPEDIC SURGERY
Patrick J. Halpin, M.D.

PULMONARY / ALLERGY
J. Waylon Black, M.D.

VASCULAR SURGERY
David M. Deitz, M.D.

RECEIVED BY
92 JUN 22 AM 11:37
OFFICE OF
HEARING EXAMINER

Dear City Officials,

I give my support for the need of a Helistop at CHILDREN'S for the immedate and the adequate delivery of our Children to the Emergancy Room for the Help that they need. 100%. My reason for this is that 1 year ago on June 6th 1991. My family had the very unfortunate need to have the service of a Helicopter that was able to land right at the Emergency Room at

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Children's Hospital. When my son was 2 weeks old he became critically Ill. He started to turn blue and we had to call 911. They were able to get him into an ambulance and get him on oxygen and on the heart monitor. They told me that they would have to helicopter him over to Childrens. We live in Renton so they had to take him to Boeing Feild to meet up with the helicopter. When he got to Children's they gave

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him less than 2 hours to live.
If they would not have had
the helicopter stop at Children's
my son would not have been
Alive and doing as good as he
is now. I feel that he is
Alive today because he was able
to get the best care as fast as
possible by arriving with speed
Thanks to the helicopter. And Yes,
Yes, Yes, they do need to have a
helistop at Childrens to ensure
the adequate and safe delivery
of Emergency medical services

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to our children in the region.

Thank You Again

Sincerely
Eileen M. Hamilton

Mother of Mason M Johnson
Who is Alive Today and
doing Great Thanks the
helicopter Stop at Children's

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Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 1

To Hearing Examiner	From Phyllis Odell
Co. City of Seattle	Co.
Dept.	Phone # 523-5511
Fax # 684-0182	Fax # 526-8092

RECEIVED BY
92 JUN 22 AM 8:42
OFFICE OF
HEARING EXAMINER

3652 50th Ave. N.E.
Seattle, Wa. 98105
June 20, 1991

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Ave.
Seattle, Wa. 98104

Hello:

As a resident of Laurelhurst, I am writing my support of the helistop for Children's Hospital which we are pleased to have within our neighborhood. I feel the adequate and safe delivery of emergency medical services to children in the region is vital and we are very luckly to have people at the hospital with the vision to look into the future. Personally, it would be a comfort to know if my children became ill or seriously injured while on an outing in the Northwest that they could be airlifted to Children's.

Please do not be swayed by the objectioners in the neighborhood. There is a powerful group of people that support no change, no progress, no future, and lobby against Children's, University of Washington, Batelle Northwest, Retirement Homes, new houses, and remodels. They do not believe in the future and are very narrow minded.

I look forward to the long range plans Children's Hospital has made to provide our community with top medical care for our children.

Thank you.

Sincerely,

Phyllis K. Odell

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Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 1

To Hearing Examiner	From Phyllis Odell
Co. City of Seattle	Co.
Dept.	Phone # 523-5511
Fax # 684-0152	Fax # 526-8092

3652 50th Ave. N.E.
Seattle, Wa. 98105
June 20, 1991

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Ave.
Seattle, Wa. 98104

Hello:

As a resident of Laurelhurst, I am writing my support of the helistop for Children's Hospital which we are pleased to have within our neighborhood. I feel the adequate and safe delivery of emergency medical services to children in the region is vital and we are very luckly to have people at the hospital with the vision to look into the future. Personally, it would be a comfort to know if my children became ill or seriously injured while on an outing in the Northwest that they could be airlifted to Children's.

Please do not be swayed by the objectioners in the neighborhood. There is a powerful group of people that support no change, no progress, no future, and lobby against Children's, University of Washington, Batelle Northwest, Retirement Homes, new houses, and remodels. They do not believe in the future and are very narrow minded.

I look forward to the long range plans Children's Hospital has made to provide our community with top medical care for our children.

Thank you.

Sincerely,

Phyllis K. Odell

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My 9 year old daughter drew this political cartoon in response to Brian Basset's in the June 21 Seattle Times. Our homes are being walked on by CHMC's big foot of greed. We do not count.

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REED P. SCHIFFERMAN

RECEIVED BY
92 JUN 18 PM 12:06
OFFICE OF
HEARING EXAMINER

June 17, 1992

Office of Hearing Examiner
City of Seattle
13.0 Alaska Buiding
61f Second Avenue
Seattle, Washington 98104

Re: Helistop at Children's Hospital

Dear Hearing Examiner:

I support the establishment of a helistop at Children's Hospital so critically injured children may be airlifted directly to the best available medical care.

In August 1989 we moved to Laurelhurst (3717 N.E. 44th Street) just a few blocks from Children's Hospital. Even before that time my wife and I were aware of the protest of neighbors of Children's regarding helicopter landings at Children's Hospital. Prior to moving to Laurelhurst we were in favor of helicopter access to Children's Hospital, and our view has not changed even though we now live in the community just a few blocks from Children's.

In an ideal world hospitals would be located in convenient locations far from residential areas and close to population centers where the sound of ambulances and helicopters would not affect local residents. However, this is not an ideal world, and Children's Hospital has long been a part of the Laurelhurst community. That is not going to change.

It is impossible to provide the same level of pediatric services at any other hospital in the Northwest. Children's is uniquely qualified to provide the best care in an emergency setting. There is no question that if my daughter were hurt, I would want her taken to Children's Hospital. I am aware that they not only have an outstanding in-house staff but many private physicians live close to Children's so they can be there in case of an emergency.

1420 Fifth Ave. Suite 4100 Seattle, WA 98101-2338 (206) 223-7000

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We occasionally hear helicopters bringing critically injured children for emergency treatment at Children's. While our home is close to Children's (six blocks), I am sure the noise level at our house does not equal that of neighbors immediately adjacent to Children's. Nonetheless, this relatively infrequent inconvenience seems a small price to pay for the immediate availability of superb medical care for the children of our community. Friends of mine have had their children airlifted to Children's and were thankful that was an option.

It is not a viable solution to ask that all emergency care be delivered at another institution. That is simply not practicable, nor would such a move be cost efficient. Additionally, I am not persuaded by any claims regarding safety of neighbors due to a helicopter crash; that does not seem to be a realistic concern.

My perspective on the situation has not changed since before I moved to Laurelhurst. The convenience of a few neighbors of Children's is far outweighed by the need to provide emergency medical care to critically injured children who cannot safely be transported from the alternative helicopter site at the University of Washington intramural field. Under circumstances when minutes make a difference, we all wish to have the best immediate medical care available to our children, which in the Northwest is best provided at Children's Hospital.

Very truly yours,

Reed Schifferman

Reed P. Schifferman

RPS:jlb

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OFFICE OF
HEARING EXAMINER

June 11, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 2nd Avenue
Seattle, WA. 98104

To Whom It May Concern,

It has recently come to my attention that Children's Hospital Medical Center is seeking a permit from the City of Seattle to build a helicopter landing pad outside the emergency room of the lower hospital campus. I would just like you to be aware of the fact that this would be a very valuable asset to our pediatric emergency medical network. I am a pediatrician that works at St. Peter Hospital in Olympia, and some of our complex and surgical emergencies are transported by helicopter to Children's. In the situation where a neonate or child is critically ill, a matter of minutes can make a difference in their survival. I think that having a helicopter landing pad at Children's would be a big asset to the health care of children in our state.

Respectfully yours,

Dana M. Petersen, M.D.
Memorial Clinic, Pediatrics

DMP/am

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Main Office • 500 Lilly Rd. N.E., Olympia, WA 98506 • (206) 456-1122
Southeast Lacey Office • 5130 Corporate Center Ct., Lacey, WA 98503 • (206) 456-2488
West Olympia Office • 406 Yauger Way S.W., Suite 1, Olympia, WA 98502 • (206) 754-6005

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HEARING EXAMINER

CARDIOLOGY

William P. Brennan, M.D.
William A. Gavin, M.D.
David H. Schoening, M.D.
Robert S. Wark, M.D.
Cardiac Electrophysiology
Craig J. Wehrli, M.D.

DERMATOLOGY

J. Mark Bauer, M.D.
James L. Brazil, M.D.

ENDOCRINOLOGY

Kenneth A. Boldt, M.D.

FAMILY PRACTICE

Main Clinic
Karri K. Chinn, M.D.
Edward G. Laclergue, M.D.
Thomas F. Rafferty, M.D.
Martin J. Scheidt, M.D.
Southeast Tacey Office
Lorne E. Bigley, M.D.
Beth M. Moore, M.D.
Martin J. Scheidt, M.D.
Westside Office
Dirk F. Havlak, M.D.
Dennis W. Peck, M.D.

GASTROENTEROLOGY

F.A. Griesman, M.D.
James F. Kruidenier, M.D.
William J. Mitchell, M.D.
Bruce A. Silverman, M.D.

GYNECOLOGY

Roger W. Carnes, M.D
Infertility
Wayne M. Parpala, M.D.
Gynecologic Urology

INTERNAL MEDICINE

Virginia R. Cannon, M.D.
David L. Fairbrook, M.D.
James S. Edstam, M.D.
Edward L. Jansen, M.D.
Sarah A. Lux, M.D.
Carl R. Ott, M.D.
Richard F. Williams, M.D.

NEPHROLOGY

Vo D. Nguyen, M.D.
Owen G. Reese, M.D.
Robert C. Tomford, M.D.

NEUROLOGY

Lewis B. Almaraz, M.D.
Adult and Child
James R. McDowell, M.D.
Christine R. Wells, M.D.

OBSTETRICS, GYNECOLOGY AND INFERTILITY

James L. Gadbaw, M.D.
Marilyn Darby Gage, M.D.
Maternal-Fetal Medicine
James L. Power, M.D.
Laurie T. Sorenson, M.D.
William G. Sprake, M.D.

ONCOLOGY

Harry S. Griffith, III, M.D.
Lonnie Harper, M.D.
James J. Lechner, M.D.

ORTHOPEDICS AND ORTHOPEDIC SURGERY

Franklin T. Paudler, M.D.
Adult Spine Surgery
William W. Peterson, M.D.
Sports Medicine
Dennis E. Smith, M.D.

OTOLARYNGOLOGY

Ear, Nose and Throat
Head and Neck Surgery
Patricia A. Gilmer, M.D.
Facial Plastic Surgery
Leonard L. Hays, M.D., F.A.C.S.

PEDIATRICS

Karen K. Fukui, M.D.
Carl A. Lindgren, M.D.
Cole V. Mason, M.D.
Lin S. O'Leary, M.D.
Dana M. Petersen, M.D.
Edward W. Steinweg, M.D.

PULMONARY DISEASES

Rex W. Bolin, M.D.
John L. Brottem, M.D.
Katherine M. Hogg, M.D.
Robert L. Huck, M.D.

SURGERY

General, Thoracic and Vascular Surgery
Louis Gevirtzman, M.D.
Chris N. Griffith, M.D.
John T. Hairston, III, M.D.
James L. Reus, M.D.

UROLOGY

John H. Farrer, M.D.
Patrick Soles, M.D., F.A.C.S.

ANCILLARY SERVICES

Ambulatory Surgery
Audiology
Marilyn-Loy Every, M.S.A.
Mary C. Reno, M.A.
Laboratory
Neuro Diagnostic Laboratory
Outpatient Chemotherapy
Radiology
Consultants - Olympia
Radiological Associates
Vascular Laboratory

ADMINISTRATION

William A. Lauta, MBA
Carl A. Lippert, MHA

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RECEIVED BY
92 JUN 18 PM 12:05
OFFICE OF
HEARING EXAMINER

5029 40 Ave. NE
Seattle, WA. 98105
June 16, 1992

Office of the Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Ave
Seattle, WA. 98104

Greetings:

This is to urge you to approve the construction of a helistop at Children's Hospital in order that emergency medical care may be provided to sick or injured children with no delay. A few seconds can be an eternity to one in pain or danger. There is no excuse for interrupting and traumatizing these patients en route to care.

I have lived within a block of Children's Hospital for over seven years and have never been disturbed by the helicopter. Even if I had been, I would consider it a small sacrifice to assure the timely delivery of care to a sick or hurting child.

I do not believe the helicopter poses any more danger to me by falling out of the sky than do various other aircraft which I observe overhead.

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I have no patience nor sympathy for those in the community who would place their own comfort above that of a sick or injured child.

Please approve the construction without further delay.

Sincerely,

Jane A. Dahm

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SOL DUC CLINIC

P.O. BOX 1918 • FORKS, WA 98331 • PHONE: (206) 374-6642

KEITH DOBYNS, D.O.
Family Practice

RICK DICKSON, M.D.
Family Practice

GERALD WILLIAMSON, P.A.-C.
Physicians' Assistant

RECEIVED BY
92 JUN 18 PM 12:05
OFFICE OF
HEARING EXAMINER

June 4, 1992

Office of the Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sir or Madam:

I am writing in regards to the Children's Hospital and Medical Center's request for a heli-port near the emergency room of the hospital. I am a family physician working in Forks, Washington, a rural community out on the coast, and we routinely have to fly very sick or injured infants and children to Children's Hospital for specialized treatment. On at least three occasions in the last two to three years, I have had children that were in such severe condition that any unnecessary handling or transfer of the child by ambulance would have been very detrimental or possibly fatal to the child. I understand that one of the concerns of the Laurel Hearst Community is the noise that the helicopters do produce. I can tell you from personal experience here in Forks that one of the more welcome sounds we ever hear when we are having a battle for some child or adult's life is the sound of the helicopter coming overhead. I beseech the Laurel Hearst Community and the Seattle Planning Committee to allow Children's Hospital to have a heli-port at the emergency room of the hospital.

Sincerely,

Rick Dickson, M.D.

RD/hb

cc John Neff, M.D., Medical Director
Children's Hospital and Medical Center
4800 Sand Point Way N.E.
P.O. Box C5371
Seattle, WA 98105-0371

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June 15, 1992

RECEIVED BY
92 JUN 18 PM 12:04
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
Seattle, WA. 98104

To Whom It May Concern:

It is our understanding that Children's Hospital is seeking a permit from the city of Seattle to build a helicopter landing pad outside the COH Emergency Department to facilitate the timely receipt of critical children. For this reason, we are writing to formally support Children's request for a helipad.

In November 1988 our 22 month old daughter developed a "rapid onset" form of Haemophilus influenza B meningitis. Within 12 hours from the beginning of a fever and vomiting she was unresponsive and nearly comatose. After the decision to transport her to Children's was finalized, she began deteriorating so fast that the ground transport team from Children's was canceled enroute and the Airlift NW team dispatched. Enroute to Children's from Valley Medical Center, Rae-Ann's blood pressure disappeared and she respiratory and cardiac arrested. Her little body turned a deep purple as the full brunt of the profound septic shock took effect. She began concurrently bleeding from every orifice and producing dangerous blood clots due to a condition called Disseminated Intravascular Coagulation . It is my understanding that the cerebral spinal fluid that bathes the spinal cord and brain was so thick it resembled what you call pus. (Normally CSF is a thin, clear, light amber fluid.) A mid-air decision was made to land the helicopter outside Children's Emergency Department as the Flight Nurse and resident physician were barely able to keep Rae-Ann alive throughout the transport.

When my husband and I arrived at Children's an hour later we were told to begin preparing and accepting that Rae-Ann would die by morning due to the extreme pressure inside her head, the profound septic shock that her vital organs were enduring and the bleeding/clotting problem. It was stated, that on the outside chance she survived the night, she would remain in a permanent vegetative state. You can surely imagine the pain and sorrow shared by a mommy and daddy as we watched that sweet baby girl slipping away.

Thankfully, the Intensive Care staff did not stop fighting for Rae-Ann's life even though they were certain she was dying. After more crises and much work, Rae-Ann became one of Children's "miracle" children. Two weeks after this ordeal began, she was discharged home. Today, at 5 and a half, she is without any residual affects. We all know that every minute that was saved and every opportunity seized contributed to the remarkable recovery of our daughter. We appreciate so much the willingness of the Airlift team to make an unpopular decision and do what, in their professional opinion, was most likely to give our daughter a chance.

Please, please consider the long term impact of your decision on the lives of the children and their families who are critical enough for direct transport to COH. Your decision has life saving potential! Thank you.

Most Sincerely Yours,

Jeffrey W. Mitchell

Jeffrey W. Mitchell

Wendy S. Mitchell

Wendy S. Mitchell, RN, BS, CEN
former Nurse Manager,
UWMC Emergency Medicine Service

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Olympic Memorial Hospital

939 Carcline
Port Angeles, WA
98362

(206) 457-8513

Public Hospital
Dist. No. 2 of
Clallam County

RECEIVED
'92 JUN 18 PM 12:03
OFFICE OF
HEARING EXAMINER

June 11, 1992

Office of Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

To Whom It May Concern:

We are a group of obstetrical and neonatal nurses working at Olympic Memorial Hospital in Port Angeles, Washington.

We are dependent on Children's Hospital to provide newborn emergency services, long-term life support, and surgical services unavailable on the Olympic Peninsula. Each one of us has been involved in the resuscitation of sick newborns and the subsequent transfer by helicopter to Children's Hospital. We have seen, firsthand, the need for prompt, intensive treatment, where the delay of even a few minutes can be life threatening to an infant. We know from experience how difficult transporting sick newborns can be, and how each additional movement (i.e., from a helicopter to an ambulance) can complicate the care and delay treatment. Keeping an IV and an ET tube properly placed in a sick newborn is difficult enough in the nursery let alone through several stages of transport!

Our families deserve the best care possible--we urge you to approve the building of the helistop pad at Children's Hospital.

Elizabeth Snodmaker RN
Nancy Watson RN
Stacy L. McClure
Norma L. Cooper RN
Gloria J. Phillips RNC
Cindy Truman RN

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KITSAP COUNTY FIRE PROTECTION DISTRICT NO. 1

10955 SILVERDALE WAY N.W. • SILVERDALE, WASHINGTON 98383 • PHONE (206) 692-2551

COMMISSIONERS:
THEODORE C. ANDERSON
MICHAEL D. McKINLEY
GRAHAM KENT

FIRE 1942 50th Anniversary 1992 DEPT.

FIRE CHIEF:
RICHARD E. WEST
ASSISTANT FIRE CHIEF:
ROY E. LUSK
EXECUTIVE SECRETARY:
JOY SQUIRE GRINDELAND

RECEIVED BY
92 JUN 18 PM 12:03
OFFICE OF
HEARING EXAMINER

June 17, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Kitsap County Fire District #1 would like to voice its support for construction of a helistop at Children's Hospital and Medical Center. Due to the unavailability of a pediatric medical facility on the Kitsap Peninsula, the need for rapid access to one geared for critically ill or injured kids is paramount to we here in Kitsap County.

Helicopter transport saves an ambulance trip by road or ferry of over an hour. This time frame drastically reduces a critically injured child's chance of survival and recovery.

Kitsap County Fire District #1 encourages the city of Seattle to maintain its leadership role in emergency health care in the United States by accomodating rapid access to its own medical facilities. Any disadvantage or minor inconvenience caused by this helispot is surely miniscule in comparison to the potential number of children's lives saved. Please help us do our jobs on behalf of those kids.

Thank you for your consideration and approval.

Sincerely,

Gary Eddings

Gary Eddings
Battalion Chief
KCFD #1 Medic 1

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AFFILIATED

HEALTH SERVICES

Skagit Valley Hospital
United General Hospital

RECEIVED BY
92 JUN 17 PM 12: 22
OFFICE OF
HEARING EXAMINER

June 10, 1992

To Whom It May Concern:

The value of helicopters in treating and transporting critical patients has clearly been established. Since a plan to minimize environmental impacts on surrounding areas is already in place, the installation of a helistop would serve to ensure the safe transport of the children who critically need to be sent directly to Childrens.

Affiliated Health Services utilizes both Airlift Northwest and Med Flight from Bellingham depending on certain variables. This helistop would be valuable for the helicopter transports from AHS, the Islands and surrounding Puget Sound area.

We applaud your endeavor and extend our support.

Sincerely,

Patrick Mahoney
Chief Executive Officer

Diane Speer

Diane Speer, RN
Director Emergency Services

Ron Richeson

Ron Richeson
Skagit County EMS
Medical Control

C:\WP51\BARB\SPEER.LTR

P.O. BOX 1376
MOUNT VERNON
WASHINGTON
98273-1376

Skagit Valley Hospital
206-424-4111
United General Hospital
206-856-6021

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VOLUNTEERS
OF
KING COUNTY FIRE DISTRICT NO. 2, INC.
15100 EIGHTH AVENUE S.W. SEATTLE, WASH. 98166
BUSINESS PHONE 242-2040

RECEIVED BY
92 JUN 17 PM 12:19
OFFICE OF
HEARING EXAMINER

June 15, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

RE: Children's Hospital Helicopter Landing Pad

King County Fire District #2 Volunteers wish to express our support for the helicopter landing pad outside the emergency room on the Laurelhurst campus.

As a group that provides emergency aid to many individuals, we realize how important it is to have rapid transport to advanced medical services. Since Children's Hospital provides such specialized medical services to such an important and precious segment of our society, we feel that it is vitally important to approve the landing pad.

It is our understanding that the landing pad would only used in most critical cases when the time savings are important. When helicopters are used in this manner, it should result in minimal disruption and impact to the surrounding areas. The extra time involved in existing transfer at the University of Washington, the extra transport crew combined with additional hazards of one extra run would be eliminated.

The landing pad could also be an advantage in the event traffic is at a standstill or in the event of a natural disaster.

Thank you for your consideration,

Michael M. Fitz
Secretary, Volunteers of King County Fire District #2.

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Peninsula Children's Clinic
902 E. Caroline Street
Port Angeles, WA 98362

Infants, Children, Adolescents

Phone: 457-8578

- EUGENE F. TURNER, M.D., F.A.A.P.
- JAMES E. MANTOOTH, M.D., F.A.A.P.
- JOHN D. WEGMANN, M.D., F.A.A.P.
- MADELINE HARRINGTON, M.D., F.A.A.P.
- OTERO FLOWERS, M.D., F.A.A.P.

RECEIVED BY
92 JUN 17 PM 12:19
OFFICE OF
HEARING EXAMINER

June 15, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Members of the Hearing Examiners Office:

This letter is being written in support of the Helipad at Children's Hospital and Medical Center. This letter represents my second input in support of this effort, as I have already spoken before members of the Seattle City Council at the Council Chambers several years ago, on behalf of the Children's Hospital and we, rural practitioners, who use the facility regularly. For the first ten of the twenty-two years that I have lived in Port Angeles, we were personally escorting our sick newborns and other critically ill patients to Children's Hospital by Coast Guard helicopter. These transports were risky at best. I can recall at least two critically ill newborns who died while enroute to Children's Hospital, and one who died enroute from the football practise field to the Hospital in the ambulance. Having experienced these traumatic events, I can appreciate the need for the critical few minutes that are saved by direct transport to the Hospital. One extremely important point that I would like to make is that Children's Hospital has been in its present location for approximately forty years. One reason that the hospital was relocated in that place was that it was much less densely populated than in its former location. This means that probably the majority of those persons who live in the adjacent area have moved there subsequent to its arrival. The importance of this fact is that the Hospital should be given top priority in allowing it to update its facilities and services, which include its availability to critically ill patients. It would seem that the relative infrequency with which the proposed flights would arrive at this Helipad, would be a small inconvenience to the adjacent residents when compared to the life-saving nature of the event. Yet another factor to be considered into the formula, is the fact that the additional costs of landing at the football field and transferring the patients to an ambulance are not trivial.

In conclusion, I would think that it would be quite ludicrous to deny the Hospital this facility under the circumstances, and would ask that you think of the critical nature of the service, and give your whole hearted endorsement to this endeavor. I speak not only for myself, but

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for the other members of my Pediatric group, and all physicians who utilize Children's Hospital and Medical Center in our area.

Most respectfully yours,

Eugene F. Turner, M. D.

EFT:hew

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NORTHWEST REGIONAL
EMERGENCY MEDICAL SERVICES
AND TRAUMA CARE COUNCIL

RECEIVED BY
92 JUN 17 PM 12: 18
OFFICE OF
HEARING EXAMINER

June 16, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, Wa 98104

Dear Hearing Examiner:

I am writing this letter to speak in favor of Children's Application for a helicopter landing pad on the Laurelhurst campus. There is a definite need for this helistop. Time is one of the major factors working against a trauma victim as well as victims of medical illness and burns. For a child from Neah Bay who faces a wait of forty-five minutes for the helicopter to fly from Seattle to Neah Bay and then another forty-five minute flight back to Children's a few minute delay can mean the difference not only between life and death but, also possibly a life of disability.

The delay of landing else where and ground transporting an individual may not be a factor to those living in the Seattle area. But, to those living in the remote areas of the State every delay is another strike against them. The common response to this statement is that people choose where they live. There are children from Seattle who become injured in the remote areas of the State and they are then flown to Children's. They then face the same delays that the child from Neah Bay faces.

With emotions set aside it still makes sense to put the efforts into that which has the highest return, with a survival rate of 73% those children flown to Children's are a valuable resource. Therefore the request from Children's is one we of rural EMS firmly support and urge you to find in favor of Children's.

If you have any questions or desire any additional information please call me at (206)-479-5631 thank you for reviewing my letter.

Sincerely,

Mark Bowes

Mark J. Bowes, Planner/Coordinator

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(206) 479-5631 4841 Auto Center Way, Suite 202, Bremerton, WA 98312 FAX: (206) 479-5772

Peninsula Children's Clinic
902 E. Caroline Street
Port Angeles, WA 98362

Infants, Children, Adolescents

Phone: 457-8578

- EUGENE F. TURNER, M.D., F.A.A.P.
- JAMES E. MANTOOTH, M.D., F.A.A.P.
- JOHN D. WEGMANN, M.D., F.A.A.P.
- MADELINE HARRINGTON, M.D., F.A.A.P.
- OTERO FLOWERS, M.D., F.A.A.P.

June 15, 1992

RECEIVED BY
92 JUN 17 PM 12:18
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

To Whom It May Concern:

I am writing this letter in support of Children's Hospital and Medical Center's request to build a helicopter landing pad outside of their emergency room on the Laurelhurst Campus. I am a pediatrician who has been in private practice in Port Angeles on the Olympic Peninsula for the past eight years. During that time, I have had many occasions to refer critically ill or injured children to Children's Hospital. It is my understanding that Children's Hospital will land only the most critically ill or injured children at this proposed helipad, but there have been occasions where literally minutes will make a difference between life and death for a child who is in this critical condition.

I hope you will remember the children of the Olympic Peninsula when considering this permit.

Thank you very much for your attention to this matter.

Sincerely yours,

Madeline Harrington MD

Madeline Harrington, M. D.

MH:hew

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Grays Harbor Community Hospital
Community East • 1006 North H Street • Aberdeen, Washington 98520 • 206-533-0450
Community West • 915 Anderson Drive • Aberdeen, Washington 98520 • 206-532-8330

OFFICE OF
HEARING EXAMINER

June 15, 1992

RECEIVED BY
92 JUN 17 PM 12:18
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

To the Attention of The Hearing Examiner:

Those of us who work at Grays Harbor Community Hospital know how important Children's Hospital & Medical Center has become as the leader in the Northwest for services to the most critically ill and injured children throughout the region.

We strongly support the approval of a permit from the City of Seattle to build a helicopter landing pad, or helistop, outside the Emergency Room on the Laurelhurst campus. Everything that can be done to ensure the approval of this permit needs your serious attention. We at Grays Harbor Community Hospital endorse and support the development of this landing pad and the very important work of Children's Hospital & Medical Center.

Sincerely,

Michael Madden
Administrator

MM/jb

cc: Treuman Katz, President & CEO
Children's Hospital & Medical Center

John Neff, M.D., Medical Director
Children's Hospital & Medical Center

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RECEIVED BY
92 JUN 17 PM 12:17
OFFICE OF

King County Fire Chiefs Association

June 12, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Bldg.
618 Second Avenue
Seattle, WA. 98104

RE: Children's Hospital & Medical Center/Helicopter Landing Pads

Dear Sirs:

On behalf of the King County Fire Chiefs' Association, we would like to express our support for the building of a helicopter landing pad outside the emergency room at Children's Hospital Laurelhurst Campus and the improvements to the helistop located at the University of Washington Intramural Field.

After reviewing this issue, there is simply no compromise when this type of transport is necessary to save the critical time that is needed in life and death incidents or critically ill or injured children. This time is saved only if the landing sites are strategically located next to an emergency room.

The compromise proposal that has been ironed out between the citizens of Laurelhurst and Children's Hospital to minimize the adverse effects of emergency helicopter transport addresses the community's concerns about noise, safety and frequency of flights yet still provides for the rapid transportation of critically ill or injured children. We feel strongly that this proposal will improve the level of critical care available to the children living or visiting in the Puget Sound area and Olympic Peninsula and increase their chances of survival. We highly support this proposal

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Members of the King County Fire Chiefs' Association strongly urge you to approve the permit requests for these helistop sites.

We appreciate your careful consideration of this matter.

Sincerely,

James X. Davis, President
King County Fire Chiefs' Assoc.

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Children's
Hospital & Medical Center

RECEIVED
JUN - 2 1992
King County
Fire District #36

May 28, 1992

James Davis, Chief
King County Fire District #42
P.O. Box 2324
Woodinville, WA 98072

Dear Chief Davis:

We need your help! Children's Hospital and Medical Center is seeking a permit from the City of Seattle to build a helicopter landing pad, or helistop, outside the Emergency Room on the Laurelhurst campus. City officials are nearing key decisions about our request. We are writing to ask for your support.

Since the early 1970's, some critically ill and injured children have required transport by helicopter to Children's Hospital in emergencies. Most requests for emergency helicopter transport of patients to Children's come from community hospitals and physicians in the Puget Sound area or Olympic Peninsula. Air transport by helicopter is one very important component of the regional emergency medical care response system. Complex surgical emergencies, overwhelming infections, and near drownings represent a few of the conditions where every moment lost increases the risk of death to a child.

In order to minimize the impacts of the community, only the most critically ill or injured patients land at Children's Other patients determined able to withstand delay and movement are landed at the University of Washington Intramural Field and are transported by ambulance to Children's. Please refer to the enclosed fact sheet for further information on the need for the helistop at Children's.

If you have reason to support the need for Children's to construct a helistop to ensure the adequate and safe delivery of emergency medical services to children in the region, please write a letter of support and send it by June 23, 1992 to:

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104
Fax Number: 206/684-0182

4800 Sand Point Way N.E. P.O. Box 5371 Seattle, Washington 98105-0371 (206) 526-2000

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Children's
Hospital & Medical Center

Helistop Proposal
Facts in Brief

CHILDREN'S HOSPITAL IS SEEKING A PERMIT FROM THE CITY OF SEATTLE TO BUILD A HELICOPTER LANDING PAD, A HELISTOP, OUTSIDE THE EMERGENCY ROOM ON THE HOSPITAL CAMPUS.

History
The permit was applied for in 1984. The City Department of Construction and Land Use (DCLU) required the preparation of an Environmental Impact Statement (EIS) to evaluate the noise and safety issues associated with construction and operation of the proposed helistop. The Draft Environmental Impact Statement was published in 1986; comments on and revisions to the draft followed. The final EIS was published in April 1991.

During preparation of the EIS, emergency helicopter landings, which began occurring at Children's in the 1970s, have continued on a grass plot just outside the Emergency Room.

Landing Sites
Several helicopter landing locations were examined in the EIS as alternatives. Although the best alternative from a patient care perspective would be to land all critically ill or injured children destined for Children's Hospital by helicopter directly at the Hospital, a compromise has been implemented.

In order to minimize impacts on the local community, only the most critically ill or injured children are brought by helicopter to Children's campus. Other critically ill or injured children, determined by the medical transport team to be able to withstand the time delay and ground ambulance transport to Children's, are brought by helicopter to the University of Washington Intramural Field, Harborview, or Boeing Field. A permit application for an improved helistop at the University of Washington Intramural Field has been submitted.

Frequency of Landings
Through 1995, an estimated average of 15 to 21 children each month may need emergency transport to Children's Hospital by helicopter. It is estimated that each month an average of 3 to 5 of these 15 to 21 children will need to land directly at the helistop at Children's.

Need
Helicopter transport directly to Children's Hospital can be life saving in the most critical cases because it reduces transport time to the Hospital and the number of times a patient must be moved. Complex surgical emergencies, overwhelming infections and near drownings are examples of conditions where immediate advanced medical care can make the difference between life and death.

Airlift Northwest is a regional air ambulance service, founded by Seattle hospitals including Children's. Airlift Northwest operates medically equipped airplanes and helicopters staffed by flight teams specially trained to provide critical care aboard aircraft. Most requests for helicopter transport are from paramedics in the field or community hospitals in the Puget Sound area and the Olympic Peninsula.

Outcome
Review of the cases of critically ill or injured children transported by helicopter directly to Children's Hospital shows that their survival rate has improved over the past several years. Of the 141 patients flown to Children's between August 1985 and March 1989, in 60 percent of the cases the emergency condition was successfully treated and the child was discharged from Children's Hospital. In 40 percent of the cases, the child died. However, of the 166 patients transported to Children's between June 1989 and December 1991, 73 percent survived and 27 percent died.

4800 Sand Point Way N.E. P.O. Box 5371 Seattle, Washington 98105-0371 (206) 526-2000

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Our sincere thanks for your interest in this issue and your support. If you have any questions, please do not hesitate to call Suzanne Petersen, Director of Government Affairs, at 206/526-2530 for more information.

Sincerely,

Treuman Katz
President and CEO

John Neff, M.D.
Medical Director

TK:JN:mml

Enclosure: Facts in Brief

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Helicopter Transport and Landing Decisions
The decision to transport a patient by helicopter to Children's Hospital, or any other hospital, is made by the referring hospital physician or by the paramedic responding at an accident site.

The decision to land a child destined for Children's Hospital directly on the Hospital campus, or at one of the alternate locations, is made by the Airlift Northwest medical team aboard the helicopter. The decision is made according to each child's medical needs.

Cost
Helicopter transport is generally more expensive than ground ambulance, but it is sometimes necessary to save time, and, therefore, lives. Insurance companies and Medicaid reimburse for emergency helicopter transport.

Safety
Based on national helicopter accident statistics, in the worst case scenario an accident would be expected to occur once for every 14,184 transports to Children's Hospital, or once every 59.1 years. Airlift Northwest has an outstanding patient care and flight safety record. Properly constructed helistops at Children's and the UW Intramural Field are needed to provide for maximum safety.

Noise
Noise and vibration from helicopter landings at Children's has been evaluated for the EIS and found to be within regulatory limits. The highest outdoor maximum sound level of a helicopter was found to be 84 decibels at the closest residential location. Typical outdoor sound levels in urban residential areas are between 75 to 85 decibels due to vehicles such as trucks or buses. At night, when less than 25 percent of the estimated average 3 to 5 monthly landings are expected to occur, residents closest to the hospital and patients in the hospital could be awakened by the helicopter noise.

Noise from emergency equipment necessary to protect the health, safety or welfare of the community is exempt from the Seattle Noise Ordinance.

Mitigation Efforts
In order to minimize potential adverse environmental impacts on the surrounding neighborhoods and accommodate safe, effective helicopter transport, Children's Hospital has:

- Implemented the compromise proposal to land only the most critically ill or injured children directly at the Hospital campus;
- Agreed to the creation of a medical review panel to monitor landings at the on-campus helistop;
- Developed with Airlift Northwest flight paths and approach, landing, and departure procedures to minimize noise and maximize safety;
- Monitored Airlift Northwest safety programs and developed procedures for providing security at the proposed helistop and responding in the case of an accident.

Footnote: Most information in this Facts in Brief is contained in the Final Environmental Impact Statement.

April 1992

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King County Fire Commissioners Association

12923-156TH AVE. S.E., RENTON, WA. 98059

June 4, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Bldg.
618 Second Avenue
Seattle, WA. 98104

RE: Children's Hospital & Medical Center/Helicopter Landing Pads

Dear Sirs:

On behalf of the King County Fire Commissioners Association, we would like to express our support for the building of a helicopter landing pad outside the emergency room at Children's Hospital Laurelhurst Campus and the improvements to the helistop located at the University of Washington Intramural Field.

After reviewing this issue, there is simply no compromise when this type of transport is necessary to save the critical time that is needed in life and death incidents or critically ill or injured children. And this time is saved only if the landing sites are strategically located next to an emergency room.

The compromise proposal that has been ironed out between the citizens of Laurelhurst and Children's Hospital to minimize the adverse effects of emergency helicopter transport addresses the community's concerns about noise, safety and frequency of flights yet still provides for the rapid transportation of critically ill or injured children. We feel strongly that this proposal will improve the level of critical care available to the children living or visiting in the Puget Sound area and Olympic Peninsula and increase their chances of survival. We highly support this proposal.

Members of the King County Fire Commissioners Association strongly urge you to approve the permit requests for these helistop sites.

We appreciate your careful consideration of this matter.

An Association of taxing districts dedicated to progress in fire prevention and life saving emergency medical service

TOTAL P.01

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Sincerely,

KING COUNTY FIRE COMMISSIONERS ASSOCIATION

Don Leggett

Don Leggett
President

cc: Children's Hospital & Medical Center
King County Fire Chiefs Association

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RECEIVED BY
92 JUN 16 AM 11:01
OFFICE OF
HEARING EXAMINER

3527 46th Ave NE
Seattle Wn 98105

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Ave
Seattle Wn 98104

Dear Hearing Examiner:

We reside in Laurelhurst, near Children's Hospital. We have followed fairly closely the dispute over the request by Children's for authority to build a helipad, and the reports of the use of the existing facilities. We are satisfied that the current use of facilities is reasonable and prudent, and not an unreasonable intrusion into the surrounding neighborhood. We support the city granting a permit to Childrens's for constuction of a helipad at the hospital, subject to the current restrictions limiting landings at the hospital to those in which the most critically ill patients are taken directly to the hospital and less critical patients are landed at other facilities for transfer to Children's.

Very truly yours,

Donald B. Myers

Donald and Pamela Myers

Pamela R Myers

June 14, 1992

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Seattle City Council

RECEIVED BY
92 JUN 10 PM 3:11
OFFICE OF
HEARING EXAMINER

June 9, 1992

D.W. Jackson
6826 - 32nd NE
Seattle, WA 98115

Dear D.W.:

Thank you for your letter regarding the proposed helicopter landing at Children's Hospital.

Because the City Council functions like a judge rather than a legislative body on many land use issues, Councilmembers are governed by the Appearance of Fairness Doctrine. This legal requirement precludes them from reading letters, responding to telephone calls or being lobbied on individual projects. If they do, they risk prejudicing themselves before all relevant facts are determined and losing the right to vote on the project if it comes before the council.

This issue will appear before the Hearing Examiner on either the 23rd or 24th of June. I have forward a copy of your letter to the Hearing Examiner so that your input will be entered into the record.

Since this project is currently under administrative review with the possibility of future appeal to the Council, these rules apply. Therefore, I am responding for Councilmember Donaldson, as well as the other Councilmembers, to your letter and will try to keep you apprised as to the status of this issue.

Please feel free to call me at 684-8806 if you have any questions.

Sincerely,

Paula Hoff

Paula Hoff
Council Assistant to
Councilmember Sue Donaldson

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June 9, 1992

[redacted]

Seattle City Council
600 4th Ave.
Seattle, WA. 98104

ALL COUNCIL MEMBERS
RECEIVED THIS MATERIAL

This letter raises an objection to the DCLU recommendation for approval of helicopter landings at Children's Hospital.

Public opinion has been previously expressed on this issue which was one of overwhelming disapproval. Media hype at that time which has been reborn failed to overcome the public desire for no further noise polution and for safety of the neighborhood from possible aircraft failure as well as other adverse affects.

Present landing arrangements have been adequate so far as I know. I am not aware of any deaths or serious results directly caused by lack of a helistop atop the hospital.

The question arises of who would determine that point of need where the hospital landing would be selected over the UofW helistop. How many other hospitals will require this addition?

DCLU, according to a recent report, has been ineffective of zoning regulations at the expense of the homeowner. The answer to the problem is to change the regulations.How would misuse of the proposed heliport be handled?

This letter requests your involvement in this public issue and your recommendation against the proposal. Noise polution, interruption for hospital patients, distraction for medical personnel and disruption for public in general must be considered for doubtful gain.

Sincerely,

D.W.Jackson
6826 32nd NE
Seattle, WA. 98115

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4754 44th Ave. NE
Seattle, WA 98105
June 12, 1992

RECEIVED BY
92 JUN 15 PM 12:12
OFFICE OF
HEARING EXAMINER

Meredith Getches - Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Ms. Getches:

I am writing in regards to the Director's recommendation on the conditional approval of Council Conditional Use of the emergency helistop at the Children's Hospital and Medical Center Campus. I applaud many of the recommendations made in the Director's Report regarding this matter. However, I also feel that some issues remain to be addressed. Of specific concern to me are the following:

The Director's Report has not considered other options such as use of the landing pad at Harborview and the trauma center which already exists there. It has also not examined what sort of precedent is being set for the low-income neighborhood surrounding Providence Hospital - the only other hospital which is a member of the Airlift NW consortium which doesn't have a helistop, and the only other hospital in this consortium which is located in a residential neighborhood.

The Citizen Oversight Panel is a wonderful idea. As it is currently constituted in the Director's Report, however, it would be composed only of staff from Children's Hospital. This panel needs to be composed equally of CHMC staff members and impacted citizens. Among the non-CHMC members of the staff need to be outside physicians whose financial well-being is not controlled by CHMC. This panel also needs to be kept in effect as long as the helipad is in operation, and needs to meet more frequently than twice a year. This is especially essential in light of the fact that neighborhood monitorings of current helicopter landings shows a discrepancy with the figures used by CHMC, with CHMC appearing to under-report the number of landings made per month.

Serious consideration needs to be given to the siting of the proposed helipad. The current helipad location will become obsolete once the Master Plan for the CHMC campus is enacted. I suggest that the helipad be approved on a conditional basis until the Master Plan is finalized and approved.

Two other items that do not appear to have been taken into consideration when the Director's Report was written are 1) No test take-offs and landings were conducted to verify the actual noise level and impact on the surrounding neighborhood and schools. 2) Once approved, the City of Seattle will have no air-right controls over the helipad and will thus lose all control over the helipad to the FAA. Is the City of Seattle willing to relinquish this control?

I will be out of state on June 23 and 24 when your Office

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hears this issue. This is why I have written such a lengthy letter explaining my position about this issue. I would appreciate it if you would send me a notice of the Hearing Examiner's recommendation and send it to me at the above address. Thank you for your attention to all of this.

Sincerely,

Dorothy M. Rowe

Dorothy M. Rowe

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11 June, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle WA 98104

Dear Sir or Madame:

I strongly support the Children's Hospital Medical Center plan to construct a helicopter landing pad outside their Emergency Room.

As a pediatrician practicing in the Olympia area, I have had patients that have required emergent transport by helicopter to the Children's Hospital. One child, who had a brain tumor, I am convinced would not be alive today if it were not for the prompt response made possible by this service.

I, therefore, strongly support approval for the permit to build a helicopter landing pad at Children's Medical Center.

Respectfully submitted,

Carl A. Lindgren

CARL A. LINDGREN, M.D.
Dept of Pediatrics

CAL/ms

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West Olympia Office • 406 Yauger Way S.W., Suite 1, Olympia, WA 98502 • (206) 754-6005

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William P. Brennan, M.D.
William A. Gavin, M.D.
David H. Schoening, M.D.
Robert S. Wark, M.D.
Cardiac Electrophysiology
Craig J. Wehrli, M.D.

DERMATOLOGY

J. Mark Bauer, M.D.
James L. Brazil, M.D.

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Robert C. Tomford, M.D.

NEUROLOGY

L[illegible]B. Almaraz, M.D.
Adult and Child
James R. McDowell, M.D.
Christine R. Wells, M.D.

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ADMINISTRATION

William A. Latta, MBA
Carl A. Lippert, MHA

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June 11, 1992

Seattle Department of Construction and Land Use
Project numbers: 8405870 and 9106441
Addresses: 4800 Sand Point Way N.E. and 2501 N.E. 45th Street

Laura Gilbert, Acting Director:

Several years ago I attended an evening public hearing at a school in the Windermere neighborhood. Recently when I received information that Children's Hospital and Medical Center is still trying to be allowed an emergency helistrop on the CHMC campus and a second, primary helistop on the U. of W. intramural fields I could hardly believe that the issue hadn't been settled years ago and been in use.

I have lived in the same neighborhood since 1952. When the U.S. Naval Air Station on Sandpoint Way was still active, every Friday and Saturday nights "Weekend Warriors" practiced landings and takeoffs on Lake Washington opposite our house. It interfered with our sleep but the Navy never asked whether or not we objected. Often I could hardly force myself to go to work Saturday and Sunday mornings.

Sea planes still land and take off at Kenmore as they wish. In the past year I hear jets from California turn around over Lake Washington and land at Seatac coming from the North. I sometimes wish I were deaf.

I do hope the permits requested for these projects are given and all helicopters carrying patients to the Children's Hospital can land on the CHMC campus without any delay and the extra expense of requiring an ambulance from the U. of W. campus.

Please send me a notice of the Hearing Examiners recommendation.

Sincerely,
Nancy Lawrence

NANCY LAWRENCE
10660 Lakeside Ave N.E.
Seattle, WA 98125

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OFFICE OF
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Mr. & Mrs. Dennis D. Kurtz
27824 10th AVENUE SOUTH • REDONDO, WASHINGTON 98054

RECEIVED BY
June 10, 1992 PM 12:10
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sir or Madam:

On November 21, 1991, our then 13-month old son was airlifted from Federal Way directly to Children's Hospital in Seattle. He had a near-drowning in our home bathtub after being left unsupervised for only a minute or two. He had stopped breathing and begun to turn blue. Every minute, every <u>second</u> saved in reviving him and getting him to the hospital made the difference between the perfectly normal, healthy 19-month old child we have today and the possibilities of brain damage or even death that we faced on that day with agony in our hearts.

We most strongly support and recommend the construction of a helistop directly at Children's Hospital without further delay. In cases of a real emergency nature where there is not a moment to lose, a helistop at Children's Hospital should be considered by the City of Seattle to be not an option, but a necessity.

No one <u>ever</u> expects it to happen to them. Tragically, it does. The lives of our children are at stake. Please do everything in your power to ensure the helistop is allowed to be built. <u>Soon</u>. For your children and mine, <u>thank you</u>.

Sincerely,

Mrs. Dennis D. (Cindy) Kurtz

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I support all NEFRN's proposed conditions for the helipad at CHMC

Karen Kast
Keith Whittemore
4750 44th NE
Seattle WA 98105

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NATIONAL HUMANE EDUCATION SOCIETY
15-B Catoctin Circle, SE, Room 207 • Leesburg, VA 22075
(703) 777-8319

Illustration By: John Eggert/Mendola Ltd.

The National Humane Education Society is a non-profit organization fostering the sentiment of kindness to animals in children and adults.

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19806 127th Court NE
Bothell, WA 98011
June 12, 1992

RECEIVED BY
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OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Gentlemen:

As an active member of the Cottage Lake Auxiliary of Children's Hospital and Medical Center and as a person who cares for the best help available for any child whose life is in danger I urge you to approve the petition for construction of the emergency helistop and the second primary helistop.

Any minor inconvenience to the public in these areas will be more than offset by the efficiency of the care which the patients will receive when their lives are in danger.

Thank you for your favorable consideration of this matter.

Please send me a notice of the Hearing Examiner's recommendation.

Sincerely yours,

Viola N. Meredith

Viola N. Meredith

VNM

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OFFICE OF
HEARING EXAMINER

June 11, 1992

Hearing Examiner,

A permit to build a helistop at Childrens's Hospital is very neccessary and long over due.

I would hope that anyone awaken by a helicopter would say a prayer for the child being brought in instead of fussing about the noise as I do when the aid car or fire truck goes by my house.

Thank You
Frances Jarrett
17013 31 Pl So
Seattle WA 98188
244-2297

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RETIRED
SEATTLE POLICE OFFICERS ASSOCIATION
PUBLIC SAFETY BUILDING
SEATTLE, WASHINGTON 98104

June 19, 1992

RECEIVED BY
92 JUN 22 AM 11:27
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sir:

May I, on behalf of the Retired Seattle Police Officers Association support Children's Hospital and Medical Center request to build a helicopter landing pad, or helistop, outside the Emergency Room on the Laurelhurst campus.

Air transport by helicopter is one very important component of the regional emergency medical care response system. We realize how important time is when an emergency exists and fully support Children's request to construct a helistop to ensure the adequate and safe delivery of emergency medical services to children in the region.

Helicopter transport directly to Children's Hospital can be life saving in the most critical cases because it reduces transport time to the Hospital and the number of times a patient must be moved.

LIFE IS PRECIOUS - Lets not hesitate on this important request for a permit from the City of Seattle to build this pad.

Respectfully,

S.A. McLaughlin

S.A. McLaughlin, Secretary/Treasurer
Retired Seattle Police Association

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NORM MALENG
KING COUNTY PROSECUTING ATTORNEY
3405 42nd WEST
SEATTLE, WASHINGTON 98199

RECEIVED BY
92 JUN 24 AM 10:59
OFFICE OF
HEARING EXAMINER

24 June 1992

Ms. Ruperta Alexis, Hearing Examiner
Office of the Hearing Examiner
City of Seattle
1320 Alaska Building
618 2nd Avenue
Seattle, WA 98104

Re: Council Conditional Use Permit
Project Nos. 8405870 & 9106441

Dear Ms. Alexis,

I am in complete support of the proposed emergency heliport at Children's Hospital.

Three years ago, my daughter Karen was killed in a tragic sledding accident in Magnolia. Emergency efforts to save her life included an evacuation by helicopter to Harborview Medical Center. In the middle of winter, with the city in the grips of a snowfall, the helicopter was the only option available.

Children's Hospital is an institution that we are all proud of. Its mission is to save the precious lives of sick and injured children, but it cannot fulfill that mission without the ability to receive critically injured children transported by helicopter. In many cases, the speed of helicopter transport can make the difference between life and death for an injured child.

I urge the quick approval of the Children's Hospital heliport.

Sincerely,

NORM MALENG
King County Prosecuting Attorney

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4757 45th Avenue North East, Seattle Washington 98105

June 23. 1992

Ms. Ruperta Alexis, Deputy Hearing Examiner
Room 1320, Alaska Building
618 Second Avenue, Seattle Wash. 98104

Dear Ms. Alexis,

We strongly urge that the heliport be denied or severely restricted. The items of concern are listed below:

1. We are extremely concerned about safety issues regarding the COH helipad. Coming into a helistop is not like coming into an airport runway where air/surface conditions are carefully monitored. Components could fail and the helicopter could fall on a house or school. Though such failures are rare, they can and do happen. Homes and families adjacent to COH and children at Laurelhurst Elementary are potentially at risk.

2. A number of times HELICOPTERS HAVE DESCENDED OFF THE PRESCRIBED FLIGHT PATTERN, above and very close to residential homes, including ours.

3. Of special concern are heavy weight helicopters. They HAVE serviced COH. Once a helistop has been approved, more of these flights can be expected, even though they are admittedly unplanned.

4. We are also worried about the possible future location of a helipad on one of the COH garages across the street from our home. We would have no objection to locating a helipad on one of the new buildings currently undergoing approval.

5. In conclusion: The growth plans of COH can do nothing but increase the number of flights, thereby exacerbating the danger to the surrounding neighborhood.

We request that you either deny or severely restrict construction of a permanent helipad. If you approve the helistop, at least impose a monitoring restriction, MONITORED BY SOMEONE OTHER THAN COH for compliance.

Sincerely,

Helen and Dave Belvin

Helen and David Belvin

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4757 45th Avenue North East, Seattle Washington 98105

June 23. 1992

Ms. Ruperta Alexis, Deputy Hearing Examiner
Room 1320, Alaska Building
618 Second Avenue, Seattle Wash. 98104

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Sincerely,

Helen and Dave Belvin

Helen and David Belvin

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June 23, 1992

My name is Cheryl Kitchin.
My address is 4702 44th Ave. N.E. Seattle, Washington.

I am the mother of 3 children.

I am a C.P.A. and an Administrator at Shoreline Community College.

I grew up in Northeast Seattle and love its friendly neighborhoods.

The facilities available for children in our neighborhood are the best, this includes a beautiful park, and gymnasium in which we have enjoyed many an exciting baseball and basketball game.

My home is on the corner of 44th Ave NE and NE 47th. My home is the closest house to the proposed helipad. Our front door is approximately 100 yards away form the helipad. We purchased our home 19 years ago when our Son was two years old. He was seriously ill and often required help in the middle of the night at the Emergency Room. Walking was our means of transportation. I am aware of the fear and exhaustion parents feel when they bring sick children to the hospital.

For the last six years the Hospital has been landing helicopters in front of my house. Yes, I worry about the safety of my children. But I have never objected to its use as long as I am certain that its use is only for the most serious of circumstances.

I simply wish to ask that the City of Seattle not allow our neighborhood be destroyed by the Hospital. Its growth in the last ten years has been incredible. The Hospital is proposing a 45% increase in building size in the next 15 years. How can we stop the flight of young families from our neighborhood if the safety of that neighborhood is questioned. The helipad will cause this to happen. The impact of the Hospital helipad will become a greater impact with each passing day if their is no control of its use.

The creation of an oversight committee is an excellent suggestion by the Department of Land Use. I wish that the existence of that committee be made permanent by the City of Seattle and that those on the committee live on the streets most affected by the helipad. I need to be assured that the risk to our safety each time a helicopter flies very low over our home is worthy of the need. I need to know that <u>EACH</u> flight is necessary in the most basic way, that is, to save a life. I can not accept future flights which will bring equipment or staff to the hospital by helicopter. Without an oversight committee to check into this possibility, I am sure this will begin to happen.

I am a concerned and responsible parent who happens to live very near Children's Hospital. I am asking that my concerns be viewed with understanding.

Cheryl F. Kitchin

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June 23, 1992

To: Directors, DCLU

From: Bob Swenson
3808 - 42nd Avenue N. E.
Seattle, WA 98105

I wish to take issue with your ruling recommending the so-called Emergency Helistop on the CHMC campus. I realize that I am, of course, automatically branded a bad guy when I oppose anything that the CHMC may wish to do. I can only comment regarding the disruption and dangers of the helicopter flights in a restricted residential area. We personally do not live directly under the flight path of the helicopters landing at the CHMC, but are close enough to still be subjected to the noise. We own a condominium at Laurelon Terrace, however, and our tenant there has complained of the terrible noise generated -- not to mention the danger that these low flights create in this residential area. I realize there is the need for emergency flights to aid stricken children. However, there are alternatives to handling such situations. It has been recommended that CHMC should develop an emergency pediatric care facility at Harborview. With the use of this existing helipad, there certainly would not be the same dangers to the populace as to a helipad in a residential area. Once the emergency conditions are alleviated, the child could then be moved to CHMC by ambulance. The existing use of the University of Washington's field poses no flight path threat and certainly keeps the noise away from the residential area. I am terribly concerned that the helipad adoption is only the first step in the constant erosion of our neighborhood by the CHMC. It is my understanding that the next encroachment is to apply for a zoning change which would permit a 105 foot height limit. I guess I have to ask, "when will these constant attempts by CHMC to add more and more buildings with the resultant congestion and increased traffic stop?" I can only compare the

received in hearing

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CHMC actions to the land developer who will eventually wear down the opposition and get his way! I wish to go on record as opposing the helipad at CHMC and dearly hope that the other options be explored with an open mind.

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Publisher: Virgil Fassio
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Seattle Post-Intelligencer

The voice of the Northwest since 1863

OK hospital's helicopter pad

Transporting critically ill or injured children to Children's Hospital and Medical Center's emergency room by helicopter would seem to be an eminently sensible procedure, yet it has been fought for eight years by some residents of the surrounding Laurelhurst neighborhood.

Now, after preparation of exhaustive environmental impact statements and prolonged negotiations that have produced a number of compromises, the hospital's application for a permanent helicopter pad on the hospital grounds is about to receive official city review. It will be considered Tuesday by a city hearing examiner who will make a recommendation to the City Council.

The application deserves full approval.

The proposal, which has the blessing of the city's Department of Construction and Land Use, would permit construction of a helipad for the "most critically ill" emergency patients. They are defined as those who have an inability to breathe, no blood flow from the heart, inability to maintain adequate blood flow to the head and a lack of vital signs.

In other words, those children who are in imminent danger of death.

This conforms to a practice that has been in place on a temporary basis for some time. The most critically ill have been landed on a grassy area at the hospital while the majority have been flown to nearby University of Washington intramural athletic fields, then transported to the hospital by ambulance.

Hospital officials note that loading and unloading patients during emergency transport operations involves two major risk — life support systems may become dislodged and body temperature may be lowered. The new helipad will minimize such risks for those in the most critical conditions.

The hospital estimates that from three to five of the 15 to 21 children brought by helicopter each month will require landings on the proposed new, concrete hospital helipad. The others will continue to be shuttled from the UW fields by ambulance.

Arguments by those who may continue to resist the helipad project because of occasional noise a few times a month should be summarily dismissed — concern over a little infrequent and brief noise carries no weight in relation to concern over the survival of critically ill and injured children.

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EDITORIALS

The Seattle Times

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Founded August 10, 1896

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Elmer E. Todd, 1942-1949 *W. K. Blethen, 1949-1967*
W. J. Pennington, 1982-1985

John A. Blethen, Chairman Emeritus
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Michael R. Fancher, Executive Editor and Vice President
Mindy Cameron, Editorial Page Editor
Alex MacLeod, Managing Editor
Cynthia N. Meagher, Associate Managing Editor

EMOTIONAL DEBATE REOPENS

Yes to helicopter pad at Children's Hospital

DEBATE over an emergency helicopter pad at Children's Hospital and Medical Center has gone on too long. A permanent landing should be built as soon as possible.

Saving lives of children takes precedence over out-of-proportion objections by some Laurelhurst residents to noise that is, at worst, infrequent.

Since the early '70s, some critically ill and injured children have required emergency helicopter transport to the hospital. In 1984, the hospital applied for a permanent landing pad. Opposition tied up the plan. Helicopter landings have continued on a grass plot just outside the emergency room.

Helicopter noise at the nearest residence measures about the same amount of decibels as an ambulance siren from 500 feet.

An environmental-impact statement has been completed, and the city's Department of Construction and Land Use has recommended the hospital be granted a permit for a permanent landing pad.

Tomorrow, at 9 a.m. in the Alaska Building, the city's hearing examiner will take public comment on the recommendation. City Council consideration is expected in late summer.

Very vocal opposition by some neighbors is expected to be renewed. It has less merit now than before.

As a compromise to minimize noise, the proposal calls for landing only the most critically ill or injured children at the hospital. Other emergency cases that can withstand the time delay will continue to be brought by helicopter to the University of Washington intramural field. They will be relayed the remaining short distance by ambulance.

Helicopter noise at the nearest residence measures about the same amount of decibels as an ambulance siren from 500 feet. The chopper noise is short-term and infrequent.

The hospital estimates that through 1995 an average of 15 to 21 children a month may need emergency helicopter transport. Under one alternative compromise, only 3 to 5 of that number would be taken directly to the hospital. The rest would be landed at the UW intramural field.

This is not a huge neighborhood inconvenience for what is at stake: precious moments that could mean life or death for a child.

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June 23, 1992

Members, Seattle City Council
City of Seattle Hearing Examiner
1320 Alaska Building
Seattle, WA 98104

RE: Council Conditional Use Permit Requested for Helistop
CF# 297288 and 298740

RECEIVED BY
92 JUN 23 PM 4:25
OFFICE OF
HEARING EXAMINER

Dear Councilmembers and Hearing Examiner,

Please clarify that the "full scale" helistop recommended by DCLU for Graves Field will be limited by SMC 23.69.012C to life threatening emergencies only. Interhospital transfers of stabilized patients should land at Boeing Field or Harborview for transport by ground ambulance. The Harborview and airport locations are sited by the freeway. Landings and overflights of the University and residential areas are avoided by use of these locations. While I don't think it is DCLU's intent to recommend a general use helistop on the UW campus, the limitation to emergency, life-threatening medical use should be clear in the legislation.

If helicopter landings are allowed as a legal use on the Children's campus as recommended by DCLU, I request further conditioning to limit the physical change to accommodate emergency landings to a grass or grass-crete landing pad. A 40 X 40 concrete pad is neither necessary nor desirable. As noted in the report, helicopters have been landing without incident, albeit illegally, for eight years on a completely unimproved site. The esthetic and environmental advantages of grass or grass-crete are obvious. Furthermore, I believe the restriction to grass would be a significant deterrent to potential misuse of a helistop permit. The review panel is one deterrent, but a very weak one.

I disagree with the recommendation to permit landings on the hospital campus. Providence is a tertiary care hospital and relies on ambulance transfers from Harborview. Harborview has a significant transfer by ambulance required from the landing site to the emergency room. The University will also rely on ambulance transfer to its hospital.

Perhaps we'd all be safer if we lived at the emergency room, but a compromise is necessary. I believe landing true emergencies at Graves Field for transfer to Children's is a reasonable compromise.

Sincerely,

Kate W. Hemer

Kate W. Hemer
4537 55th N.E.
Seattle, WA 98105

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06-23-92 11:49 AM FROM BELLEVUE FIRE DEPT. P01

City of Bellevue

Fire Department 455-6892 Fire Prevention Bureau 455-6872
Post Office Box 90012 • Bellevue, Washington • 98009-9012

FAX COVER SHEET

DATE: 6/23/92

No. of pages (including cover sheet) 2

TO: FAX NUMBER 206/684-0132

NAME: Hearing Examiner

COMPANY: City of Seattle

FROM: FAX NUMBER 637-5287

NAME: Ron Profit

COMPANY: Bellevue Fire Dept.

MESSAGE/COMMENTS:

Letter of support for Helipad at Children's Hospital

RECEIVED BY
92 JUN 23 PM 12:04
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HEARING EXAMINER

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Fire Department Headquarters is located at 766 Bellevue Way S.E.

City of Bellevue

Fire Department 455-6892 Fire Prevention Bureau 455-6872
Post Office Box 90012 • Bellevue, Washington • 98009-9012

June 23, 1992

Office of the Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

To whom it may concern:

On behalf of the City of Bellevue Fire Department, I would like to take the opportunity to express support for approval of a helistop/landing pad outside the emergency room on the Children's Hospital Laurelhurst campus. As Bellevue Medic One celebrates it's twentieth year of operation, we can certainly see the need for this critical operation. From the Eastside it has become increasingly difficult to access the Lake Washington bridges during peak rush hour traffic. Since the Bellevue Fire Department is a major EMS provider in the area, our Department provides treatment and transport to many critically ill pediatric patients. I would like to remind the hearing examiner that there is currently no specialized pediatric medical facility on the Eastside at this time. Ground transport to COH is not always appropriate due to extended transport times of over 20 minutes. Children's Hospital is the facility of choice for treatment of critically ill children. To refuse access to COH with an on-site helipad for emergency prehospital air transports is a decision which undoubtedly compromises the health and well-being of these young patients. Denying pediatric patients sophisticated air ambulance transports with direct access to the COH emergency room is not ethical when the delays of alternative transport modes are considered. This helipad is of the utmost priority, an issue which impacts childrens lives throughout the entire Puget Sound area.

Sincerely,

Ron Profit lgh

Ron Profit
Deputy Chief
Member of Governor's EMS Trauma Steering Committee

RP:MG:cac

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Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA. 98104

RECEIVED BY
92 JUN 23 AM 11:45
OFFICE OF
HEARING EXAMINER

June, 22, 1992

Dear City Hearing Examiner,

I urge you to recommend that the City Council approve the construction of a helistop for the safe delivery of the most critically ill children to Children's Hospital + Medical Center.

I have been a neighbor of Children's (4875 Terrace Drive N.E.) for several years and am proud that Seattle has what is probably the finest Childrens hospital in the United States.

Children's sends out regular reports to better inform the community about its highly technical methods, fine professional staff and most importantly about its' brave little patients. As one who believes that children should be societies first priority, I wont to support this fine healing institution. I would gladly undergo

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much more than an occassional wake-up if even one life can be saved.

Thank you.

Sincerely,

Nan McMurry

523-2585

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7-21-92

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA. 98104

RECEIVED BY
92 JUN 22 AM 11:44
OFFICE OF
HEARING EXAMINER

To Whom It may Concern:

My child was born at Tacoma General hospital with an overwhelming Group B strep infection. He had to be transported to Children's via helicopter. Bradley coded twice on the way to Children's (heart stopped) and would not have made it if he had been put into an ambulance. His infection was life-threatening to the point that he would have died instantly without the therapy he recived at Children's hospital. We had no time to spare.

I urge you to seriously consider granting Children's hospital the permit to build the helicopter landing pad outside the Emergency room. Although our son did not survive more than a week, we are very grateful that he had every chance at life. You cannot put a price on life!

Please allow for this permit, and thank you for your consideration.

Sincerely,
Karen + Bruce Dunker

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Verne Johnson
5226 38th Ave. NE.
Seattle, WA. 98105
524-1083.

RECEIVED BY
92 JUN 23 AM 11:41
OFFICE OF
HEARING EXAMINER

City of Seattle Hearing Examiner's

I would like to lend my support to Children's Hospital in its attempt to build a helicopter landing pad or helistop. The hospital needs such a facility to adequately care for critically ill & injured children from our city & surrounding communities.

The hospital has maintained a very good relationship with the neighborhood. They have provided use with opportunities to discuss with them matters that will impact the neighborhoods.

Please grant Children's request to construct a helistop to ensure continued adequate

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+ safe delivery of emergency medical services to children.

Sincerely

Renee Johnson

P.S. I would be more then happy to provide a personal appearance should that be necessary.

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PROVIDENCE HOSPITAL
1820 COOKS HILL ROAD
CENTRALIA, WASHINGTON 98531
PHONE: (206) 736-2803

RECEIVED BY
92 JUN 23 AM 11:41
OFFICE OF
HEARING EXAMINER

SISTERS OF PROVIDENCE
SERVING IN THE WEST SINCE 1856

June 22, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Bldg
618 Second AVE
Seattle, WA 98104

To Whom It May Concern:

It has come to my attention that Children's Hospital and Medical Center is seeking a permit from the City of Seattle to build a helicopter landing pad outside the Emergency Room on the Laurelhurst campus. I wish to express my strong support for their request.

Those of us in a community such as Centralia and Chehalis have a strong reliance on the services provided by Children's. They can make a critical difference in a young child's life at a very difficult time. At Providence, we have a busy emergency room but cannot maintain the intensity of services that are needed when we have a child come to us in need of special care. Children's fills that role. From our own experience with our own helispot, we find it can make an important difference in dealing with a patient's problem to have a helispot readily available.

I hope that the City of Seattle will look favorably upon their request.

Sincerely,

Sister Maureen Comer, OP

Sister Maureen Comer, OP
Administrator

SMC:ced

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SISTERS OF PROVIDENCE INSTITUTIONS – ALASKA: PROVIDENCE HOSPITAL, ANCHORAGE – OUR LADY OF COMPASSION CARE CENTER, ANCHORAGE – **WASHINGTON:** PROVIDENCE HOSPITAL, TOPPENISH – PROVIDENCE HOSPITAL, EVERETT – PROVIDENCE MEDICAL CENTER, SEATTLE – MOUNT ST. VINCENT NURSING CENTER & RETIREMENT APARTMENTS, SEATTLE – ST. ELIZABETH MEDICAL CENTER, YAKIMA – ST. PETER HOSPITAL, OLYMPIA – PROVIDENCE CHEHALIS, CHEHALIS – PROVIDENCE HOSPITAL, CENTRALIA – **OREGON:** PROVIDENCE CHILD CENTER, PORTLAND – PROVIDENCE MEDICAL CENTER, PORTLAND – ST. VINCENT HOSPITAL AND MEDICAL CENTER, PORTLAND – PROVIDENCE SEASIDE HOSPITAL, SEASIDE – PROVIDENCE HOSPITAL AND MEDICAL CENTER, MEDFORD – PROVIDENCE MILWAUKIE HOSPITAL, MILWAUKIE – **CALIFORNIA:** PROVIDENCE HIGH SCHOOL, BURBANK – SAINT JOSEPH MEDICAL CENTER, BURBANK

RECEIVED BY
92 JUN 18 PM 3:41
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Bldg.
618 Second Ave.
Seattle 98104

June 18, 1992

Dear Office of Hearing Examiner,

Please find my letter attached in support of the helistop at Children's Hospital. Would you please add it to the file regarding this issue? The original is being sent by mail.

Cordially,

Elizabeth Szombathy
3617 47th Avenue NE
Seattle, WA 98105

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June 18, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 2nd Avenue
Seattle, WA 98104

To: Office of Hearing Examiner

Re: The Helistop Landing & Children's Hospital

As a Laurelhurst resident, I would like to state my unequivocal and enthusiastic support for the construction of the helistop at Children's and for any and all helicopter landings on Children's Laurelhurst campus.

I have had the unfortunate and harrowing experience of driving a critically ill child to Children's and have experienced the fear that our child would not survive the commute due to the many stops at traffic lights on N.E. 45th Street and Sandpoint Way before arriving at Children's. Due to a severe case of viral pneumonia our child was barely breathing when we returned to Seattle from a vacation and rushed him by car to Children's. Each red light stood in the way of his tenuous survival. Yet these are the same traffic signals ambulances must slow for as they transport critically ill children from the Univereity of Washington's intramural field. The seconds and minutes lost in this method of transport DO make a difference between life and death.

I strongly believe it is unethical to deny any child immediate access to Children's life-saving staff and technology. A few helicopter landings in Laurelhurst is a small, small price to pay for a child's life. The existence of Children's is testimony to our city's vision and commitment to provide the best medical care available to children. Any opposition to providing such care to the children with the greatest need is truly immoral.

Claims by some residents of Laurelhurst about excessive helicopter noise are equally unqualified and facile. We experience 10-20 float plane take offs and landings each day over our house and the amount of noise these small planes generate as they fly over is deafening. When we are outside we must cease talking because the noise completely drowns out our conversations. When we are asleep, the float planes' noise is so loud we are awakened. Yet, there is no organized neighborhood opposition to

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planes flying very low over our homes and they create much more noise than helicopters. Additionally, whon I lived in Baltimore ALL residents in that city were subjected to the constant presence of helicopters since they were (and still are) used by the Baltimore police as a form of police surveillance. No neighborhood was exempt from low-flying police helicopters daily patrolling the city. Given the great number of helicopters always in flight over Baltimore, I cannot recall any accidents: or any opposition to their use.

It is in everyone's interest that Children's maintain its position as our region's preeminent children's medical institution. I owe my child's life to the comprehensive capabilities so expertly administered at Children's. My only hope would be that all children could experience the expertise of Children's, particularly the critically ill. I, for one, welcome each and every helicopter landing at Childrens's.

Sincerely,

Elizabeth Szombathy
3617 47th Avenue N.E.
Seattle, WA 98105

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Peter Erik Johanson

[illegible]

HEARING EXA[illegible]

From: **Peter**
To: **Office of Hearing Examiner**
Company: **City of Seatttle**
Subject: **COH HeliPad**

Date: **June 15, 1992**
Time:
FAX #: **684-0182**

RECEIVED BY
92 JUN 19 PM 3:4[illegible]
OFFICE OF
HEARING EXAMINER

Message:

I, Peter E. Johanson, having lived at the below listed address in **Montlake** for 19 years do **hereby** give limited **support** to the effort by **COH** to build a permanent **Helicopter Landing Pad** outside their Emergency Room.

I give this support on the condition that this new heliport be used only for the transportation of the most serious life threatening cases. Those other critically ill or injured children who could stand the delay, should be brought by ground ambulance or if needed by helicopter first to an intermediate site such as UW and then transported by ground vehicle to COH

Helicopters are just one more source of unwanted noise pollution making life in our city more difficult. Their use should be limited to the transportation of the most critically injured or ill person who might die without said effort.

2817 East Park Drive East, Seattle, WA [illegible]-2003

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< PLEASE CALL BACK >

DATE/TIME : JUN 15 8:06PM

STATION : ----------

COMM. MODE: G3 RCV

DAVIS WRIGHT TREMAINE
LAW OFFICES
2600 CENTURY SQUARE · 1501 FOURTH AVENUE · SEATTLE, WASHINGTON 98101-1688
(206) 622-3150

RECEIVED BY
92 JUN 18 PM 12:07
OFFICE OF
HEARING EXAMINER

JOHN E. KEEGAN
(206) 628-7688

June 16, 1992

Ms. Ruperta Alexis
Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Re: Council Conditional Use Permit
Project Nos. 8405870 & 9106441

Dear Ms. Alexis:

Our firm is counsel for Children's Hospital & Medical Center, the applicant for the above Council Conditional Use Permits

First, your office has confirmed that no appeal of the SEPA determination has been filed and that the hearing will be limited to consideration of the Council Conditional Use Permit applications for the helistops on the Children's campus and at the University of Washington intramural field.

Second, we understand that the morning of the hearing on June 23, 1992, has been scheduled for presentations by DCLU and Children's. This is fine, and we will be prepared to use our share of that three hours for presentations by Children's witnesses. Starting after the lunch break, the Examiner will take testimony from members of the public, probably for the remainder of the day.

In addition to the presentation which will be made the morning of June 23, Children's has approximately 12 additional witnesses to offer in support of the applications and to respond to questions raised by the public and the Examiner. The testimony of these witnesses will require approximately 4-5 hours. We will be prepared

F:\DOCS\17722\160\00008.D20
Seattle

FAX: (206) 628-7040 · TELEX: 328919 DWJ SEA
ANCHORAGE, ALASKA · BELLEVUE, WASHINGTON · LOS ANGELES, CALIFORNIA
PORTLAND, OREGON · RICHLAND, WASHINGTON · WASHINGTON, D.C.

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to start with this testimony, beginning at 9:00 a.m. on the second day of the hearing, June 24, and continue until completed.

Please let me know what further information you need from me.

We look forward to the public hearing on these applications.

Very truly yours,

DAVIS WRIGHT TREMAINE

John E. Keegan

John E. Keegan

JEK:sjp
pc: Faith Lumsden
DCLU
Treuman Katz
Children's Hospital & Medical Center
Suzanne Petersen
Children's Hospital & Medical Center
Craig Gannett, Esq.
Davis Wright Tremaine

P:\DOCS\17722\160\00008.D20
Seattle

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MEMORIAL CLINIC, LTD., P.S.

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92 JUN 18 PM 12:07
OFFICE OF
HEARING EXAMINER

10 June, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle WA 98104

TO WHOM IT MAY CONCERN:

I am writing in support of the helicopter landing pad to be built outside Children's Hospital and Medical Center. I am a practicing pediatrician in an outlying area (Olympia) who, on an occasional basis, needs to send critically ill children and babies to Children's Hospital. In many cases an ambulance transport is appropriate, but there are those few cases when a child is critically ill and time is of the essence. Therefore, a helicopter transport is essential to these critically ill children. Landing at the University of Washington and making another transfer of critically ill children could complicate their care. Therefore, I support the occasional use of a helistop at the Children's Hospital site. Every time a patient is transferred, precious moments are lost.

We as community physicians appreciate Children's Hospital's excellent care of our area's children and support them in their efforts to continually improve this care. Please give the approval of the helistop every consideration.

Sincerely,

L O'Leary

LIN S. O'LEARY, M.D.
Dept of Pediatrics

LSO/ms

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Main Office • 500 Lilly Rd. N.E., Olympia, WA 98506 • (206) 456-1122
Southeast Lacey Office • 5130 Corporate Center Ct., Lacey, WA 98503 • (206) 456-2488
West Olympia Office • 406 Yauger Way S.W., Suite 1, Olympia, WA 98502 • (206) 754-6005

CARDIOLOGY

William P. Brennan, M.D.
William A. Gavin, M.D.
David H. Schoening, M.D.
Robert S. Wark, M.D.
Cardiac Electrophysiology
Craig J. Wehrli, M.D.

DERMATOLOGY

J. Mark Bauer, M.D.
James L. Brazil, M.D.

ENDOCRINOLOGY

Kenneth A. Boldt, M.D.

FAMILY PRACTICE

Main Clinic
Karri K. Chinn, M.D.
Edward G. Laclergue, M.D.
Thomas F. Rafferty, M.D.
Martin J. Scheidt, M.D.
Southeast Lacey Office
Lorne E. Bigley, M.D.
Beth M. Moore, M.D.
Martin J. Scheidt, M.D.
Westside Office
Dirk F. Havlak, M.D.
Dennis W. Peck, M.D.

GASTROENTEROLOGY

F.A. Griesman, M.D.
James F. Kruidenier, M.D.
William J. Mitchell, M.D.
Bruce A. Silverman, M.D.

GYNECOLOGY

Roger W. Carnes, M.D.
Infertility
Wayne M. Parpala, M.D.
Gynecologic Urology

INTERNAL MEDICINE

Virginia R. Cannon, M.D.
David L. Fairbrook, M.D.
James S. Edstam, M.D.
Edward L. Jansen, M.D.
Sarah A. Lux, M.D.
Carl R. Ott, M.D.
Richard F. Williams, M.D.

NEPHROLOGY

Vo D. Nguyen, M.D.
Owen G. Reese, M.D.
Robert C. Tomford, M.D.

NEUROLOGY

Lewis B. Almaraz, M.D.
Adult and Child
James R. McDowell, M.D.
Christine R. Wells, M.D.

OBSTETRICS, GYNECOLOGY AND INFERTILITY

James L. Gadbaw, M.D.
Marilyn Darby Gage, M.D.
Maternal-Fetal Medicine
James L. Power, M.D.
Laurie T. Sorenson, M.D.
William G. Sprake, M.D.

ONCOLOGY

Harry S. Griffith, III, M.D.
Lonnie Harper, M.D.
James J. Lechner, M.D.

ORTHOPEDICS AND ORTHOPEDIC SURGERY

Franklin T. Paudler, M.D.
Adult Spine Surgery
William W. Peterson, M.D.
Sports Medicine
Dennis E. Smith, M.D.

OTOLARYNGOLOGY

Ear, Nose and Throat
Head and Neck Surgery
Patricia A. Gilmer, M.D.
Facial Plastic Surgery
Leonard L. Hays, M.D., F.A.C.S.

PEDIATRICS

Karen K. Fukui, M.D.
Carl A. Lindgren, M.D.
Cole V. Mason, M.D.
Lin S. O'Leary, M.D.
Dana M. Petersen, M.D.
Edward W. Steinweg, M.D.

PULMONARY DISEASES

Rex W. Bolin, M.D.
John L. Brottem, M.D.
Katherine M. Hogg, M.D.
Robert L. Huck, M.D.

SURGERY

General, Thoracic and Vascular Surgery
Louis Gevirtzman, M.D.
Chris N. Griffith, M.D.
John T. Hairston, III, M.D.
James L. Reus, M.D.

UROLOGY

John H. Farrer, M.D.
Patrick Soles, M.D., F.A.C.S.

ANCILLARY SERVICES

Ambulatory Surgery
Audiology
Marilyn-Loy Every, M.S.A.
Mary C. Reno, M.A.
Laboratory
Neuro Diagnostic Laboratory
Outpatient Chemotherapy
Radiology
Consultants - Olympia
Radiological Associates
Vascular Laboratory

ADMINISTRATION

William A. Latta, MBA
Carl A. Lippert, MHA

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RECEIVED BY
92 JUN 19 PM 4:14
OFFICE OF
HEARING EXAMINER

SANDRA F. PORTER

4498 CHESTNUT COURT SO. #113
SEATTLE, WASHINGTON 98108
(206)723-1459

JUNE 19, 1992

DEAR HEARING EXAMINER,

ON AUGUST 13, 1990, MY DAUGHTER TONYA PORTER WAS TRANSPORTED by HELICOPTOR TO CHILDREN'S, IN A NEAR DROWNING ACCIDENT, WHICH OCCURED ON VASHON ISLAND. I SHE WAS TRANSPORTED by AMBULANCE TO CHILDREN'S, SHE MIGHT HAVE NOT SURVIVED.

I AM SUPPORTING CHILDREN'S IN BUILDING A HELISTOP TO ENSURE THE ADEQUATE AND SAFE DELIVERY OF EMERGENCY MEDICAL SERVICES TO THE CHILDREN IN OUR REGION, BECAUSE IT HAD SAVED MY DAUGHTER'S LIFE AND FURTHERMORE IT WILL SAVE OTHER CHILDREN'S LIVES.

SINCERELY,

Sandra F. Porter

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92 JUN 22 AM 11:38
OFFICE OF
HEARING EXAMINER

June 19, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

Re: C.O.H. Helipad

Dear Examiners,

I am writing in support of the helipad being located and operated at Children's Hospital. I am a nurse at Jefferson General Hospital in Port Townsend. I work with newborn infants and their families. Our hospital is small with an average of two births a week. We have no pediatricians in this county. Occasionally an infant is born with serious health problems and requires emergent transfer to Children's Hospital. Fortunately we do have a helipad right beside the hospital. With a critically ill newborn every minute is crucial. When transported, these infants are utilizing many different pieces of medical equipment such as heart monitors, umbilical artery lines, ventilators, and medication pumps. In addition to the time and effort involved in moving all this equipment, the infant needs to be observed and treated. To optimize the infant's chances of health and survival, the transport must be rapid and smooth. To land at a distant site and put the infant through one more transfer is unconscionable. Some years ago an infant being transported from Jefferson General Hospital was landed at the soccer field site. Before the infant was transferred to the ambulance, his heart stopped. He could not be saved. We will never know but will always wonder whether he could have been saved by the immediate availability of Children's. When an infant's heart and breathing have stopped, those wasted minutes spent transferring to an ambulance and driving through traffic can make a crucial difference.

When we have a critically ill infant and are awaiting transport, the sound of the approaching helicopter is wonderful. It signals the arrival of the needed advanced medical support that a small community hospital like Jefferson General can not provide.

There have been no complaints from our community about the noise associated with the helicopter landings. This community recognizes that the noise is a necessary part of being able to save lives. I live under the flight path o the helicopter. When I hear them it is a signal to me to send out my prayers, knowing that someone is in grave danger.

I hope that the neighbors of Children's Hospital

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realize that when they leave Seattle to enjoy the rural and wilderness areas, they are then potential users of the helicopter service. People who live near multiple medical facilities take for granted rapid access to advanced medical care. Those who live away from the city recognize that our lifeline is the helicopter.

Sincerely,

Vicki Stuart

Vicki Stuart R.N.
Jefferson General Hospital
9 & Sheridan
Port Townsend, Wa. 98368

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RECEIVED BY
92 JUN 19 AM 11:03
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Bldg.
618 Second Ave.
Seattle, Washington 98104

To Whom it may concern;

I'm writing concerning the helistop proposal at Children's Hospital.

My child was transported by Northwest Airlift last year from Ketchikan to Children's Hospital. He was on oxygen, in a coma. He needed to go directly to the hospital. Tranferring him was hard on him, took more time and was riskier.

I am convinced that the helistop would save lives. The noise factor I feel is a minor issue compared to a child's life.

Ambulance, police and fire sirens all make noise, as does traffic. A helicoptor would make noise for a short amount of time on the occasions it landed. That's a small price to pay for a life and is just a short blurb in every day city noise.

Seeing for myself where Children's Hospital is located on a busy street, with such a large area taken up by the hospital,

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it wouldn't be like the helicopter would be in someone's back yard.

Nobody complains about the helicopter pad at Ketchikan Hospital, which was used to bring my injured husband in from a logging camp.

I am convinced that this helistop at Childrens is necessary. There is no price on a life. I hope my letter helps.

Sincerely,

Debbie Blake

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Fire Protection District 5 Mason County

Post Office Box 127 Allyn, Washington 98524
275-2889 • 426-5533

6/17/92

RECEIVED BY
92 JUN 19 AM 11:13
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle WA 98104

Fire District 5 is in full support of the construction of a helicopter landing pad outside of the Emergency Room on the Laurelhurst Campus of Childrens' Hospital.

In the past we have called upon Airlift Northwest for care and transport of sick and injured children. Airlift is usually called because the nature of the illness or trauma is so severe that immediate transport to a an appropriate critical care center is needed. Their response time is very impressive and this, along with the expert care the patients receive, makes the emergency medical system work.

Air transportation is a vital link to patient care. The addition of a landing site is necessary to ensure adequate and safe delivery of emergency medical services to children in the region.

Sincerely,

R.A. Knight
Chief

RAK/dc

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RECEIVED BY
92 JUN 19 AM 11:13
OFFICE OF
HEARING EXAMINER

June 18, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 2nd Avenue
Seattle, WA 98104

To: Office of Hearing Examiner

Re: The Helistop Landing & Children's Hospital

As a Laurelhurst resident, I would like to state my unequivocal and enthusiastic support for the construction of the helistop at Children's and for any and all helicopter landings on Children's Laurelhurst campus.

I have had the unfortunate and harrowing experience of driving a critically ill child to Children's and have experienced the fear that our child would not survive the commute due to the many stops at traffic lights on N.E. 45th Street and Sandpoint Way before arriving at Children's. Due to a severe case of viral pneumonia our child was barely breathing when we returned to Seattle from a vacation and rushed him by car to Children's. Each red light stood in the way of his tenuous survival. Yet these are the same traffic signals ambulances must slow for as they transport critically ill children from the University of Washington's intramural field. The seconds and minutes lost in this method of transport DO make a difference between life and death.

I strongly believe it is unethical to deny any child immediate access to Children's life-saving staff and technology. A few helicopter landings in Laurelhurst is a small, small price to pay for a child's life. The existence of Children's is testimony to our city's vision and commitment to provide the best medical care available to children. Any opposition to providing such care to the children with the greatest need is truly immoral.

Claims by some residents of Laurelhurst about excessive helicopter noise are equally unqualified and facile. We experience 10-20 float plane take offs and landings each day over our house and the amount of noise these small planes generate as they fly over is deafening. When we are outside we must cease talking because the noise completely drowns out our conversations. When we are asleep, the float planes' noise is so loud we are awakened. Yet, there is no organized neighborhood opposition to

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planes flying very low over our homes and they create much more noise than helicopters. Additionally, when I lived in Baltimore ALL residents in that city were subjected to the constant presence of helicopters since they were (and still are) used by the Baltimore police as a form of police surveillance. No neighborhood was exempt from low-flying police helicopters daily patrolling the city. Given the great number of helicopters always in flight over Baltimore, I cannot recall any accidents: or any opposition to their use.

It is in everyone's interest that Children's maintain its position as our region's preeminent children's medical institution. I owe my child's life to the comprehensive capabilities so expertly administered at Children's. My only hope would be that all children could experience the expertise of Children's, particularly the critically ill. I, for one, welcome each and every helicopter landing at Children's.

Sincerely,

Elizabeth Szombathy

Elizabeth Szombathy
3617 47th Avenue N.E.
Seattle, WA 98105

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JEFFERSON GENERAL HOSPITAL
834 SHERIDAN
PORT TOWNSEND, WA 98368
TEL (206)385-2200 FAX (206)379-9420

FACSIMILE TRANSMISSION COVER SHEET

FROM: JGH TO: Hearing Examiner

OF: _____ OF: _____

TIME: 06:00

DATE: 6/19/92

TOTAL PAGES: 2

OPERATOR: MA

RE: Concerning hearing 6/23
Children's Hospital Helipad

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Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104
Fax (206) 684-0182

June 22, 1992

Dear Sirs,

As Registered Nurses in the Emergency Department of Jefferson General Hospital in Port Townsend, Washington, we would like to voice our whole-hearted support for the placement of a helipad adjacent to the Emergency Department at Children's Hospital.

We rely on Children's as a definitive care site for the acutely ill or injured child from our community. There is no Pediatrician or Pediatrics floor in our hospital, and as both parents and professionals we strongly feel that having timely transportation to a definitive care setting can make the difference in a positive outcome versus a tragedy.

Having read the background information, we feel that Children's is acting responsibly and in the best interests of the pediatric patients in requesting a more immediate access to the Emergency Department for helicopters. Having worked with critically injured children, we are aware of how quickly children can deteriorate. The Nurses with Airlift Northwest are some of the best, and we have no doubt about their abilities to triage these patients and, when condition allows, land at an alternate (less obtrusive) site, as proposed. But when push comes to shove and the physical reserves are used up and that child is going down the tubes fast, we would like the option of the fastest route to the most highly trained people to be available.

We understand the problems with public safety and noise, but as proposed, the utilization of this helipad will be minimal, and the disruption of the community will be outweighed by better outcomes for these patients. In this case, the needs of the few (the critically ill and injured children of Washington State) outweigh the needs of the many. Please support Children's Hospital & Medical Center in their quest for approval of an on-site helipad near the Emergency Department.

The Nurses at Jefferson General Hospital
Port Townsend, Washington

Mark Hammond RN — Kathleen Tollefson RN
Kristy Franklin RN
Penny Hill RN
Jackie Hoover RN

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SURGERY and
GYNECOLOGY

JAMES P. McCARRON, M.D., INC., P.S.
1136 Water Street
Port Townsend, Washington 98368

Office: 385-2947
Home: 385-2846

RECEIVED BY
92 JUN 19 AM 11:0
OFFICE OF
HEARING EXAMINER

June 12, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Ave.
Seattle, WA 98104

Dear Sirs,

This letter is written to strongly urge that helicopters be allowed to transport ill children directly to the helipad at Children's Orthopedic Hospital in Seattle.

I am a general surgeon in practice in Port Townsend, Washington, I have been here for 17 years. Prior to that, I trained at Virginia Mason and also to an extent at Children's Orthopedic Hospital. I have had personal experience at the receiving end of it at Children's Orthopedic and I have had experience as a surgeon, helping to transport critically ill children from Port Townsend to Seattle. Prior to Airlift Northwest, I personally accompanied many of these children and the hassle of landing at the University of Washington playing field, ambulance transfer with it's attendant increased risk, exposure to cold, etc., was extremely traumatic to these vulnerable and already highly compromised infants.

When one is working in emergency situations with one of these children, the sound of an incoming helicopter can indeed be a welcome sound and I just wish that some of the people who object to the sound of helicopter bearing a sick infant could experience for a moment the heart wrenching sight of a critically injured or sick infant, either at the site of origin in a small hospital such as our own, or at the receiving end at Children's. Perhaps they would then better understand how critically injured and ill these children are and how vital minutes and even seconds are to the care of these children.

Please put the health of lives and limbs of these little children ahead of other less important considerations.

Yours sincerely,

James P. McCarron, M.D., Chief of Surgery
Jefferson General Hospital
Port Townsend, WA 98368

JPM:vc
cc: Sharon Wagner

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DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
BOONE ROAD
BREMERTON, WASHINGTON 98312-1898

RECEIVED BY
92 JUN 19 AM 11:12
OFFICE OF
HEARING EXAMINER

5000
Ser 03/003229
18 June 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sirs:

W at Naval Hospital, Bremerton, fully support the improvement i service to our young patients that will result from the construction of the helistop at Children's Orthopedic Hospital and Medical Center.

We, in Bremerton, have frequently had to air evacuate critically ill patients to Children's Hospital in Seattle. We view the capability of emergency air evacuations as an essential component of our regions emergency medical response system.

We, therefore, strongly support the construction of the proposed helistop at children's Hospital and Medical Center.

R. E. MCKEE
Captain, Medical Service Corps
United States Navy
Commanding Officer

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DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
OAK HARBOR, WASHINGTON 98278-8800

6320
Ser NHOH-00008/1062
23 June 1992

RECEIVED BY
92 JUN 23 PM 1:28
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Gentlemen:

The Naval Hospital, Oak Harbor, has used Children's Hospital and Medical Center on 35 occasions in the past year when the scope of illness or injury to its pediatric beneficiaries was beyond this facility's capabilities. The presence of a helicopter landing pad at this referral center would greatly enhance its ability to receive critical patients in a timely manner. Additionally, the helopad would ease the burden of the Naval Air Station search and rescue helicopter and decrease the cost to the patients' families and the state and federal governments by eliminating the need for secondary ambulance transportation.

The Naval Hospital, Oak Harbor supports the need for a helicopter landing pad at Children's Hospital and Medical Center.

Sincerely,

M. K. MURPHY
Captain, Medical Corps
United States Navy
Commanding Officer

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 1

To Hearing Examiner	From Naval Hospital
Co. City of Seattle	Co. Oak Harbor
Dept.	Phone # (206)257-9974
Fax # (206)684-0182	Fax #

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JUN-24-92 WED 8:59 KOMO TV P.01

Post-it™ brand
Fax Transmittal Memo 7672

To	Office of Hearing Examiner	No. of Pages	1
Company		Today's Date	6-24
Location		From	Debbie Funk per Ken Schram
Fax #	684-0182	Company	KOMO TV
Comments		Location	Public Affairs
		Dept. Charge	
		Fax #	
		Telephone #	
		Original Disposition	☐ Destroy ☐ Return ☐ Call for pickup

For Children's Hospital Heli-Pad file.

d Genes "C"
6/1-7/92 am/pm radio/tv

Announcer: If founder genes are going into our tomatoes, tell us. Here's Ken Schram.

Ken Schram: No pronunciation preferences were apparent last week when the Bush administration gave the green light to the sale of genetically altered fruits, vegetables and grains, without the Food and Drug Administration having to do any testing first.

The new policy does not affect biotech research involving meat, poultry, fish or dairy products. It only deals with plants whose new properties can be found in other plants considered edible.

What this comes down to is that some 70 different crops, everything from cucumbers to cantaloupes to tomatoes, can be made more disease-resistant, offer more nutrition, and be made to taste better. Fruit can be left to ripen and shipped without concern of spoiling. In the end, we're promised a safer, more abundant food supply.

We have no reason to doubt that, no reason to take exception with the policy that allows it. The only problem we have is that there is no requirement that any of the new genetically altered products have to be labeled. As consumers, we have the right to know such information and as a government agency whose responsibility includes protecting us, the FDA should see to it that we indeed get that information. I'm Ker Schram.

Helped "B"
6/1-7/92 am/pm radio/tv

Announcer: Children's Hospital sho the helped it needs. Here's Ken Schram.

Ken Schram: Right now, if a critical injured child is rushed to Children's Hospita helicopter, this is where the chopper often l [illegible] ofa field about 1/2 a mile from t [illegible], the child has to be tak ambulance, [illegible] precious minutes before emergency care can be administered.

The hospital's been trying to get a h built up by its emergency room for almost a but some people around here have manage keep that from happening.

Seems there are residents here in Laurelhurst who don't want to deal with the helicopters that help provide children with th medical attention. Rather than have their tra disturbed, people in the area have fought the hospital's efforts at every turn. At one point, residents objected to any and all medical flig overhead, but have now amended that to wri feel landings should be restricted to only the serious emergency cases.

On the 23rd of this month, the City C Seattle will take public comment on the helipo issue. If all goes well, the city Council will tak issue under consideration later in the Summe

Genes "C"
'92 am/pm radio/tv

Announcer: If flounder genes are going into matoes, tell us. Here's chram.

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Heliped "B"
6/1-7/92 am/pm radio/tv

Announcer: Children's Hospital should get the helipad it needs. Here's Ken Schram.

Ken Schram: Right now, if a critically ill or injured child is rushed to Children's Hospital by helicopter, this is where the chopper often lands: in the middle ofa field about 1/2 a mile from the hospital. From here, the child has to be taken by ambulance, losing precious minutes before emergency care can be administered.

The hospital's been trying to get a helipad built up by its emergency room for almost a decade but some people around here have managed to keep that from happening.

Seems there are residents here in Laurelhurst who don't want to deal with the noise of helicopters that help provide children with the fastest medical attention. Rather than have their tranquility disturbed, people in the area have fought the hospital's efforts at every turn. At one point, residents objected to any and all medical flights overhead, but have now amended that to where they feel landings should be restricted to only the most serious emergency cases.

On the 23rd of this month, the City of Seattle will take public comment on the helipad issue. If all goes well, the city Council will take the issue under consideration later in the Summer.

Building the helipad has been stymied and stalled far too long. In situations where minutes, even seconds can literally mean the difference between life or death, a few moments of noise is a small price to pay.

If it were your child, what would you want the city to decide? Since it could be your child, you should let your feelings be known. I'm Ken Schram.

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92 JAN 24 AM 11:07
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HEARING EXAMINER

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4757 45th Avenue North East, Seattle Washington 98105

June 23. 1992

RECEIVED BY
92 JUN 25 PM 12:54
OFFICE OF
HEARING EXAMINER

Ms. Ruperta Alexis, Deputy Hearing Examiner
Room 1320, Alaska Building
618 Second Avenue, Seattle Wash. 98104

Dear Ms. Alexis,

We strongly urge that the heliport be denied or severely restricted. The items of concern are listed below:

1. We are extremely concerned about safety issues regarding the COH helipad. Coming into a helistop is not like coming into an airport runway where air/surface conditions are carefully monitored. Components could fail and the helicopter could fall on a house or school. Though such failures are rare, they can and do happen. Homes and families adjacent to COH and children at Laurelhurst Elementary are potentially at risk.

2. A number of times HELICOPTERS HAVE DESCENDED OFF THE PRESCRIBED FLIGHT PATTERN, above and very close to residential homes, including ours.

3. Of special concern are heavy weight helicopters. They HAVE serviced COH. Once a helistop has been approved, more of these flights can be expected, even though they are admittedly unplanned.

4. We are also worried about the possible future location of a helipad on one of the COH garages across the street from our home. We would have no objection to locating a helipad on one of the new buildings currently undergoing approval.

5. In conclusion: The growth plans of COH can do nothing but increase the number of flights, thereby exacerbating the danger to the surrounding neighborhood.

We request that you either deny or severely restrict construction of a permanent helipad. If you approve the helistop, at least impose a monitoring restriction, MONITORED BY SOMEONE OTHER THAN COH for compliance.

Sincerely,

Helen and David Belvin

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RECEIVED BY
92 JUN 24 PM 3:40
OFFICE OF
HEARING EXAMINER

PROVIDENCE HOSPITAL
1820 COOKS HILL ROAD
CENTRALIA, WASHINGTON 98531
PHONE: (206) 736-2803

SISTERS OF PROVIDENCE
SERVING IN THE WEST SINCE 1856

June 24, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Gentleperson,

I am writing this letter to support Children's Hospital and Medical Center's request to build a helicopter landing pad outside their Emergency Department on the Laurelhurst campus.

Critically ill and injured children from our community are transferred by helicopter to Children's Hospital. Helicopter transport directly to Children's Hospital can be life saving in the most critical cases because it reduces transport time to the hospital and the number of times a patient must be moved.

To ensure the delivery of safe and adequate emergency medical services to children in the region, I urge your support of a helipad at Children's Hospital.

Sincerely,

Mitzi VandeWege
Assistant Administrator

MAV/dk

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SISTERS OF PROVIDENCE INSTITUTIONS—ALASKA: PROVIDENCE HOSPITAL, ANCHORAGE—OUR LADY OF COMPASSION CARE CENTER, ANCHORAGE—WASHINGTON: PROVIDENCE HOSPITAL, TOPPENISH—PROVIDENCE HOSPITAL, EVERETT—PROVIDENCE MEDICAL CENTER, SEATTLE—MOUNT ST. VINCENT NURSING CENTER & RETIREMENT APARTMENTS, SEATTLE—ST. ELIZABETH MEDICAL CENTER, YAKIMA—ST. PETER HOSPITAL, OLYMPIA—PROVIDENCE CHEHALIS, CHEHALIS—PROVIDENCE HOSPITAL, CENTRALIA—OREGON: PROVIDENCE CHILD CENTER, PORTLAND—PROVIDENCE MEDICAL CENTER, PORTLAND—ST. VINCENT HOSPITAL AND MEDICAL CENTER, PORTLAND—PROVIDENCE SEASIDE HOSPITAL, SEASIDE—PROVIDENCE HOSPITAL AND MEDICAL CENTER, MEDFORD—PROVIDENCE MILWAUKIE HOSPITAL, MILWAUKIE—CALIFORNIA: PROVIDENCE HIGH SCHOOL, BURBANK—SAINT JOSEPH MEDICAL CENTER, BURBANK

To: Ruperta Alexis, Deputy Hearing Examiner
Room 1320 Alaska Bldg.
618 Second Avenue, Seattle, WA. 98104

6/23/92

My name is Marvin O. Christman, my home address is 4350 53rd NE, in the Laurelhurst community which is immediately adjacent to two plus sides of Childrens Hospital.

I am representing the eight story LAURELHURST WEST Condominium at 4545 Sandpoint Way NE having two and three bedroom homes, with 54 seperate families. This neighborhood residence has a DIRECT line of sight with the Hospital. As a condoninium owner there and a member of the Board of Directors I speak for them that we DO NOT want and adamantly oppose the building of and use of a HELIPORT AND PAD at Childrens Hospital.

Childrens Hospital was dedicated in the late '40's at which time and on many occasions since, the NE communities have been told, " This is a small building we are constructing and it will continue to enhance the neighboring communities with our services." Therefore, every year the facility continues to grow higher and wider with increases in traffic and congestion.

My earliest recollection of Helicopter landings at the Hospital is 1981 when my Mother moved into the Laurelon Terrace Condominium, immediately adjacent to the Hospital on the South Side. There are approximately 120 Units there, with many ownerships by retired Northeast citizens. At this time the noise and vibration caused by Helicopter landings, which we were told by the FAA and others to be illegal, but done in the interest to SAVE A LIFE, OCCURED on a regular 2-3 per month.

We knew, since my Mother being very hard of hearing, she would feel the vibration of the landing helicopter and many times she would ask me to replace her wall pictures that had fallen from the wall to the floor.

Additionally, on the North side of Childrens. home residences are immediately adjacent to the street, adjacent to their property line. There is very little open space to accomodate Childrens Hospital from the the surrounding neighborhood...especially during the night ..when landings are definately an intrusion to their privacy. The situation is almost to the point where the City will have to pay the close-by neighbors to move, as has happened at SEA-TAC Airport. This would not only reduce an excellent city tax base but lower the value of the rest of the NE homes affected by the Hospitals encroachment of quiet Airspace.

Over Please

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This community, as one of Seattles finest residental communities deserves more.....we pay above average residental tax revenues.....we are proud of our homes, we tolerate the enlargement of the Hospital...even though we are constantly at odds with the Hospitals administration and the various City Officals.

We do not want to move or to have out residences de-valuated because of the dangers due to congestion, helicopter traffic or plant size facility in the center of our community homes.

For ten years the NE community has defended this position... no helicopter pad or landings at Childrens Hospital....and have had the support of City Officals and the present LAW. We sincerely request your continued consideration of our interests.

Marion O. Christmas

4350 53rd NE
Seattle, WA. 98105
(206) 525-6966

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4217 51st Avenue N.E.
Seattle, WA 98105
June 21, 1992

RECEIVED
JUN 23 1992
PETER EGLICK
ATTORNEY AT LAW

Carol Eychaner
Peter J. Eglick & Associates
Suite 1212
Bank of California Building
900 Fourth Avenue
Seattle, WA 98164

Dear Ms. Eychaner:

Thank you for showing me the documents from D.C.L.U. about the proposed heliport at Children's Hospital.

In general, I am concerned that use of air ambulances will be subject to overuse in the way many other technologies have been. It is partly an internal matter if C.H.M.C. wants to spend money on ineffective technology, but it is also a matter of concern for all taxpayers. One has only to look at the amount of uncompensated care given by C.H.M.C. to realize that the hospital also provides a lot of care paid for by the public. If C.H.M.C. can provide data that air transport is more cost-effective than ground trnasport, that would help ally concerns that the technology is being used inappropriately. I have previously suggested a randomized trial to the former director of the Seattle-King County Health Department, Dr. Bud Nicola. I doubt that a randomized trial will be done for political and logistical reasons.

The next alternative to determining cost-effectiveness would be a case-control study. This would be much cheaper and might give some useful information.

Beyond the medical considerations, there are of course political considerations. Namely, whose rights are more important, the neighborhoods' or the hospital's? I suspect that the final decision wil be more political than scientific, so I would like to offer some comments about the D.C.L.U. proposal.

The composition of the committee is heavily weighted towards vested interests. The Seattle-King County Health Department has strong ties with the University of Washington. Good academic policy, not necessarily good politics. Pediatricians will probably beinclined to sympathizsize with C.H.M.C. because they will think that they may need to use theair ambulance service for their own patients. Most local neonatologists and intensivists

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trained at or have some ties with U.W. or C.H.M.C. I think that a committee that is asked to serve without compensation will be plagued by absences of its members. If C.H.M.C. is seeking a variance from public regulations, it is reasonable for them to pay for the privilege. This could be in the form of landing fees, just as commercial air carriers pay. These fees could be used to support the regulation, a common practice in public health. I find the proposed committee's role--advisory--to be almost risible. Whom shall they advise? If C.H.M.C. chooses to violate the restrictions, who is to enforce them? I find the dichotomous penaly (license/no license) to be impractical. This is analogous to the death penalty for a traffic violation. "Let the penalty suit the crime." Each infraction should be fined at a rate commensurate to the imposition on the community and the cost of investigating and prosecuting it. Penalties should be civil rather than criminal because the county prosecutor is unlikely to ever prosecute for such a petty criminal offense.

C.H.M.C. should be required to have navigational aids to the helicopter pilots.

The more incentives to discourage use of air transport, the better. This will reduce the need for external regulation. I do not mean that air transport should be unduly burdensome, but it should be used in a context of choice among alternatives. The current system encourages the use of air transport because there is profit for the carriers, good public relations for them and the hospital (except with the neighbors), and lacks penalites against abuses. The incentives should be such as to encourage use of ground transport.

All of this must also be viewed in the context of the hospital's long-range development plans. They have already shown a "stone soup" approach to land use restrictions ("We already have this much, so how about a little bit more.") They have plans for a major expansion of their Seattle campus and have bought a large tract in Issaquah, where they will again face a conflict between residential use and their own. I am willing to have my peace and quiet disturbed and safety threatened for truly important reasons, but I think that I deserve an explanation and some protection against abuse by neighboring institutions.

Sincerely,

Thomas A. Bell

Thomas A. Bell, M.D., M.P.H.

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MEMORIAL CLINIC, LTD., P.S.

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92 JUN 24 AM 11:53
OFFICE OF
HEARING EXAMINER

22 June, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle WA 98104

Ladies and Gentleman:

I am a practicing pediatrician in the Olympia area and have been associated with Children's Hospital since 1975. Currently I am the chairman of the Department of Pediatrics at St. Peter Hospital in Olympia. Over the years I have had the opportunity to transfer some critically ill children to Children's Hospital. In emergency type situations when both time and level of care are critical to the survival of the patient, I have been somewhat frustrated by the fact that whomever I refer there, has to land first, usually at the local intramural field and then have to be transported to Children's via ambulance.

The time delay and sometimes even more importantly, the hassles to the patient and danger to the patient in changing modes of transportation can represent real risk to the health of the patient. Such risk would be obviated by a helistop at Children's Hospital from where the patient can be directly admitted to Children's Hospital. I think such a facility is a much needed one and would save both valuable time and obviate transport difficulties to the critically ill or injured patients that I refer to Children's Hospital.

Thus, I would support the construction of a helistop to provide adequate and safe delivery of emergency medical services to children in the region.

Sincerely,

COLE V. MASON, M.D.
Chairman, Dept of Pediatrics
St. Peter Hospital

CVM/ms
CC: Treuman Catz,
President and CEO
Children's Hospital and Med Center

John Neff, M.D.
Medical Director
Children's Hospital and Med Center

Alice James,
Director of Planning
St. Peter Hospital

Main Office • 500 Lilly Rd. N.E., Olympia, WA 98506 • (206) 456-1122
Southeast Lacey Office • 5130 Corporate Center Ct., Lacey, WA 98503 • (206) 456-2488
West Olympia Office • 406 Yauger Way S.W., Suite 1, Olympia, WA 98502 • (206) 754-6005

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CARDIOLOGY

William P. Brennan, M.D.
William A. Gavin, M.D.
David H. Schoening, M.D.
Robert S. Wark, M.D.
Cardiac Electrophysiology
Craig J. Wehrli, M.D.

DERMATOLOGY

J. Mark Bauer, M.D.
James L. Brazil, M.D.

ENDOCRINOLOGY

Kenneth A. Boldt, M.D.

FAMILY PRACTICE

Main Clinic
Karri K. Chinn, M.D.
Edward G. Laclergue, M.D.
Thomas F. Rafferty, M.D.
Martin J. Scheidt, M.D.
Southeast Lacey Office
Lorne E. Bigley, M.D.
Beth M. Moore, M.D.
Martin J. Scheidt, M.D.
Westside Office
Dirk F. Havlak, M.D.
Dennis W. Peck, M.D.

GASTROENTEROLOGY

F.A. Griesman, M.D.
James F. Krudenier, M.D.
William J. Mitchell, M.D.
Bruce A. Silverman, M.D.

GYNECOLOGY

Roger W. Carnes, M.D.
Infertility
Wayne M. Parpala, M.D.
Gynecologic Urology

INTERNAL MEDICINE

Virginia R. Cannon, M.D.
David L. Fairbrook, M.D.
James S. Edstam, M.D.
Edward L. Jansen, M.D.
Sarah A. Lux, M.D.
Carl R. Ott, M.D.
Richard F. Williams, M.D.

NEPHROLOGY

Vo D. Nguyen, M.D.
Owen G. Reese, M.D.
Robert C. Tomford, M.D.

NEUROLOGY

Lewis B. Almaraz, M.D.
Adult and Child
James R. McDowell, M.D.
Christine R. Wells, M.D.

OBSTETRICS, GYNECOLOGY AND INFERTILITY

James L. Gadbaw, M.D.
Marilyn Darby Gage, M.D.
Maternal-Fetal Medicine
James L. Power, M.D.
Laurie T. Sorenson, M.D.
William G. Sprake, M.D.

ONCOLOGY

Harry S. Griffith, III, M.D.
Lonnie Harper, M.D.
James J. Lechner, M.D.

ORTHOPEDICS AND ORTHOPEDIC SURGERY

Franklin T. Paudler, M.D.
Adult Spine Surgery
William W. Peterson, M.D.
Sports Medicine
Dennis E. Smith, M.D.

OTOLARYNGOLOGY

Ear, Nose and Throat
Head and Neck Surgery
Patricia A. Gilmer, M.D.
Facial Plastic Surgery
Leonard L. Hays, M.D., F.A.C.S.

PEDIATRICS

Karen K. Fukui, M.D.
Carl A. Lindgren, M.D.
Cole V. Mason, M.D.
Lin S. O'Leary, M.D.
Dana M. Petersen, M.D.
Edward W. Steinweg, M.D.

PULMONARY DISEASES

Rex W. Bolin, M.D.
John L. Brottem, M.D.
Katherine M. Hogg, M.D.
Robert L. Huck, M.D.

SURGERY

General, Thoracic and Vascular Surgery
Louis Gevirtzman, M.D.
Chris N. Griffith, M.D.
John T. Hairston, III, M.D.
James L. Reus, M.D.

UROLOGY

John H. Farrer, M.D.
Patrick Soles, M.D., F.A.C.S.

ANCILLARY SERVICES

Ambulatory Surgery
Audiology
Marilyn-Loy Every, M.S.A.
Mary C. Reno, M.A.
Laboratory
Neuro Diagnostic Laboratory
Outpatient Chemotherapy
Radiology
Consultants - Olympia
Radiological Associates
Vascular Laboratory

ADMINISTRATION

William A. Latta, MBA
Carl A. Lippert, MHA

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400 South 43rd Street
Renton, WA 98055
206•228•3450
FAX 206•656•4042

Valley Medical Center

ADMINISTRATION

RECEIVED BY
92 JUN 24 AM 11:53
OFFICE OF
HEARING EXAMINER

June 22, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Gentlemen:

This letter is written in support of Children's Hospital & Medical Center's requested permit for a helistop. From time to time critical newborn and pediatric patients from Valley Medical Center require emergency transportation, via helicopter, to Children's Hospital & Medical Center.

A child's life cannot be compromised due to lack of immediate aerial transportation.

Thank you for adding this letter to the others in support of the permit.

Sincerely,

Richard D. Roodman
Administrator

cc: Treuman Katz, President/CEO
Children's Hospital & Medical Center

Board of Commissioners

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PIERCE ENTERPRISES INTERNATIONAL
Jim and Erica Pierce
3912 48th Avenue N.E.
Seattle, WA 98105
(206) 527-5121

June 22, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
Seattle, Wa. 98104

Gentlemen: Re: Project No's 8405870 and 9106441

I am writing on behalf of Children's Hospital and Medical Center in reference to the above numbered projects.

As Laurelhurst residents we support the helistop outside the Emergency Room at the hospital. We feel the necessity to save lives of children far outweighs the inconvenience to the neighborhood.

Please consider the permit for the hospital and act favorably to this important addition.

Sincerely,

Erica Pierce

Erica Pierce

ep

cc: David Hunter

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OFFICE OF
HEARING EXAMINER

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Other conditions discussed in the EIS analysis include prohibition of staff pickup at CHMC by helicopters, continuation of the quarterly public newsletter reporting on helicopter landings, establishing a regular training schedule to familiarize pilots with the specific characteristics of the helistops, and limiting landings at CHMC to helicopters no noisier than the Agusta 109.

These conditions, as set forth below, should be imposed based on Council authority under the conditional use provisions of the Land Use Code and on the City SEPA noise and transportation policies.

DECISION - SEPA

The Department concludes the Environmental Impact Statement for the CHMC helistop proposal adequately discloses and analyzes expected impacts from the proposal and from reasonable alternatives. The Department finds the proposal can be expected to result in significant adverse noise impacts which cannot be mitigated. However, the Department also finds that the benefits of the proposal, as defined in the Preferred Alternative, outweigh the adverse impacts. The Department recommends mitigation to the extent possible of noise and safety impacts as set forth in the Conditions section based on substantive authority found in sections 25.05.675 L and R, Noise and Transportation.

RECOMMENDATION - COUNCIL CONDITIONAL USE

The Department recommends the proposal for an emergency helistop at the Kitchen Garden site at CHMC and a second, full service helistop at the University of Washington IMA/Graves Field site be approved, with conditions to mitigate impacts to the public safety and welfare. The recommended conditions, based on Council authority to mitigate averse impacts including that set forth in the Land Use Code and the Noise and Transportation policies of Seattle's SEPA Ordinance, are set forth below.

RECOMMENDED CONDITIONS

1. Only the most critical and life-threatening medical emergencies shall be allowed to land at CHMC. All other patients shall land at the Intramural Activities field site. The initial decision whether to land at the Kitchen Garden site or the IMA field is to be made by the referring physician and/or attending medical team. For patients whose condition deteriorates in flight, the medical team on board

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the helicopter may decide to land at CHMC. The following conditions indicate a landing at CHMC is appropriate:

a. unstable airway;
b. inability to ventilate/oxygenate;
c. inability to maintain adequate cardiac output;
d. inability to maintain adequate cerebral bloodflow; or
e. the persistence of unstable vital signs despite heroic attempts to control them.

2. Military Assistance to Safety and Traffic (MAST)~~, Coast Guard, and Navy~~ **HUEY** helicopters shall not be permitted to land at CHMC, but shall land at the IMA field or at Harborview, in order to reduce noise impacts and reduce the potential for helicopter accidents in the CHMC area. **Other helicopters, military or civilian, shall be permitted to land at CHMC only if they demonstrate a noise profile equal to or less than the Agusta 109 and meet FAA ~~noise~~ guidelines for the CHMC helipad.**

3. A Medical Review Committee shall be established to review compliance with Condition 1 above, allowing only the most critically ill patients to land at CHMC. The Committee shall consist of the following five members:

1) The Director of the Seattle-King County Department of Public Health, or the Director's appointee, who will serve as Committee chair;

2) A representative of CHMC selected by the Chief Executive Officer;

3) A physician representative of the Washington State Medical Association (WSMA), selected by the President of the Association. The representative must be a qualified neonatologist, pediatric intensivist, or pediatric emergency physician;

4) A physician representative of the Washington State Society of Pediatrics (WSSP), selected by the President of the Society. The representative must be a board certified pediatrician.

5) A citizen, residing in one of the neighborhoods in the area of CHMC, to be nominated by the Department of Neighborhoods and confirmed by the City Council.

Committee members will be appointed for terms not to exceed three years, with replacements to be made by the original appointing authority. The role of the Committee is advisory only. The Committee shall meet at least twice per year to review and evaluate helicopter transports to CHMC. The

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Committee shall submit a report after each review meeting to DCLU, the Chief Executive Officer of CHMC, the Airlift Northwest Executive Committee and Medical Director, and the Citizens' Advisory Committee for CHMC Master Plan. Committee members will receive no compensation or other remuneration for their service on the Committee. The Committee shall adopt rules and procedures as necessary to ensure compliance with laws and administrative rules governing confidentiality of patient medical records, while also providing for public input and review of the Committee's work.

CHMC shall provide administrative and staff support needed by the Committee. The necessity for, and performance of, the Committee shall be evaluated by DCLU after two years and a recommendation shall be made to the City Council regarding whether to continue, reorganize, or discontinue the Committee's work.

4. CHMC shall continue to report on a quarterly basis to the community regarding the number and nature of transports to the campus. The report shall also include the number of helicopter landings at the IMA/Graves Field site for the given quarter.

5. Helicopters shall not be allowed to land at CHMC to pick up medical staff prior to patient transport.

6. DCLU shall review the quarterly reports of CHMC and the reports of the Medical Review Committee. If it appears that inappropriate or non-medically necessary landings have occurred, DCLU shall work with CHMC, the Public Health Director, the Medical Review Committee and ALNW to revise guidelines or procedures to ensure compliance with the limited landings requirement stated in condition one (1). Failure to demonstrate clear improvement in implementation of the limited landings criteria may result in suspension of the permit for landings and shall be subject to enforcement action pursuant to Chapter 23.90 of the Land Use Code.

(7.) ~~Only helicopters with a four bladed rotor shall be permitted to land at the CHMC campus helistop.~~ Should Airlift Northwest or other aeromedical vendor seek to establish regular flights to CHMC in helicopters other than the Agusta 109 studied in the EIS, a showing must be made to DCLU proving the noise impacts of the alternative equipment are no greater than for the Agusta 109. **Technological features (twin engines, navigation equipment,etc) must equal or exceed the Agusta 109.** DCLU must give approval of the new equipment prior to its regular use for flights to CHMC.

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8. The flight paths for approach and departure to the CHMC and IMA/Graves Field helistops shall be strictly maintained as described in the Final EIS and shall to the greatest extent possible avoid residential areas. Airlift Northwest and any other regular carrier shall establish a training program to introduce all pilots to the approved flight paths. ALNW or other regular carrier shall confirm in writing to DCLU its commitment to the training program and to ensuring the approved flight paths are followed.

9. Prior to beginning regular use of the Kitchen Garden helistop, all ALNW pilots shall make at least one test landing and take-off at the site. CHMC and ALNW shall schedule the training/test flights for a weekday between the hours of noon and 3:00 p.m. Advance notice of at least ten days shall be given to the surrounding communities of the test/training time, date, and expected number of flights. The number of flights shall be held to the minimum necessary to provide adequate training.

10. New pilots shall make at least one landing at CHMC under supervision of a pilot experienced in landing at CHMC prior to unsupervised patient transport landings. Non-patient transport training flights, if desired, may be scheduled no more than twice per year without approval from DCLU. Notice shall be provided to surrounding communities as stated in Condition ~~10~~ 9.

Signature_____
Faith L. Lumsden, Senior Land Use Specialist
Land Use Division

Date_____

FLL:sh

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COMMUNITY MEMORIAL HOSPITAL

2125 C STREET
BOX 218
ENUMCLAW, WASHINGTON 98022
(206) 825-2505

FAX 206-825-3094

RECEIVED BY
92 JUN 24 AM 11:06
OFFICE OF
HEARING EXAMINER

FAX TRANSMITTAL

SENT TO FAX # 206 684-0182

DATE: 6/24/92

TO: Office of Hearing Exam

COMPANY: City of Seattle

FROM: ED - CMH

PAGES (INCLUSIVE): 2

CONFIRMATION REQUESTED? YES (NO)

CONFIRMATION FAX #: 206-825-3094

COMMENTS: _____

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MR1-3.fax

JUN 24 '92 08:45 ENUMCLAW HOSPITAL

Community Memorial Hospital

2125 C Street • P.O. Box 218 • Enumclaw, Washington 98022-0218 • (206) 825-2505

June 24, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

To Whom It May Concern:

We strongly agree with the implementing of a permanent helipad at Children's Orthopedic Hospital. This will greatly help in providing needed, safe, emergency critical care service. Community Memorial Hospital would definitely use this service.

Sincerely,

Dennis K. Fopp
Administrator

Emergency Physicians

Emergency Nursing Staff

Marge Beattie
Emergency Department Manager

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JUN 2

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June 24, 1992

Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

To the Hearing Examiner:

Gee, I never thought of myself as a baby killer or someone who would ask that a child's life be traded for my comfort. I'm the mother of 2 children who attend Laurelhurst Elementary. My husband are both teachers, my husband for 21 years and myself for 10 years. I'm writing this in response to some things I heard yesterday at the hearing and also because I just need to get some things off my chest.

Yesterday as I sat and listened to two mothers talk about the near deaths of their children, I felt very uneasy. These mothers either came on their own or were asked by CHMC to come before us, total strangers, and tell the gutrenching experiences of having a child near death and almost losing that child. I think it took alot of courage on their parts to do that. Both broke down and cried. Both wondered how anyone (meaning my neighbors and myself) could deny life to a child. They came here because of what they had heard from the hospital about us and fe.t obliged to support CHMC no matter how agonizing it was to retell their stories. When the neighborhood people began testimony, I started feeling very embarrassed for those mothers who had just testified. I'm sure it became very apparent to them that these families living around the hospital are people just like them, parents who are concerned about the safety and wellbeing of their children, parents who are asking, "Are there better alternatives to landing a helicopter at CHMC for everyone's safety, both the ill child's and and those living in the flight path. And if there aren't, how can the families around the hospital secure the safety of their own children and homes?" I just can't help but think that those two mothers who testified on behalf of CHMC, left yesterday feeling a little bit tricked and taken

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advantage of by CHMC! They gave alot yesterday and it wasn't really necessary.

It was surprising and disheartening yesterday when 4 Laurelhurst residents came forward to testify in favor of CHMC. One of these residents is on the CHMC Master Plan Advisory Committee who meets twice monthly at the hospital to discuss the hospital's massive expansion plans. These meetings are open to the public. I have attended many. I have never seen the other 3 Laurelhurst residents. Just for the record, I have not seen one of those 3 at a Master Plan Advisory meeting. To understand what is happening in our neighborhood and how powerful and scary this hospital is, you have to attend these meetings. I'm a member of NEFREN, the North East Families for Residential Neighborhoods. None of these 3 people have ever approached us or asked to attend one of our meetings to find out what we're about or what the real issues are. These testimonies were purely reactionary.

When I ~~saw~~ Brian Basset's cartoon in the Sunday Seattle Times, it took ~~me~~ about 2 hours to get over it. In fact, it ruined a good part of our Father's Day breakfast. I live in Laurelhurst, so I guess that's me he's depicting. But, that's not the way I live or what my views represent. I called Brian Basset on Monday and asked what prompted him to draw such a cartoon. He said it was because of the hearing on Monday and he had been following this issue for 10 years, and he was in favor of the hospital. Following the issue, I think, means calling CHMC periodically to dind out what's going on. In this case, however, because of the timing, I think it's save to say CHMC contacted the Times. Gee, I wish Brian had phoned us too. Obviously he didn't. In Brian Basset's defense, however, I must say he's a very good listener. He did listen to me for about 10 minutes as I gave a side to the hospital's expansion I think he was totally unaware of.

This helipad is just a part of CHMC's plans for a 45% building expansion at the Laurelhurst site. Can you imagine an expansion that large? This huge institution, my neighbor across the street, keeps asking for more and more. They're asking for a rezoning. The 45% expansion they plan, I have no doubt will destroy my neighborhood as we know it. I think it's time the City of Seattle does some serious questioning and probing where this hospital is concerned. A good place to begin is with the helipad. CHMC has made promises to the community and broken them. CHMC says one thing and does another.

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The recommendations made by Clark Sorenson yesterday represent the North East Families for Residential Neighborhoods of which I am a member. I ask that the Hearing Examiner take these recommendations into serious considerations. They are all legitimate recommendations that obviously have been given alot of thought. I want to refer specifically to the heliport being built only on the Kitchen Garden site. Since CHMC is asking for a zoning change on that site for future expansion, we need to guard against this institution once again "pulling the wool over our eyes". I also strongly recommend a review committee be formed to monitor CHMC's compliance and that this committee stay in place as stated by NEFREN.

Life in this neighborhood has become very stressful. I know that as long as I live in my home, I will be fighting this institution's never ending greed to be the biggesst and best no matter what the cost. I'm tired already. I will never get used to helpicopters flying over my home and landing across the street. I remember the first flight. I was terrified and thought to myself, "This is what Viet Nam must have sounded like." If I am forced to live with helicopters flying over my home at all hours, then let ~~it be~~ be it. But, I am asking the Hearing Examiner to please see us as a neighborhood who have rights too. We have tried time and again to be good neighbors to this hospital. We have tried to be understanding of their needs, but continue to be walked on. This institition is going to get its way, regardless of the cost to the community.* I am making a personal request and plea to you right now. I'm asking for your protection.

Sincerely,

Vicki Young

Vicki Young
4546 - 45th Ave. NE
Seattle, WA 98105

* both with the helicopter flights and their future bldg. expansion plans.

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Childrens
Hospital & Medical Center

RECEIVED BY
92 JUN 23 AM 11:41
OFFICE OF
HEARING EXAMINER

May 28, 1992

Ed Johnson
WA State Fire Fighters' Assoc.
P.O. Box 48253
Seattle, WA 98148-0253

Dear Mr. Johnson:

We need your help! Children's Hospital and Medical Center is seeking a permit from the City of Seattle to build a helicopter landing pad, or helistop, outside the Emergency Room on the Laurelhurst campus. City officials are nearing key decisions about our request. We are writing to ask for your support.

Since the early 1970's, some critically ill and injured children have required transport by helicopter to Children's Hospital in emergencies. Most requests for emergency helicopter transport of patients to Children's come from community hospitals and physicians in the Puget Sound area or Olympic Peninsula. Air transport by helicopter is one very important component of the regional emergency medical care response system. Complex surgical emergencies, overwhelming infections, and near drownings represent a few of the conditions where every moment lost increases the risk of death to a child.

In order to minimize the impacts of the community, only the most critically ill or injured patients land at Children's Other patients determined able to withstand delay and movement are landed at the University of Washington Intramural Field and are transported by ambulance to Children's. Please refer to the enclosed fact sheet for further information on the need for the helistop at Children's.

If you have reason to support the need for Children's to construct a helistop to ensure the adequate and safe delivery of emergency medical services to children in the region, <u>please write a letter of support and send it by June 23, 1992 to</u>:

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104
Fax Number: 206/684-0182

OVER

4800 Sand Point Way N.E. P.O. Box 5371 Seattle, Washington 98105-0371 (206) 526-2000

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To who it may concern

I support the helistop. This will ensure Children's abillity to ensure adequate & safe delivery of medical service to children in the region

Sincerely

Cindy McComb

7305 31st SW

Seattle WA

98126

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RECEIVED BY
92 JUN 23 AM 11:42
OFFICE OF
HEARING EXAMINER

June 22, 1992

Elizabeth Spaethe
4807 Terrace Drive NE
Seattle, WA 98105
527-7063

Office of Hearing Examiner
1320 Alaska Building
608 Second Avenue
Seattle, WA 98104

RE: 8405870 & 9106441
4800 Snd Pt Wy/2501 NE 45th
#297288 & #298740

I strongly oppose increased Helicopter flights to Children's Hospital.

I do not live in Laurelhurst. Laurel Crest Condominums are located west of Sand Point Way and 40th Avenue NE.

EVERY HELICOPTER GOING IN AND OUT OF CHILDREN'S HOSPITAL GOES DIRECTLY OVER THE ROOF OF MY BUILDING ON A DECENDING ROUTE. THERE ARE ELECTRIC LINES, PHONE LINES AND CABLE TV LINES ALL OVER THE PLACE. I FEEL THAT MY SAFETY AND THE SAFETY OF THE OTHER 12 OCCUPANTS OF THIS BUILDING IS BEING IGNORED. ARE WE WORTHLESS???? THERE HAVE BEEN SIX FATAL HELICOPTER CRASHES IN OUR AREA OF THE COUNTRY IN THE LAST YEAR.

WE ARE IN DANGER AND NOBODY CARES!!!!!!!

Sincerely,

Elizabeth Spaethe

Elizabeth Spaethe

CC: Susan Donaldson
Mayor Rice

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WEST SATURDAY, MAY 2, 1992

B.C. helicopter crash kills one

Associated Press

BELLA COOLA, B.C. – One serviceman was killed when a military helicopter slammed into a mountain on the central British Columbia coast.

Nine others were injured.

The Labrador helicopter was taking part in a search Thursday for two missing hikers in mountains 25 miles southeast of Bella Coola, the Rescue Coordination Center said.

The dead man was identified as Cpl. Phil Young, 29, of Sydney, Nova Scotia.

The injured were taken to a hospital by a second helicopter involved in the search.

The crashed helicopter was from Canadian Forces Base Comox on Vancouver Island.

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SAB-TEC STATIONERS
4710 University Village Place N.E.
Seattle, WA 98105
tel (206) 523-2106 fax (206) 523-6035

Facsimilie Cover Page

To: Hearing Examiner
Of: Seattle Fleet Mgt

Re: Children's Hospital Helistop

Fax #: (206) 684-0182
Ph #: ( )

From: Pamella Thornberry
Of: Children's

Number Of Pages: 2 (Including Cover Page)

Note: If you do not receive all pages or have any questions regarding this FAX, please call us at (206) 523-2106

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JUNE 23, 1992

Hearing Examiner
1320 Alaska Building
618 2nd Avenue
Seattle, WA 98104

RE: Children's Hospital Helistop

Dear Sir;

I am writing to you to urge that Seattle allow Children's Hospital to build a helistop on the Hospital grounds. I live two blocks south of Children's Hospital and have a view of both the Hospital and the approach of any helicopter that comes from the west or south. The noise is minimal compared to the benefits of having quick access to medical care for very sick children. I have often watch helicopters make that run to the Hospital and have said a silent prayer for each child.

I frankly can't imagine living in a community where the noise of the helicopter would preclude quick and speedy medical care for anyone, let alone children.

I urge you to allow Children's Hospital to build their helistop. They are good neighbors and should be allowed to provide the best medical care possible for the community.

Sincerely yours,

Priscilla J. Thornberg
4201 N.E. 41st
Seattle, WA 98105
(206) 525-2309

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JUN-22-1992 15:[illegible] FROM Memorial Clinic Ltd TO 12066840182 P.01

RECEIVED BY
92 JUN 23 AM 8:42
OFFICE OF
HEARING EXAMINER

Memorial Clinic, Ltd., P.S.

Main Office: 500 N. Lilly Rd., Olympia, WA. 98506 (206) 456-1122
West Olympia Office: 410-C Black Hills Lane S. W., Olympia, WA. 98502 (206) 754-6005

FAX #456-4600

FAX TRANSMITTAL COVER

DATE: 6/22/92
FROM: Memorial Clinic, Cole Pierson, MD
TO: Office of Hearing Examiner
COMPANY: City of Seattle
TELECOPIER NO. 1-206-684-0182
SUBJECT: _____

SPECIAL INSTRUCTIONS _____

NUMBER OF PAGES (including this page) 2

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MEMORIAL CLINIC, LTD., P.S.

"A Tradition of HealthCare Excellence"

22 June, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle WA 98104

Ladies and Gentleman:

I am a practicing pediatrician in the Olympia area and have been associated with Children's Hospital since 1975. Currently I am the chairman of the Department of Pediatrics at St. Peter Hospital in Olympia. Over the years I have had the opportunity to transfer some critically ill children to Children's Hospital. In emergency type situations when both time and level of care are critical to the survival of the patient, I have been somewhat frustrated by the fact that whomever I refer there, has to land first, usually at the local intramural field and then have to be transported to Children's via ambulance.

The time delay and sometimes even more importantly, the hassles to the patient and danger to the patient in changing modes of transportation can represent real risk to the health of the patient. Such risk would be obviated by a helistop at Children's Hospital from where the patient can be directly admitted to Children's Hospital. I think such a facility is a much needed one and would save both valuable time and obviate transport difficulties to the critically ill or injured patients that I refer to Children's Hospital.

Thus, I would support the construction of a helistop to provide adequate and safety delivery of emergency medical services to children in the region.

Sincerely,

COLE V. MASON, M.D.
Chairman, Dept of Pediatrics
St. Peter Hospital

CVM/ms
CC: Treuman Catz,
President and CEO
Children's Hospital and Med Center

John Neff, M.D.
Medical Director
Children's Hospital and Med Center

Alice James,
Director of Planning
St. Peter Hospital

Main Office • 500 Lilly Rd. N.E., Olympia, WA 98506 • (206) 456-1122
Southeast Lacey Office • 5130 Corporate Center Ct., Lacey, WA 98503 • (206) 456-2488
West Olympia Office • 406 Yauger Way S.W., Suite 1, Olympia, WA 98502 • (206) 754-6005

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The Children's Alliance

A Voice For
Washington's Children
Youth And Families

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92 JUN 23 AM 8:42
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HEARING EXAMINER

FAX TRANSMITTAL COVER PAGE

DATE: 6/21

TO: Hearing Examiner FAX #: 684-0182

FROM: Peter Berliner FAX #: 206-325-6291

NUMBER OF PAGES INCLUDING COVER SHEET: 2

COMMENTS: _____

If there are problems or questions about this transmission, please call 206-324-0340.

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172 20th Avenue
Seattle, Washington 98122
206/324-0340
Fax# 206/325-6291

JUN-22-92 MON 17:11 ALLIANCE FOR CHILDRE P.01

The Children's Alliance

A Voice For
Washington's Children
Youth And Families

June 18, 1992

Office of the Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

This is written to urge you to permit Children's Hospital and Medical Center to construct a helicopter landing pad adjacent to the hospital emergency room for the purpose of transporting critically ill and injured children.

It is not often that we can take a concrete step toward preserving the lives of children. It would be a tragedy if one were life lost or one permanent injury sustained because of our failure to take this opportunity to act on behalf of children.

I encourage you to approve the permit application.

Sincerely

Peter Berliner
Executive Director
The Children's Alliance

Peter Berliner
Executive Director

172 20th Avenue
Seattle, Washington 98122
206/324-0340
Fax# 206/325-6291

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JUN-22-92 MON 17:12 ALLIANCE FOR CHILDRE P.02

RECEIVED BY
92 JUN 23 AM 8:42
OFFICE OF
HEARING EXAMINER

FACSIMILE COVER LETTER

Please deliver the following pages to:

Name: Office of Hearing Examiner

Firm: City of Seattle

City:

Fax Number: 684-0182

From: Elizabeth C. Wheeler

Total number of pages including this cover sheet: 2

Date: June 23, 1992 **Time:**

If you do not receive all pages, please call (206)223-7025.

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Seattle, WA 98105
June 21, 1992

To Whom It May Concern:

If you choose to live in an urban environment you accept the fact that silence will be broken by sirens, alarms, horns, traffic and airplane noise. If you choose to live near a public building such as a school, church or hospital you understand that noise and traffic will be part of your environment.

As a neighbor of Children's Hospital I see and hear the medical helicopters. They are not disturbing but rather reassuring. I know when I hear that sound that a child is being given the best emergency care possible.

Children's Hospital sends its neighbors a quarterly log of emergency flights to let us know why our silence was broken. When I read it I am amazed at the number of positive results arising from critical and often tragic situations. Without the helistop the results could be very different.

I ask you to approve the helistop to affirm the work of this hospital. No parent or child should have to live with an outcome that a few extra minutes could have altered.

Sincerely,
Elizabeth C. Wheeler

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

June 18, 1992

Office of Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Re: Children's Hospital Helipad
Project Numbers: 8405870 and 9106441
Addresses: 4800 Sand Point Way and 2501 N. E. 45th Street.
CF Numbers 297288 and 298740

If a child's life or quality of life is dependent on getting to the hospital in the shortest possible amount of time, then that trip should take precedence over all else. The helicopter provides the quickest, safest and most efficient method of transport and should be permitted to land directly on the hospital site when such emergencies arise.

Although the helicopter is a noisy unit, the duration of this noise is about a minute to land, about the same to take off and considerably less as it passes above the neighborhood. These helicopters pass above our house from time to time en route to the hospital and represent a trivial, insignificant issue, bearing no concern whatever. One of my neighbors wasn't aware that the helicopters are flying over our area. I have noticed three in the past month, only because attention has been drawn to this issue. Although the people living next to, or very near the hospital are slightly more affected by the noise, this cannot be, or shouldn't be, any more than a minor annoyance to them. Three to five trips a month represents less than ten minutes of noise per month or about two minutes a week.

We urge you to approve this permit and place the most importance on saving a dying child's life. We'll happily live with the very small amount of noise attributed to this operation just knowing that it may mean the difference of a child's survival.

James R. Johnston
5110 N. E. 54th Street
Seattle, WA 98105

RECEIVED BY
92 JUN 22 PM 4:00
OFFICE OF
HEARING EXAMINER

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JUN-22-1992 14:[illegible] FROM NORTHWEST ARCH COMPANY TO 6840182 P.01

TRANSMITTAL/FAX TRANSMISSION

Northwest Architectural Company

TO HEARING EXAMINER'S
CITY OF SEATTLE

PROJECT [illegible]

ARCHITECT'S PROJECT NO. [illegible]

DATE 6/22/92

FILE

Transmitted herewith:

Total Pages _____
(including this form)

COPIES	DESCRIPTION (Date, Drawing No., Section No., etc.)	FILE DOC.
1	GROSSMAN LTR RE: CHMK HEIGHTS	

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[ ] Mail/Common Carrier
[X] Fax No. 684-0182
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[ ] Courrier
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REMARKS If incorrect number of documents is received, please contact the sender immediately

RE: PROJECT # 9106441 & 9405870

RECEIVED BY
92 JUN 22 PM 4:00
OFFICE OF
HEARING EXAMINER

[ ] As Requested [X] For Your Information or Use [ ] For Your Action [ ] For Coordination and Clarification
[ ] For Estimating [ ] For Review and Comment [ ] For Your Response [ ] _____

copy: by: FAX MAIL

_____ [ ] [ ]
_____ [ ] [ ]
_____ [ ] [ ]
_____ [ ] [ ] ORIGINATOR [signature]

form 102(7/91)

[ ] West 1203 Riverside, Spokane, Washington 99201, 509-838-8240, FAX 509-838-8261
[X] 303 Battery Street, Seattle, Washington 98121, 206-441-4522, FAX 206-441-7917

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

June 21,1992
4402 NE 50th St
Seattle, Washington
98205

Office of Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

RECEIVED BY
92 JUN 22 PM 4:0
OFFICE OF
HEARING EXAMINER

RE: Children's Hospital Helistop Hearings
Project # 9106441 # 9405870

To the Hearing Examiner and City Council:

Seattle has a well-established tradition of community input and involvement in public policy decisions.

This has served the City well in many instances.

However, we urge you to consider that well-organized opposition to a particular proposal, while it may represent the majority opinion of a particular community group or group of residents, does not necessarily represent the views of the majority of the total residents.

We own our residence at 4402 NE 50th St., located less than 1000 feet from the proposed Helipad. We have recently made extensive improvements to our house, and have every intention of remaining here for many years.

In our two years here, we have heard a number of helicopter landings at Children's. Earlier this very day, with our doors and windows all open, the noise from a landing made it impossible for us to carry on a conversation with guests --- for approximately ten to fifteen seconds. We found this to be an inconvenience. But, to put it in perspective, we find the helicopter noise to be an inconvenience:

- on a par with the frequent sounds of fire engine sirens coming down the hill on NE 55th St. or emergency vehicle sirens on Sandpoint Way.

- infinitely less disturbing that the screeching of the local crow population as they noisily rouse the neighborhood at the first light of dawn each morning.

It is interesting to consider the power that the phenomenon of "NIMBY-ism" and of the "we" (defenseless individuals) vs: "they" (a large institution) mindset has on people's reactions. While many individuals have gone to a great deal of effort to oppose the approval of this helicopter facility in spite of the nature of its service to other humans, it's interesting to note that:

- there is no discussion of limiting emergency vehicle sirens in this neighborhood. (We accept it as part of living in the "city".)

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- to our knowledge, no one is proposing to dispense of the crows. (We don't wish to even consider the ramifications of such a discussion)

We are committed to our community. We believe changes must be carefully considered, but choose to look forward to the potential benefits of those changes and accept a reasonable degree of personal inconvenience that may result.

We believe that Children's Hospital's heliport proposal, as conditioned and indicated in the Final Environmental Impact Statement (FEIS) has adequate safeguards on frequency and control of use such that we are willing to extend a level of trust to the Hospital to use the facilities within those guidlines.

Finally, we urge you to consider the good of the overall community — i.e. neighborhood, city, state and region — in this decision.

We urge you to approve this application.

Robert J. Grossman
ROBERT J. GROSSMAN

Shirley M Grossman
SHIRLEY M. GROSSMAN

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Jefferson General Hospital

834 Sheridan Avenue · Port Townsend, WA 98368 · (206) 385-2200

June 3, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

RECEIVED BY
92 JUN 22 AM 11:24
OFFICE OF
HEARING EXAMINER

To whom it may concern:

We have been notified that the Children's Orthopedic Hospital's (COH) helipad is the subject of a hearing scheduled for late June.

Our concern is that our accessibility to a skilled pediatric facility able to care for significantly compromised children will be severely limited. This in turn, will compromise the infant's survival.

Another factor which we hope will be considered is the extra expense to the family. We have heard much of the high cost of health care lately, a decision to close down the helipad would only serve to increase the cost of care for these infants and their families as well as their employers.

We wonder, if the people who have signed the complaints have stopped to consider whether the extra noise is worth the life of their own child, should their child be involved in a life threatening accident or medical situation in a rural area of this State. It is accepted knowledge, by the providers of emergency medical care, that there is an hour space of time in which survivability is enhanced, if a patient with critical injuries can be delivered to an appropriate medical facility. To re-route incoming helicopters to an airport, and then take the time and risk to transfer from vehicle to vehicle and care-taker to care-taker is absolutely unacceptable in a State which is praised for its care of critical patients.

Sincerely,

Patricia L. Hogan, RN MN
Nursing Administrator

Victor Dirksen
Administrator

PLH:lds
cc: Administrator, COH

NSGPAT71.LTR

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KING COUNTY FIRE PROTECTION DISTRICT NO. 13

VASHON-MAURY FIRE DEPARTMENT
P.O. BOX 1150 VASHON, WASHINGTON 98070
BUSINESS PHONE 463-2405

June 9, 1992

RECEIVED BY
92 JUN 12 AM 11:20
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, Wa 98104

Gentlemen:

We all support the need for Children's to construct a helistop for the adequate and safe delivery of emergency medical services to the children in the area.

We are an isolated Island community with no emergency facility. Emergency ambulance transportation can take over an hour by surface vehicle.

Emergency helicopter transport can take 15 minutes or less.

Sincerely,

Board of Commissioners
Craig Hamelings
Fire Chief

Fire Department Members
Harriet Clayton
Stan Horn
Shirley Cummings
Mark Redford
Larry Ochenko
Patrick L Kramer
Jay Kopta
Mary Jean
Maria Goodman
Jolene Lamb
Holly K Davies
Linda J Hamilton
Frank Lund
Brett H Kramer
Judy Jensen
Kristy Warner

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GENERAL HOSPITAL
MEDICAL CENTER

RECEIVED BY
92 JUN 12 AM 11:20
OFFICE OF
HEARING EXAMINER

June 8, 1992

Hearing Examiner
City of Seattle
1320 Alaska Building
628 Second Avenue
Seattle, Washington 98104

Dear Sir:

I am writing this letter to you to indicate the support of General Hospital Medical Center, Everett for the application by Children's Hospital and Medical Center to build a helicopter landing pad adjacent to their emergency facilities.

Every day, ill and injured children are transported to hospitals throughout western Washington for emergency treatment. Although most of these children can be appropriately treated at these hospitals, the most critically ill or injured require transport to Children's Hospital and Medical Center, our region's only tertiary level facility dedicated to the treatment of children. Helicopter transport is sometimes the only alternative when time is critical, particularly given the increasing congestion on our freeways and roads.

It is unthinkable to deny the construction of the helistop at Children's Hospital and Medical Center. The noise or other inconvenience to the neighborhood due to a small number of helicopter landings is a very small "price" to pay compared to the documented benefits in saving the lives of children.

Many community hospitals in residential neighborhoods, such as our own, are equipped with helistops that are used in emergency situations by helicopters that bring search and rescue patients to our emergency department and helicopters that transport critically ill patients to Children's Hospital and Medical Center or other facilities. As the final recourse for many sick or injured children, it is appropriate that the helistop be approved for Children's Hospital and Medical Center.

I urge you to approve the helistop permit application submitted by Children's Hospital and Medical Center.

Sincerely,

DANIEL G PACE
Senior Vice President

14th and Colby, P.O. Box 1147, Everett, Washington 98206-1147, (206) 258-6300

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THE CITY OF REDMOND
FIRE DEPARTMENT

RECEIVED BY
92 JUN 12 AM 11:19
OFFICE OF
HEARING EXAMINER

June 9, 1992

Hearing Examiner
City of Seattle
13207 Alaska Building
618 Second Avenue
Seattle, WA 98104

This letter is being written on behalf of the Redmond Fire Department in support of Children's Hospital and Medical Center requesting a permit to build a helicopter landing pad, or helistop, outside the emergency room on the Laurelhurst campus.

We have seen the results gained by having Airlift Northwest transport our patients, i.e.: trauma, burn, and pediatric, etc., to Harborview Hospital and the specialized hospitals in the Seattle area. This service has proven to be a wonderful life saving benefit to the public. The approval and addition of another helistop will only improve this vital service which is provided to the public in the Puget Sound area.

Again, the Redmond Fire Department supports the helistop at Children's Hospital and recommends your approval.

Sincerely,

Randy Coggan
Fire Chief

RC:ab

O:\BLAKE\4BLCHHEL

8450 161ST AVENUE N.E. • REDMOND, WASHINGTON 98052-3584 • FAX (206) 556-2227 • (206) 556-2200

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PROVIDENCE HOSPITAL
916 PACIFIC AVENUE
P.O. BOX 10' 7
EVERETT, WASHINGTON 98206-1067
PHONE: (206) 258-7123

RECEIVED BY
92 JUN 12 AM 11: 19
OFFICE OF
HEARING EXAMINER

SISTERS OF PROVIDENCE
SERVING IN THE WEST SINCE 1856

June 9, 1992

Office of Hearing Examiner
CITY OF SEATTLE
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

To Whom It May Concern:

This letter is written in support of a request by Children's Hospital and Medical Center for a permit from the City of Seattle to build a helicopter landing pad outside the Emergency Department on the Laurelhurst campus.

Frequently, critical patients arrive at our facility in Everett and require transport to Children's Hospital. Because of the nature of their injuries and illnesses these transports are critical to the survival and well-being of the patients. We would like to support their request to build a helipad which would minimize the delays following helicopter transport from Everett to Seattle.

Thank you very much for your consideration of this request.

Sincerely,

Jan Rich RN

Jan Rich, RN
[illegible] Services

JR/jw

c: Ray Crerand
Treuman Katz

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RECEIVED BY
92 JUN 11 AM 11:15
OFFICE OF
HEARING EXAMINER

5709 36th Ave. N. E.
Seattle WA 98105
June 9, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Ave.
Seattle WA 98104

Dear Sirs;

I am writing to urge you to grant a permit for Children's Hospital & Medical Center to build a helistop adjacent to the Emergency Room at its Laurelhurst site.

My interest in this matter stems from four facts: I am a neighbor; I do volunteer work in the Emergency Room at Children's; I am a member of the Master Plan Advisory Committee for Children's; and my wife and I, having reared three boys, are keenly aware of the importance of prompt top-quality medical care.

As a neighbor I am naturally concerned about the noise that a helicopter makes. My home is about a mile from the Hospital, and occasionally I am awakened at night when a Helicopter lands. However, my wife and I agree that this is a small price to pay when a human life is at stake. I realize that the noise level from a mile away is considerably less than from a block away, but the hospital can't be moved and a human life is not measured in decibels.

Working in the Emergency Room has made me cognizant of the need to improve the safety of the existing landing arrangement. I have witnessed several landings at which I was keenly aware of the shortcomings of the present temporary helistop. With all due respect to the skill of the pilots, the distance between the landing and the entrance to the Emergency Room is too short. The proposed location of the new helistop, while not perfect, is a considerable improvement.

I am aware that the helistop is not a part of the master plan for the hospital, but as a member of the Master Plan Advisory Committee I have been approached by neighbors who have expressed considerable concern about the safety and the noise impact of the helicopters. It is my belief that the delicate balance proposed among need, safety, noise, frequency of landings and mitigation efforts is a very rational approach to satisfy all the various interests.

Sincerely yours,

Ray Meuse

Ray Meuse

cc: Suzanne Petersen, Director of Gov't. Affairs, CHMC

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RECEIVED BY
92 JUN 17 PM 12:
OFFICE OF
HEARING EXAMINER

June 16, 1992

Attention Hearing Examiner:
City of Seattle
Dear Sir,

I am writing in support of a helicopter landing pad to be built outside the emergency room on the Laurelhurst campus.

Our five year old son, Gregory, became ill suddenly two days after Christmas of 91'. He couldn't breath and doctors thought he would go into Cardic arrest.

We live forty-five miles South of Seattle and had to drive that distance in all of the holiday traffic. I am very thankful that Gregory was flying in a helicopter avoiding mass traffic and getting quicker medical attention.

Please allow this Helistop to be built. Having our son flown directly to the wonderful medical staff at Children's saved his life, the outcome could have been much different - He could have been one of the 27% that died.

Save a life!
Build a Helistop right
at the Hospital.
Sincerly,
Karen Fuhl and Gregory

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H+H HIGHLINE COMMUNITY HOSPITAL
16251 Sylvester Road S.W. / Seattle, WA 98166 / (206) 244-9970

RECEIVED BY
92 JUN 10 PM 1:05
OFFICE OF
HEARING EXAMINER

June 5, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

To Whom it May Concern:

The purpose of this letter is to support Children's Hospital and Medical Center's request for permission to build a helicopter landing pad.

Like other hospitals in the Seattle area as well as regionally, we depend on Children's to provide tertiary care for the Pediatric patients and high risk new borns we serve.

Transfers from our facilitate as others to Children's are primarily due to high risk illness or injuries. In these cases, time can be a critical factor in successful outcomes. For this reason, we endorse Children's proposed landing pad.

Sincerely,

Paul W. Tucker
Administrator

PWT/pmu

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RECEIVED BY
92 JUN 10 PM 1:05
OFFICE OF
HEARING EXAMINER

St Joseph Hospital

2901 Squalicum Parkway
Bellingham WA 98225-1898
(206) 734-5400

Sisters of St. Joseph
of Peace, Health
and Hospital Services

June 8, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Gentlemen:

As the administrator of a community hospital 100 miles from Children's Hospital and Medical Center in Seattle, I am aware of the need to rapidly transport critically ill children to a tertiary care facility. St. Joseph Hospital does not have a Level III nursery nor pediatric intensive care and thus, transports critically ill children to Children's Hospital by helicopter. We do have a helipad adjacent to our facility and would like to know that these children could be taken directly to Children's Hospital when their recovery depends on a rapid arrival

St. Joseph Hospital supports the development of a helistop outside the emergency room of Children's Hospital to ensure our patients do not have any additional delay reaching tertiary care when they have a critical medical emergency.

Sincerely,

John Hayward

John Hayward
Administrator

/dc

bcc: Treuman Katz

q:\letters\jh-chmc.dc

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WARREN P. JENSEN M.D., F.A.A.P.
Pediatrics, Teen-agers & Young Adults
10513 Silverdale Way N.W.
Silverdale, Washington 98383

Date 6/9/92

RECEIVED BY
92 JUN 10 PM 1:05
OFFICE OF
HEARING EXAMINER

To whom it may concern:

I would like to voice my support of the request to build a helistop at Children's Hospital.

Helicopter transport directly to Children's hospital can be life saving in the most critical cases.

Your sincerely,
W P Jensen MD

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

WARD L. HINRICHS, M.D., FAAP
MICHAEL J. BOYER, M.D., FAAP
RUSSELL B. VOEGTLEN, M.D., FAAP
ANNE METTE SMEENK, M.D., FAAP

KITSAP CHILDREN'S CLINIC
2825 WHEATON WAY
BREMERTON, WASHINGTON 98310-3382
PHONE 479-1651

R. RONALD DIONNE, M.D., FAAP
SUSAN L. REIMER, M.D., FAAP
CHRISTINE H. LARSON, M.D., FAAP

RECEIVED BY
92 JUN 10 PM 1:05
OFFICE OF
HEARING EXAMINER

June 4, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 2nd Avenue
Seattle, WA 98104

To Whom It May Concern:

I do support the need for Children's Hospital and Medical Center to construct a Heli-Stop for immediate and effective transport directly to Children's for critical cases.

I am currently a pediatrician in private practice. The community hospital with w'-m I am associated does not have a Critical Care Unit or a pediatric intensivist in house. There are times when helicopter transport directly to Children's Hospital is of life saving importance.

I strongly support this concept to provide adequate and safe delivery of emergency medical services for children.

Sincerely,

Michael J. Boyer, M.D.

Michael J. Boyer, M.D.

MJB/df

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Faith Baptist Church

1157-W. Highway 101
Sequim, Washington 98382

RECEIVED BY
92 JUN 10 PM 1:05
OFFICE OF

PASTOR: Charles E. Teffeteller Phones: 683-7303 ◆ 683-2197

June 4, 1992

To Whom it concerns,

We wish to write and give our full support for the need to construct a helistop or landing pad to ensure the adequate and safe delivery of emergency medical service to children in the region. We are so very, very thankful that our baby was allowed to land directly at the hospital. The time difference that would have been lost had she been forced to land at the Intramural Field may have been just enough to save her little life and for that we are so thankful to the medical team who were allowed to make that critical decision.

Please grant Children's Hospital the permit needed to build this much needed landing pad outside the emergency room on the hospital campus. Where the safety of our children who are already at such tremendous risk is at stake, nothing should be barred from seeking to make it as safe as possible.

Sincerely,
Peggy Teffeteller &
Charles Teffeteller
Charles and Peggy Teffeteller

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RECEIVED BY
92 JUN 10 PM 1:05
OFFICE OF
HEARING EXAMINER

June 8, 1992

St Joseph Hospital

2901 Squalicum Parkway
Bellingham WA 98225-1898
(206) 734-5400

Sisters of St. Joseph
of Peace, Health
and Hospital Services

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sir:

I am writing this letter in support of the application by Children's Hospital & Medical Center for a permit to build a helipad at Children's Hospital. The need for this is paramount. As the Medical Director, for the last eight years, for MedFlight Aviation, an air medical program based at St. Joseph Hospital in Bellingham, Washington, we have had numerous occasions to fly critical children to Children's Hospital & Medical Center. During these flights it has often been necessary to land these critically ill patients at the soccer field numerous blocks away from the hospital. This then necessitates an additional transfer of the child to Shepard Ambulance, and then subsequent transfer to the Emergency Department. While on many occasions this may not be a detriment to the patient's care, in some it is. When life and death hang in the balance, time is the biggest enemy. In order to facilitate the saving of these children's lives, the many minutes lost in transferring the patient from the soccer field, to the ambulance, and then subsequently to the Emergency Department may make the difference between life and death. A helipad or helistop based directly at the Emergency Department would obviate this delay.

I appreciate the concerns that the neighbors have expressed, but having experienced those same concerns in Bellingham, we have been able to mutually agree on flight paths and usages that have been in the patients' best interest as well as the neighbors. I believe with the development of a helipad at Children's Hospital Emergency Department and with the development of appropriate flight paths and agreements, children can be safely brought to Children's without adversely affecting the neighborhood.

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Remember, every one of us has the potential to become a user of these emergency care systems. It is very easy to say, "Not in my back yard," until it is our own child who is the one in need of the system. I think that this type of attitude needs to be taken by everyone involved in order to better serve the community. I, therefore, wish to go on record as formally recommending the development of a helipad at Children's Emergency Department.

If there is any additional information I could provide, or assistance, I would be happy to do so.

Thank you for your consideration of Children's request. I hope you will act favorably upon it.

Sincerely yours,

Marvin A. Wayne, M.D.
Medical Director
MedFlight

/sp

cc: **Children's Hospital & Medical Center**

Treuman Katz, President & CEO

John Neff, M.D.
Medical Director

Dena Brownstein, M.D.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

RETIRED FIREFIGHTERS OF WASHINGTON
18415 W Spring Lake Drive SE, Renton, Washington 98058
(206) 432-4772

James Q. King
President
Ted Sholdra
Secretary

RECEIVED BY
JUN 10 PM 1:04
OFFICE OF
HEARING EXAMINER

June 10, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sirs:

Our organization, representing retired firefighters throughout the State of Washington with the majority having served and still residing within the Seattle-King County area, strongly endorses the request of Children's Hospital for a permit to provide a helicopter landing pad.

We sincerely believe that the need for rapid patient delivery in a medical emergency must override the concerns expressed regarding noise and flight safety.

Please be assured that Children's has our wholehearted support in their effort to provide such a helistop.

Sincerely,

James Q. King
President

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

KING COUNTY FIRE PROTECTION DISTRICT #4

1016 North 175th Street — Seattle, Washington 98133
Business (206) 546-5716 FAX (206) 546-5719

COMMISSIONERS
E. Scott Carlyle
Jon Kennison
Alan I. Stone

EXECUTIVE DIRECTOR
Claudia B. Ellsworth

RECEIVED BY
OFFICE OF
HEARING EXAMINER

June 8, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 2nd Avenue
Seattle, Wa. 98104

To Whom It May Concern:

I've been employed for the last sixteen (16) years as a Firefighter/Paramedic with the Shoreline Fire Department. For the last five (5) years I've functioned as the Medical Services Officer. It is with both a personal and professional interest that I am writing about the Helopad at Children's Orthopedic Hospital.

Without fail, events involving critical ill children put the greatest demands on the health care professionals working in Emergency Medical Service. The demand in individuals is both technical and emotional. Even more frustrating than the event itself can be the failure of the system to provide the greatest opportunity for a child to be saved. These events are tramatic enough without the added burden of knowing that something more which might have made the difference wasn't accomplished simply because some one person or group of persons, who must be isolated from the reality of such an event, is making a decision which is contrary to the best interest of our children.

Often an individual parent or relative does not know that the service being provided is more or less than what could have been done. However, the chain works backwards from those Health Care Professionals who render care and do know how the system can and should work. If I as an individual Paramedic in the field have confidence in the system and I display without reservation, that confidence to the other persons involved then everyone benefits from that more. However, when I know that less is being done that can be done, I'm certain that my frustration shows through from time to time. It is not a burden I wish or need to carry alone.

As Medical Services Officer for the Shoreline/Kenmore Paramedic Program and a King County Government employee, my job is to serve the needs of the citizens of Shoreline and Kenmore as well as the employees who provide this service on a day to day basis. As a government entity

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you are tasked with the same responsibility, namely to provide service to the people. I believe the decision to allow a helopad at Children's Orthopedic Hospital serves the community and its children very well. I would be willing, if necessary, to provide first hand comments on particular children whom I have treated over the years. If I can provide any additional information or assistance to enable you to decide in favor of a helopad at Children's Orthopedic Hospital, please let me know.

Sincerely yours in service,

Captain Michael Koontz, Medical Services Officer
King County Fire District #4
Shoreline/Kenmore Paramedic Provider Group

MK/jh

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3400 E. LAUREL HURST DR. NE
SEATTLE, WA 98105

We support the building of a helicopter landing pad at Childrens Hospital.

The lives of children are more important than the noise of an occasional helicopter in our neighborhood. This helistop is long overdue.

Andrea & Alan Rabinowitz

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92 JUN -9 AM 11:31
OFFICE OF
HEARING EXAMINER

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5260-18 N.E.
Seattle, WA 98105

Office of Hearing Examiner
City of Seattle
1320 Alaska Bldg.
618 Second Avenue
Seattle, WA. 98104

RECEIVED BY
92 JUN -9 AM 11:30
OFFICE OF
HEARING EXAMINER

Dear Sirs:

We strongly support the approval to construct a helistop at Children's Hospital and Medical Center.

Each time we hear a helicopter overhead, we're glad it may be saving a child's life. The noise brings gratitude, not frustration.

Sincerely,

Don & Ramona Davis

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BERTRAM LEVY, M.D.
P. O. BOX 218
PORT TOWNSEND, WASHINGTON 98368
PHONE 385-2905

DIPLOMATE OF THE
AMERICAN BOARD OF UROLOGY

6 June 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Ave.
Seattle, WA 98104

To whom is may concern:

It has been brought to my attention that there is some controversy regarding the need for helicopter transport to Children's Orthopedic Hospital. We in rural communties depend on this contact to transport our children to Children's Orthopedic in moments of crisis. If it disturbs some of the neighbors television reception, then I suggest that they evaluate the importance of a child's life compared to a few minutes of objectionable noise; the sacrifice seems minuscule.

Sincerely,

Bertram J. Levy, M.D.

BJL/vw

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92 JUN -9 AM 11:24
OFFICE OF
HEARING EXAMINER

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MELANIE McGRORY, M.D.
Family Practice

1136 Water Street
Port Townsend, WA 98368
Telephone (206) 385-5355

June 3, 1992

RECEIVED BY
92 JUN -9 AM 11:30
OFFICE OF
HEARING EXAMINER

The Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Ave
Seattle, WA 98104

To whom it may concern:

As a Family Practice Physician in rural community on the Olympic Peninsula it has often ~~been~~ necessary for me to transport, emergently, sick children to the Childrens Orthopedic Hospital. I am writing in support of the building of a helipad in close proximity to the Childrens Orthopedic. When children are sick enough to be transported by helicopter their rapid delivery to the pediatric intensivists is of the utmost importance in determining outcome, frequently depending on minutes.

Thank you very much for your consideration in this regard.

Sincerely,

Melanie McGrory, M.D.

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JOHN C. ROWE, M.D.
Family Practice

RECEIVED BY
92 JUN -9 AM 11:28
OFFICE OF
HEARING EXAMINER

1136 Water Street
Port Townsend, WA 98368
Telephone (206) 385-5355

June 3, 1992

Office of Hearing Examiner
City of Seattle
1302 Alaska Building
61[illegible] Second Ave
Se[illegible]ttle, WA 98104

RE: Childrens Hospital/Medical Center
Permit for helicopter landing pad.

Dear Sir,

Being a referring physician to Childrens Orthopedic Hospital from far away, Port Townsend, we often need to helicopter emergency patients from our facility at Jefferson General Hospital to Childrens. This is especially true with sick newborns, certainly a rapid transport and the ability to land Childrens is extremely important. I certainly would favor the permit.

Sincerely,

John C Rowe M.D.

John C. Rowe M.D.

JCR/ta

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GENERAL SURGERY
TRAUMA

RECEIVED BY
92 JUN -8 PM 12:19
OFFICE OF
HEARING EXAMINER

Lothar H. Pinkers, M.D.
1201 - 116TH NORTHEAST, SUITE 10
BELLEVUE, WA 98004-3881
206 - 454-5331

4 June 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Frankly, I'm surprised to see that this issue is still kicking around unresolved. When the various attempts at government regulation of the health industry during the 70s and 80s were in vogue, this issue had come to the floor. It was opposed initially because the issues of the utility of helicopters for rapid patient transfer in the civilian environment had not been well established, and the issue was viewed by some as an element of medical grand standing. Obviously there are questions of environmental noise with respect to the surrounding community.

These issues need to be laid to rest. Over the years, helicopter transfer in civilian emergencies has been proved to be an essential part of medical care. Obviously, when the flight is of one of transfer over long distances and not of great urgency, then an alternative site such as the Edmonds pavilion field is desireable because of the lessened impact on the surrounding community. However, when the flights are utilized to save lives in terms of respiratory management or severe hemorrhage, or the necessity of offsetting the rapid effects of certain poisons, then time is of the essence, and the communities' noise considerations must be set aside. These are not very frequent, yet when they occur their urgency is overwhelming in terms of the need to deliver rapid care to a sick or injured child. To force a remote set down and then a land transfer under those circumstances makes no logical sense for saving lives. It is important that a tertiary treatment center of the stature of Children's Hospital and Medical Center have the ability for the true rapid emergency to have the patient delivered straight to the door of the hospital for the institution of the most rapid life saving therapies.

In contrast to testimony I gave on a similar discussion of this issue some 15 or more years ago, it is my current firm belief that the benefits to sick and injured children outweigh the invasion of helicopter noise upon the community in those few instances in which rapid transport is of the utmost necessity. I ask that you review this favorably and

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recommend that the helistop at Children's Hospital and Medical Center be permitted for use under true emergencies. This could be accomplished if necessary with a proviso that such thoughts be reviewed by a multi-disciplinary committee, such as the Seattle/King County Emergency Medical Services and Trauma Care Council.

While I am writing this letter as a private citizen, you need to know that my credentials in the emergency field span the entire development of emergency and pre-hospital emergency medicine since 1962. I have held official capacities both in the King County Medical Society, the Washington State Medical Association, and now the Governor's Committee on Trauma. I have participated in the writing of every piece of important emergency medical care legislation and the rule making that attends it since 1969. I do not make this recommendation lightly. I urge that you adopt a favorable stance with respect to Children's Hospital and Medical Center.

Respectfully submitted,

L. H. Pinkers, M.D., F.A.C.S.

LHP:jmf

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Mr & Mrs R.L.Loesch
3326 43rd N.E.
Seattle, Wa 98105

June 7, 1992

RECEIVED BY
92 JUN -8 PM 12:18
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Bldg.
618 Second Ave.
Seattle, Wa 98104

Gentlemen:

A permit to build an helicopter landing pad outside the Emergency Room of Children's Hospital, should definitely be issued. The landing pad will make more expedient with greater safety those flights where critically ill children require a flight directly to the hospital.

Anybody near the path of a helicopter has a greater chance of being injured or killed by taking a bath or walking across the street, than by any kind of an helicopter accident.

Lawn mowers, blowers, edgers, tree sprayers, chain saws, traffic etcl, create higher noise levels, are of longer duration, and occur more often than the noise from a properly flown helicopter.

Neither of these concerns will have any effect whatsoever on property values.

Very truly yours,

R. L. Loesch

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King County Fire Commissioners Association

12923-156TH AVE. S.E., RENTON, WA. 98059

June 4, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Bldg.
618 Second Avenue
Seattle, WA. 98104

RE: Children's Hospital & Medical Center/Helicopter Landing Pads

RECEIVED BY
92 JUN -8 P 1:
OFFICE OF
HEARING EXAMINER

Dear Sirs:

On behalf of the King County Fire Commissioners Association, we would like to express our support for the building of a helicopter landing pad outside the emergency room at Children's Hospital Laurelhurst Campus and the improvements to the helistop located at the University of Washington Intramural Field.

After reviewing this issue, there is simply no compromise when this type of transport is necessary to save the critical time that is needed in life and death incidents or critically ill or injured children. And this time is saved only if the landing sites are strategically located next to an emergency room.

The compromise proposal that has been ironed out between the citizens of Laurelhurst and Children's Hospital to minimize the adverse effects of emergency helicopter transport addresses the community's concerns about noise, safety and frequency of flights yet still provides for the rapid transportation of critically ill or injured children. We feel strongly that this proposal will improve the level of critical care available to the children living or visiting in the Puget Sound area and Olympic Peninsula and increase their chances of survival. We highly support this proposal.

Members of the King County Fire Commissioners Association strongly urge you to approve the permit requests for these helistop sites.

We appreciate your careful consideration of this matter.

An Association of taxing districts dedicated to progress in fire prevention and life saving emergency medical service

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Sincerely,

KING COUNTY FIRE COMMISSIONERS ASSOCIATION

Don Leggett

Don Leggett
President

cc: Children's Hospital & Medical Center
King County Fire Chiefs Association

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King County Fire District 11
1243 Southwest 112th Street
Seattle, Washington 98146
Phone: (206) 243-0330

RECEIVED BY
92 JUN -8 PM 12: 17
OFFICE OF
HEARING EXAMINER

June 4, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Hearing Examiner:

I am responding to the proposed helistop outside of the Emergency Room on the Laurelhurst campus of Children's Orthopedic Hospital.

As Chairman of the Board of Commissioners for King County Fire District Eleven, I would like to go on record stating our District is in full support of this project. As a department we handle over 3000 medical aid calls a year and are very much aware of how important seconds can be in critical cases - it can mean the difference between life and death.

Over the past few years this department has worked with AirLift Northwest and have seen first hand what a medically-trained staff and helicopter lifts and landings at different hospital sites can mean to the critically ill and injured. We feel the minimal environmental impact to the area will be far outweighed by the lives that will be saved by this proposed project.

We again are in full support of this landing site proposal and hope that this permit will be granted in the interest of Seattle and all of our surrounding areas for the purpose of savings lives.

Yours truly,

Jesse M. Anderson
Chairman

JMA:cg

cc: Treuman Katz
Seattle Times
Seattle P.I.
AirLift Northwest

FIRE PREVENTION DOESN'T COST ... IT PAYS ...

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COLUMBIA BASIN HOSPITAL

Grant County Public Hospital District No. 3

RECEIVED B
92 JUN -8 PM 12: 1
OFFICE OF
HEARING EXAMINER

June 3, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sir/Madame:

This is a letter of support for Children's Hospital and Medical Center's request for permit from the City of Seattle to build a helicopter landing pad outside the emergency room on the Laurelhurst campus.

Columbia Basin Hospital is a small rural acute care/long term care facility located in Ephrata, Washington. The hospital has had a helipad for the last 10 years and it is used approximately 2-3 times a week to transport adults and pediatric patients from Columbia Basin Hospital to hospitals in Spokane or Wenatchee. It is not uncommon for trauma or extremely critical patients to arrive in our hospital emergency room. Those patients are stabilized at the hospital and are transported to facilities that can best handle their care. We have a very good working relationship with the air transport services and without this helipad, we would not be able to offer the best possible health care services to the residents of this community and anyone who presents themselves to our hospital.

I strongly encourage you to grant the permit for Children's Hospital and Medical Center. Their reputation is unsurpassed in the Northwest and any avenue that can be used to save a child's life is invaluable. The children really are our future!

If you have any further questions about our helipad service at Columbia Basin Hospital, please feel free to contact me.

Sincerely,

James A. Diegel
Administrator/Superintendent

JAD:rm

200 Southeast Blvd. Ephrata, Washington 98823 (509) 754-4631

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NORTHWEST PEDIATRICS
Specialists in Children's Healthcare, Birth to Maturity
3149 Ellis Street, Bellingham, WA 98225
(206) 734-4302 or 354-3277

RECEIVED
92 JUN -5 PM 12:18
OFFICE OF
HEARING EXAMINER

June 1, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

To Whom it May Concern:

I am a Pediatrician in Bellingham Washington. I transfer critically ill children from Bellingham to Children's Hospital and Medical Center approximately 6 times per year. These children need to have their transport accomplished as smoothly and as rapidly as possible. I believe that any child sick enough to transfer to a tertiary care center should be delivered directly to that tertiary care center without having to land elsewhere and be transferred into another emergency vehicle before being finally delivered to the referral center. Time is critical for these children. Transferring from one emergency vehicle, that is a helicopter, to a land based ambulance adds further time and stress that they can ill afford. I strongly urge you to approve the construction of a heli-stop to ensure adequate and safe delivery of my patients to Children's Hospital and Medical Center.

I would be happy to answer any questions that you may have for me about the type of patient's that I transfer and their need for direct transfer without the delay involved in a landing at Washington's Intramural Field. My phone number is 734-4302. Thank you, and again, I urge you to approve the construction of this heli-stop.

Sincerely yours,

David L. Johnson, M.D., FAAP

DLJ:vg

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KING COUNTY FIRE PROTECTION DISTRICT No. 25

12923 - 156TH AVE. S.E. • RENTON, WASHINGTON 98059 • 255-5151

June 4, 1992

RECEIVED BY
92 JUN -8 PM 12:16
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
City of Seattle
1320 Alaska Bldg.
618 Second Avenue
Seattle, WA. 98104

RE: Children's Hospital & Medical Center/Helicopter Landing Pads

Dear Sirs:

I am writing to express King County Fire Protection District #25's position of support for the building of a helicopter landing pad outside the emergency room at Children's Hospital Laurelhurst Campus and the improvements to the helistop located at the University of Washington Intramural Field.

The intended use of helicopter transports is for life threatening situations where time is essential to the child's survival. This critical time is saved only if the landing sites are strategically located next to an emergency room.

The compromise proposal that has been ironed out between the citizens of Laurelhurst and Children's Hospital to minimize the adverse effects of emergency helicopter transport addresses the community's concerns about noise, safety and frequency of flights yet still provides for the rapid transportation of critically ill or injured children. We feel strongly that this proposal will improve the level of critical care available to the children living or visiting in the Puget Sound area and Olympic Peninsula and increase their chances of survival.

King County Fire District #25 strongly urges you to approve the permit requests for these helistop sites.

We appreciate your careful consideration of this matter.

Sincerely,

KING COUNTY FIRE PROTECTION DISTRICT #25

Art Larson

Art Larson
Chief

cc: Children's Hospital & Medical Center

'MAXIMUM EFFORT FOR ALL'

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CITY OF AUBURN CENTENNIAL 1891-1991

Mayor Bob Roegner • 25 West Main Street • Auburn, Washington 98001-4998

RECEIVED BY
92 JUN -3 PM 12:16
OFFICE OF
HEARING EXAMINER

June 3rd, 1992

Robert K. Johnson
Fire Chief
Auburn Fire Department
1101 "D" St. N.E.
Auburn, Washington 98002

Office of the Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

The Honorable Hearing Examiner:

I am writing to you on behalf of the Auburn Fire Department to urge your favorable consideration of the request of Children's Hospital and Medical Center to obtain a permit to build a helicopter pad outside the emergency room. The need for a improved landing surface and associated safety devices at Children's Hospital, goes far beyond the concept of simply landing a helicopter in a convient location. Such a facility would prove to be essential to the citizens of Seattle in a variety of situations.

The Auburn Fire Department has an F.A.A. approved heliport at our headquarters station in northeast Auburn. Since 1986, we have landed over six hundred aeromedical and helitack (fire fighting helicopters) flights without incident. A heliport has proved to be a far safer method of landing helicopters than the use of unimproved locations. In addition, heliports are a tremendous asset to city disaster plans...especially at hospital locations. In the event of an earthquake or several other types of disasters, it is not unreasonable to expect that the ground transportation system may be disrupted for up to 72 hours.

A fixed heliport, with known latitude and longitude, is accessible in marginal weather conditions and during night operations. Helicopters can translate the latitude and longitude to Uniform Mapping System coordinates which allow them to fly directly to the heliport. In addition, fixed facilities have some degree of built-in fire fighting protection in the unlikely event of a low impact helicopter accident. Further, security fencing precludes citizens

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from entering the landing area.

The Auburn Fire Department is an emergency medical service provider agency and some of our children in the community end up at Children's hospital. As an emergency medical service provider and a strong advocate of aeromedical service, we urge you to also consider the necessity for this facility in terms of day-to-day emergency medical services. Ground transport of a severely injured child from Auburn to Children's Hospital, during rush hour, is simply not feasible or in the best interest of a critically injured child. The ground transport dilemma is shared by virtually all suburban cities that ring King County.

In conclusion, I would again indicate our most sincere recommendation that you permit Children's Hospital to develop either a heliport or helistop facility. Such a facility would be in the best interests of the citizens from Seattle, King County and many other portions of the state.

Respectfully,

Robert K. Johnson

Robert K. Johnson
Fire Chief
Auburn Fire Department

cc: Mayor Bob Roegner
City of Auburn

Treuman Katz
President/CEO
Children's Hospital

Suzanne Petersen
Director of Government Affairs
Children's Hospital

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KING COUNTY FIRE PROTECTION DISTRICT 10

RECEIVED BY
92 JUN -8 PM 12:15
OFFICE OF
HEARING EXAMINER

June 4, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98014

To whom it may concern,

I have been asked to address an issue on behalf of CHILDREN'S HOSPITAL AND MEDICAL CENTER requesting my support in their quest for a helicopter landing pad on the medical campus of Children's Hospital.

To cut to the bottom line, I whole heartedly endorse the concept of a permanent helicopter site on the medical campus of Children's Hospital.

My professional background is in the emergency medical and fire services for 20 years. I am currently an emergency room Physicians Assistant for Group Health Cooperative, a certified Washington State Paramedic, Assistant Fire Chief for King County Fire District 10, and member of the Governors Steering Committee for EMS and Trauma representing the Washington State Association of Fire Chiefs.

In my working experience as an emergency health care manager and provider for those 20 years, I have come to the conclusion that there is a direct correlation with rapid transport of the critically sick and injured to the most appropriate facility and patient outcomes. In the case of children who are critically ill or injured it is my belief as a medical practitioner, and I believe I can speak for my colleagues in the field emergency and clinical setting, that the most appropriate place for these patients is Children's Hospital.

Helicopter technology is come a long way since Vietnam. As a Navy corpsman medevac crew member stationed with the US Marines in Vietnam, I realized the value of rapid airborne transportation to medical facilities for the people that came into my care as a result of hostile operations. We saved a lot of Marines and sailors who were critically wounded due to the rapid transport times afforded by helicopters.

175 N.W. NEWPORT WAY • ISSAQUAH, WA. 98027 • (206) 392-3433 • FAX (206) 391-8764

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Modern helicopter technology has developed a safer, faster and more capable piece of equipment that has the medical equipment, staff and flexibility to transport the critically sick and injured. Within the Puget Sound region including the City of Seattle environs, ground transportation is slow and with the increasing traffic congestion, unnecessary delay in arriving at the most appropriate hospital can affect patient outcomes. That is to say, the faster a patient can reach definitive care, the better off they will be.

The issue of care of sick and injured children is not limited to the King County/Seattle area. There is a bigger picture to consider. In the extended Greater Puget Sound area which includes Pierce, King, Thurston, Mason, Grays Harbor, Snohomish, Clallam, and Jefferson County's, ground (ambulance) transportation is measured in hours not minutes. With the use of the helicopters those hours are shortened to minutes.

I don't think that people in the Seattle area and surrounding Greater Puget Sound communities should settle for anything less than the opportunity for helicopter evacuation in those critical situations. Granted, helicopter technology has not developed a quieter piece of equipment but the occasional noise levels generated in the surrounding community is a small price to pay for an improved medical service.

Thank you for the opportunity to address this critical lifesaving issue and I anticipate a favorable ruling for Children's Hospital and Medical Center.

Our children's lives depend on it.

Warm regards,

John K. Murphy PA-C, EMT-P
Assistant Fire Chief

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port townsend
family physicians, inc., p.s.

DIPLOMATES. AMERICAN BOARD OF FAMILY PRACTICE

J. RANDALL JACOBS, M.D. DOUGLAS KURATA, M.D. ANNE E. BIEDEL, M.D.

June 4, 1992

RECEIVED BY
92 JUN -8 PM 12:14
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiners
City of Seattle
1320 Alaska Building, 618 2nd Ave.
Seattle, WA 98104

Dear Sir or Madam:

I am a Family Practice physician in Port Townsend, Washington. Our emergency room services a very large rural area. We have no pediatricians available in the vicinity, our closest pediatrician is over an hour away from us. We have found it mandatory to transport high risk new born infants by helicopter to Childrens Orthopedic Hospital numerous time over the past six years that I have been in this community.

I work as an emergency room physician as well, and often have called upon Airlift Northwest to transport critically ill children to Childrens Orthopedic Hospital. I feel this is a service which is absolutely mandatory for us to be able to care for our children.

Critically ill people, whether they are young or old, need to be transported as quickly and efficiently as possible when the need arises. I feel if the helicopter were unable to land at Childrens Orthopedic Hospital, and patients had to be transported by ambulance from a removed site, the patients would be placed at grave risk. Time is of the essence in most of our pediatric emergency cases, by multiple transfers the patient's ability to survive the transition is decreased.

I urge the community surrounding Childrens Orthopedic Hospital to reconsider its stand on the helicopter pad. Childrens Orthopedic Hospital has been a landmark in Seattle for many, many years, probably before most of the community surrounding it existed. I believe that the hospital and its inherent needs takes precedent over the community needs at this point, as Childrens services the whole of Western Washington and Alaska.

Thank you for your consideration.

A E Biedel MD

Anne E. Biedel, M.D.

AEB:lh

934 SHERIDAN, PORT TOWNSEND, WASHINGTON 98368

TELEPHONE 385-3500 AFTER HOURS 385-3501 BUSINESS OFFICE 385-6200

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CASCADE VALLEY HOSPITAL

RECEIVED BY
92 JUN -5 AM 11:43
OFFICE OF
HEARING EXAMINER

June 3, 1992

Office Of Hearing Examiner
City of Seattle
1320 Alaska Building
618-2nd Avenue
Seattle, Washington 98104

Dear Hearing Office:

Cascade Valley Hospital of Arlington, Washington would like to go on record in favor of the Children's Hospital Medical Center's request for an on campus heliport.

We have high-risk infants and children which require tertiary level specialized care. Often this case is urgent and delay could result in disability or death.

The 5 to 10 minutes to offload from the chopper and load to an ambulance transport, off load the ambulance into the Emergency Room are minutes wasted if a heliport were unavailable on campus.

I know good city and facility planning can deal with appropriate safety and noise issues, but the most important goal of this issue is to expedite urgent care in the Hospital as soon as possible in a safe manner. With that goal, it is clear an on-campus heliport is vital.

Thank you for your consideration and support.

Warm regards,

Robert D. Campbell, Jr.
Administrater

RBC:bjb
cc: Truman Katz, Administrator
Children's Hospital Medical Center

330 S. Stillaguamish St.
Arlington, Washington 98223
Phone: (206) 435-2133
1-800-272-0115
Fax: (206) 435-0513

Mary Jean Kraski, Commissioner
Ray McClure, Commissioner
William Roal, Commissioner

Karin VoKaty, Commissioner
Judy Koch, Commissioner
Robert D. Campbell, Jr., Administrate

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92 JUN -5 AM 11:45
OFFICE OF
HEARING EXAMINER

OVERLAKE HOSPITAL MEDICAL CENTER

1035 116th Avenue NE
Bellevue, WA 98004
(206) 454-4011
Telecopier: (206) 462-5224

June 3, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

To Whom It May Concern,

The purpose of this letter is to strongly endorse the request of Children's Hospital and Medical Center to build a permanent helistop.

Children's serves a unique role within this greater community and region. They provide care for critically ill children that other hospitals, including Overlake Hospital Medical Center, cannot provide.

Having personally and professionally served in Emergency Medicine for over twenty years, I can attest that seconds count when treating a critically ill child.

I can understand the concerns of the local community relative to sound and safety, but I would hope they and the City can understand how important both Children's Hospital and air transportation are relative to improving the quality of life for all of us.

Your consideration is appreciated.

Sincerely,

Sanderson J. Jeghers
President and Chief Executive Officer

SJJ:lp

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

KGH
Kennewick General Hospital
900 South Auburn, P.O. Box 6128, Kennewick, WA 99336
Tel 509/586-6111

RECEIVED BY
92 JUN -5 AM 11:44
OFFICE OF
HEARING EXAMINER

June 1, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sir:

My letter is written to support the request of Children's Hospital and Medical Center for a permit to build a helistop outside the Emergency Room on their Laurelhurst campus. Our Pediatrics Department transfers patients to Children's Hospital at the rate of 4-6 children per year; some of these transfers are of critically ill or injured children and require helicopter transport and on-site landing at Children's in order to best assure the preservation of life.

Children's Hospital's proposed compromise plan to land only the most critically ill or injured children at the helistop should enable the continuation of the improving survival rates Children's has accomplished while not unduly impacting the surrounding Seattle community.

On behalf of Kennewick General Hospital and its Pediatric patients, I urge the City of Seattle to approve the construction of the helistop at Children's Hospital and Medical Center. The helistop is invaluable to the assurance of adequate and safe delivery of emergency medical services to children in our Pacific Northwest region.

Thank you,

Linda Garner

Linda Garner
Acting Administrator

LG:ss

cc: Children's Hospital & Medical Center

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3250 42nd ave NE
Seattle, Wa. 98105
June 3, 1992

Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, Wa. 98104

RECEIVED BY
92 JUN -4 PM 12:21
OFFICE OF
HEARING EXAMINER

TO whom it may concern:

After endless protests I was most disheartened to find that Children's Hospital insists on having their own heliport on the hospital grounds. This helipad will cause Airlift Northwest to fly directly over the schoolyard at Jamestown Elementary School. Granting permission to do as will jeopardize the lives of 400 children every day to possibly save the life of one. Does this make any sense to you? The hospital already has a suitable landing pad on the IMA field 5 minutes away. Please send me a copy of the Hearing Examiner's Report.

Sincerely yours,
CAROLYN MARGON
Carolyn Margon

cc. Norm Rice

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Northwest Asthma
& Allergy Center, P.S.

RECEIVED BY
92 JUN -4 PM 12:20
OFFICE OF
HEARING EXAMINER

C. Warren Bierman, M.D.
William E. Pierson, M.D.
Gail G. Shapiro, M.D.
Clifton T. Furukawa, M.D.
Leonard C. Altman, M.D.
Frank S. Virant, M.D.
Paul V Williams, M.D.
Dominick A. Minotti, M.D.
Sharon C. Sack
Administrator

May 18, 1992

Office of Hearing Examiner,
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

RE: Children's Hospital and Medical Center Helistop Proposal

TO WHOM IT MAY CONCERN:

I would like to go on record as being strongly in favor of allowing Children's Hospital and Medical Center to establish a helistop on their campus immediately adjacent to their emergency room.

As a physician at an outlying community hospital, I have had numerous opportunities to refer critically ill and injured children and neonates to Children's Hospital for care. On many occasions, these infants or children are too ill to withstand any additional handling that might be required when landing at a facility distant from the Children's Hospital and requiring transferring to an ambulance.

As a referring physician and as a parent, it seems to be potentially tragic if a child should die simply because some neighbors do not want to be awoken by a helicopter in the night.

Sincerely,

Paul V. Williams, M. D.

PVW/mer

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Physicians Affiliated with the University of Washington School of Medicine, Children's Hospital and Medical Center and A.S.T.H.M.A. Inc.

120 N. 17th Mt. Vernon, WA 98273 206-424-4410 FAX 206-424-0749
4540 Sand Point Way NE Seattle, WA 98105-3914 206-527-1200 FAX 206-523-0724

RECEIVED BY
92 JUN -4 PM 12:20
OFFICE OF
HEARING EXAMINER

June 2 92

Office of Hearing Examiner
City of Seattle
1320 Alaska Bldg
618 2nd Ave - Seattle

Hello —

I am writing in support of maintaining the Heliport at Children's Orthopedic Hospital in Seattle. While I can sympathize with the neighborhood disruptions that must be occurring as a result of frequent flights, I feel the availability of direct flights to COH are vitally important. As an RN and Certified Nurse Midwife working in a Rural Hospital (Jefferson General, Port Townsend) I can attest to the fact that with an emergency transport of a newborn, minutes can be critical. I have personally done helicopter transports to UW with women in premature labor — on one occasion we made it to the athletic field where UW's helicopter landing site is located, only to have the woman deliver in the ambulance between landing & arrival at U.W. For newborns, such a delay could mean the difference between

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survival & death, particularly if there are traffic delays. Please keep the heliport at COH!

thank you

Marty Garrish RN, CNM.

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CITY OF KENT

RECEIVED BY
92 JUN -4 PM 12:20
OFFICE OF
HEARING EXAMINER

Dan Kelleher, Mayor
Norman G. Angelo, Fire Chief

June 2, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle WA 98104

Dear Hearing Examiner,

I am writing as the Fire Chief for City of Kent and King County Fire Protection District #37. It is my understanding that you are considering a request for a helicopter landing area for Children's Hospital. Our jurisdiction is projected to respond to over 10,000 alarms this year. Unfortunately a significant amount of these calls involve critical injuries and unique circumstances. In our business seconds not minutes are critical to life. Even if life and death are not the issue, it often can be the matter of being able to offer treatment by a medical person with specialized skills. That treatment often makes a critical difference in a persons wholeness and basic quality of life.

It seems that in South King County we experience more than our share of unusual traumas and accidents. Therefore our experience rate base is a little more frequent than others. We use many forms of transport, but only the most critical or unique situations are taken out by helicopter. It is not uncommon for our department to experience one to three (1 - 3) airlifts per week. I frequently listen to other fire departments that border us and they also use this same service frequently.

While there are many fine medical facilities, Children's Hospital is among the best in the ability to deal with critical and unusual injuries/situations that relate to young patients. Their focus on skills in treating patients in this area make them an invaluable asset to field emergency medical personnel.

I am not writing this letter to load your desk with paper to politically sway your decision. Rather, it is based on a strong personal and professional observation of: field emergency situations; the skills, quality and focus of Children's Hospital; and understanding the difference that their request could make in helping a young person live a life of reasonable quality. I would strongly urge you to consider support of their request.

FIRE HEADQUARTERS / 24611 116th AVE. S.E., KENT, WASHINGTON 98031 / TELEPHONE (206) 859-3322 / FAX # 859-3281
CODE ENFORCEMENT DIVISION / 220 4th AVE. SO., / KENT, WASHINGTON 98032-5895 / TELEPHONE (206) 859-3360 / FAX # 859-3334

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Thank you for the opportunity to comment.

Sincerely,

Norman G. Angelo, Fire Chief
City of Kent Fire Department
King County Fire Prot. Dist. #37
24611 116th Ave SE
Kent WA 98031

cc: Treuman Katz, Children's Hospital President and CEO
John Neff, M.D., Children's Hospital Medical Director
Suzanne Petersen, Children's Hospital Director of Government Affairs

lm

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RECEIVED BY
92 JUN -4 PM 12:19
OFFICE OF
HEARING EXAMINER

EVERGREEN
HOSPITAL
MEDICAL
CENTER

King County Hospital District No. 2
12040 N.E. 128th Street
Kirkland, Washington 98034
Phone 206-821-1111
FAX 206-820-8697

June 2, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 2nd Avenue
Seattle, WA 98104

To Whom it May Concern:

The purpose of this letter is to express our organization's support for the helistop proposal on the campus of Children's Hospital and Medical Center.

As an administrator with over twenty years experience in maternal and child care programs I have personal experience with the lifesaving benefits of direct hospital to hospital helicopter transport. Evergreen Hospital has a helistop on its campus approved within the Master Site Plan adopted by the City of Kirkland in 1990. As we all know in the Seattle area from our experience with the Medic I program, a few minutes of care can make a difference not only in saving a life but in the quality of that life which is saved. There simply is no substitute for a helistop at Children's Hospital.

Children's Hospital deserves recognition throughout the Northwest for the creation of a Medical Review Panel to monitor landings at the on-campus helistop. This panel will review the utilization of the on-campus helistop so that the appropriate criteria can be established and monitored to mitigate the disruption caused by the helicopter usage.

Airlift Northwest represents the finest example of cooperative health care planning to avoid the abuses of medical helicopter transport found in several other parts of the nation. Airlift Northwest can operate when medically needed without the inappropriate incentive of competing with other single hospital owned services. The cooperative development of Airlift Northwest assists the community in knowing that the service is used only when medically necessary.

Within a sense of community is the willingness to understand the needs of our neighbors. Residential communities and hospitals (even nationally recognized medical centers) live side by side. They grow from each others' strengths and have learned how to accept each others' strong characteristics. I believe the combination of safety and medical care criteria established for the use of the Children's Hospital helistop combined the best possible

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criteria for success for both the hospital and the community in which it lives.

Your consideration of these observations is appreciated.

With best wishes,

Andrew Fallat, FACHE
Chief Executive Officer

AF/ef

cc: Treuman Katz, CEO, Children's Hospital

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RECEIVED BY
92 JUN 30 AM 11: 1

5217 NE 43rd Street
Seattle WA 98105

29 June 1991

OFFICE OF
HEARING EXAMINER

Office of the Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle WA 98104

In Re:
9106441

298740

Helistop

Project Number 8405870,

CF Number 297288,

Children's Hospital Emergency

Dear Hearing Examiner:

This letter is in response to your request for comments for the emergency helistop on the Children's Hospital and Medical Center (CHMC) campus.

First, here is my background concerning helicopter operations. As part of my work, I have spent about 300 hours as a passenger in helicopters. Most of this flying has been in Alaska and out over the adjacent pack ice. About half of this experience has flying from Coast Guard and NOAA ships, and half flying from land. My flying experience has been primarily in the Bell UH-1, JetRanger and Long Ranger, with some flight time in the French Alouette, and German Messerschmitt. My experience has given me the greatest respect for the capability and dangers of these machines.

I am also concerned about this request because I have two children, one of whom goes to Laurelhurst School and enjoys playing on the playground and at Laurelhurst park. My response is also colored by the recent death of Senator John Heinz whose helicopter crashed into a light plane over a crowded school yard, resulting in the death of all the passengers and several of the school children. The descriptions of the crash into the school yard were notable because the way in which some of the children panicked and were unable to get out of the way of falling wreckage.

For comparison with the proposed hospital landing site, let me describe some of the details involved in the landing and take-off of a helicopter from a ship. For example, when we would steam out of Kodiak or Seattle on a NOAA or Coast Guard vessel, we would also have the helicopter land on the ship after we had steamed several miles away from the port, to minimize damage to the port in case of a crash or fire. The procedure for landing is as follows: First, the decks would be cleared of all non-essential personnel, and smoking would be prohibited on the flight deck. Second, a fire fighting and personnel rescue team would be deployed adjacent to the flight deck in case of a crash or fire. Third, the ship would steam into the wind, so that the helicopter approach would be from the stern. Then a single officer serving as flight director would tell the helicopter when it was safe to land. A similar deployment scheme occurred during helicopter lift-offs. This whole sequence of safety regulations is designed to minimize damage to personnel, the ship, or helicopter. I would like to see evidence that CHMC will follow similar or equivalent safety precautions.

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I am also very concerned that CHMC is in process of preparing its Fifteen Year Master Plan, which suggests that CHMC will grow in both height and density. The plan implies a new height of 105 feet, which suggests that the helicopters may be forced to land in the middle of a construction site, or a set of high-rises. For example, my office is adjacent to the University Hospital construction site. For the past six months, the site has been characterized by the presence of a tall crane with its attendant cables moving material about the site, and power shovels and bulldozers stirring up dust. The changing skyline represented by new construction will make it very difficult and unsafe for a helicopter to land.

Given these concerns, and the additional concern that CHMC is a crowded urban campus with the only two immediate alternate landing sites of the Laurelhurst School playground and the Laurelhurst Park being frequently heavily populated by children, I feel that Children's request deserves considerable scrutiny and oversight.

First, I support the establishment of an independent oversight and review committee.

Second, I recommend that a landing path be assigned that will avoid the Laurelhurst Elementary School and the Laurelhurst Park.

Third, I ask that the permit only apply for the present location of the helistop, and that if a new location is desired, the permit process be re-opened.

Fourth, I recommend in the event of new construction being approved for CHMC, that the permit process be reopened, at least to the oversight and review committee, so that changes in the flight plan can be evaluated.

Sincerely yours,

Seelye Martin

Seelye Martin
523-2863

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2400 NE 95th Street
Seattle, Washington
98115-2499
(206) 525-5050
Fax (206) 525-9795

Frances L. Hume
Executive Director

RECEIVED BY
92 JUN -3 PM 12:13
OFFICE OF
HEARING EXAMINER

June 1, 1992

Ryther
Child Center

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sirs:

I am writing this letter in support of the Children's Hospital and Medical Center request for permit to build a helistop outside their Emergency Room on the Laurelhurst Campus.

It seems to me that the number of children at risk (no matter how few) without such an emergency interventive measure is reason enough. Additionally, it appears that the hospital officials have done what could be done to be sensitive to neighboring community concerns. It seems the value of saved lives and reduced trauma to children and their families is far greater than possible noise or aesthetic effects. AS a concerned citizen and a professional in the child welfare arena I urge your reconsideration of the Children's permit to build this helistop.

Thank you for your attention to this matter. I trust you will make the right decision for the best possible service to our city's children.

Sincerely,

Char Tong, M.S.W.
Associate Director
Quality Management

CT:pjs
cc: Treuman Katz
President and CEO
John Neff, M.D.
Medical Director

CWLA
ACCREDITED
A United Way Agency

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Bellingham
Pediatrics
ASSOCIATES

RECEIVED BY
92 JUN -3 PM 12: 11
OFFICE OF
HEARING EXAMINER

May 21, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sir,

I am a pediatrician in Bellingham, Washington, and deal with very critically ill children from time to time. Over the years the assistance that I have received from the physicians at Children's Hospital has been greatly enhanced by having helicopter service between Bellingham and the Children's Hospital available. I would strongly encourage you to greatly facilitate the care of these critically ill children by granting the request to have a helistop immediately at the emergency room of the Children's Hospital in Laurelhurst. The availability of such a facility may make a significant difference in the recovery and useful life of critically ill patients that we deem necessary for tertiary care at a hospital such as Children's is.

Thank you very much for considering this in your decision regarding thehelistop for Children's Hospital.

Sincerely,

Kenneth I. Jernberg, M.D., F.A.A.P.

KIJ/jf

cc: Dr. John Neff
C/O Children's Hospital & Medical Center
4800 Sandpoint Way
Seattle

STEVEN P. WISNER, M.D., F.A.A.P.

WARREN D. ERVIN, M.D., F.A.A.P.

SCOTT W. McGUINNESS, M.D., F.A.A.P.

KENNETH I. JERNBERG, M.D., F.A.A.P.

3015 SQUALICUM PARKWAY #180
BELLINGHAM, WASHINGTON 98225
Phone: 733-1911 / 384-1804 (County)
Fax: 733-2014

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Roosevelt Medical Center, INC., P.S.

6300 Ninth Avenue Northeast • Seattle, Washington 98115

(206) 527-7500

May 28, 1992

RECEIVED BY
92 JUN -3 PM 12:11
OFFICE OF
HEARING EXAMINER

City of Seattle Hearing Examiner
Alaska Building, 13th Floor
618 Second Ave.
Seattle, WA. 98101

RE: Meadowbrook Expansion Application

Dear Hearing Examiner:

I am in support of the planned 34 bed addition to the Meadowbrook Nursing and Convalescent Center. As a practicing physician in Seattle, and caring for residents at Meadowbrook Center, I can attest to the fact that these beds are sorely needed.

I remember the first time I went to Meadowbrook and was impressed with the way it blended in to the surrounding community. It was difficult for me to find it the first time because it looks more like a large home from the front than a nursing center.

With the sensitivity that the Sternberg's have demonstrated to the surrounding neighbors by modifying their plan to preserve the beauty and the privacy of the grounds, I feel that there should be a zoning variance given to allow the addition of these beds. The Sternberg's have maintained a consistently high quality of care for my patient's at Meadowbrook, and I feel that they should be allowed to expand their services to a level where they can maintain quality while providing maximal efficiency of this community resource.

Sincerely yours,

Kenneth B. Lauren, M.D.

KBL MD/cjh

cc: Louis and Virginia Sternberg
Administrators/Owners
The Meadowbrook
Nursing and Convalescent Center
3540 N.E. 110th Street
Seattle, WA. 98125-5761

Providing a full spectrum of quality health care for over 50 years

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LAKE CHELAN COMMUNITY HOSPITAL

POST OFFICE BOX 908 • CHELAN, WASHINGTON 98816
TELEPHONE (509) 682-2531

May 27, 1992

Office of Hearing Examiner
City of Seattle
1320 - Alaska Building
618 Second Avenue
Seattle, WA 98104

RECEIVED BY
92 JUN -3 PM 12:11
OFFICE OF
HEARING EXAMINER

Re: Helistop Proposal/Childrens Hospital

Ladies/Gentlemen:

As you near key decisions about Childrens Hospital's request for an onsite helipad, I am writing this letter to support the need for Children's to construct a helistop to ensure the adequate and safe delivery of emergency medical services to children in the region. I am appalled at the squeaky wheels of bureaucracy which has taken eight years and has yet to decide on this issue.

Lake Chelan is an isolated rural family resort area, over three hours drive from Seattle. Over the years, we have had critically ill and injured children requiring emergency air transport to specialized medical centers, such as Childrens Hospital. Air transport, to a rural community which Lake Chelan Community Hospital serves, is one very important and significant component of the regional medical care response system.

Immediate air transport, during the golden hour immediately following an accident or trauma, can be life saving in the most critical cases. Why? Because complex and emergency surgeries, overwhelming infections, and near drownings represent typical conditions in rural Lake Chelan area where every moment lost increases the risk of death to a child.

For these and other commonsensical reasons, we urge you to act promptly and favorably on Childrens' request for a permit to build a helicopter pad, outside its' emergency room. I do hope, for our sake for the sake of our children, that the wheels of bureaucracy will churn a lot faster than they have been.

Sincerely,

Moe Chaudry
Hospital Administrator

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KING COUNTY FIRE PROTECTION DISTRICT NO. 16
KENMORE, WASHINGTON
P.O. BOX 21 98028

BUSINESS 486-2784 EMERGENCY 911

FIRE PREVENTION IS EVERYONE'S RESPONSIBILITY

RECEIVED BY
92 JUN -3 PM 12:12
OFFICE OF
HEARING EXAMINER

June 1, 1992

Office of the Hearing Examiner
City of Seattle
1320 Alaska Building
618 2nd Avenue
Seattle, WA 98104

Gentlemen,

I have recently become aware that Children's Hospital and Medical Center has before you an application to permit a helistop near the emergency room on their Laurelhurst Campus.

Many times helicopter transport is absolutely critical in the health care of children suffering from trauma or serious illness. Upon occassion, helicopter transport is necessitated because of traffic or weather conditions even from as close in as our area here in Kenmore. It would be unfortunate if this necessary and important method of transport in King County were not allowed to happen due to some interference for the neighborhood. We need to remember that similar to emergency apparatus with their noisy siren that sometimes bothers us, each of these bothersome incidents is an occasion where someone is in a serious life threatening situation.

The purpose of this letter is to support Children's Hospitals attempt to obtain approval for their helicopter landing pad. Thank you for your consideration.

Sincerely,

Fred Baker
Fire Chief

FB/lg

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DEPARTMENT OF PUBLIC SAFETY
P.O. Box 1440 • Mercer Island, WA 98040-1440

June 2, 1992

Ms. Meredith Getches
Office of Hearing Examiner
City of Seattle
1310 Alaska Building
618 Second Avenue
Seattle, WA 98104

RECEIVED BY
92 JUN -3 PM 12: 12
OFFICE OF
HEARING EXAMINER

Re: HELISTOP - CHILDREN'S HOSPITAL

Dear Ms. Getches:

It has come to my attention that your office is about to review the request for location of a helistop at Children's Hospital and Medical Center. I understand that Children's has a history of receiving children to the hospital by means of helicopter.

I am writing to urge you to cast an affirmative decision, enabling Children's to develop a helicopter landing site which will be used to bring in only the most critically ill or injured children. While it is true that communities such as Mercer Island may have little direct use of such a capability; I think there are strong grounds for supporting this effort for use, not only by more remote Puget Sound and Olympia Peninsula residents, but also for the potential use of any child who is away from this urban core at camp or other recreational activities.

Printed on Recycled Paper

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Children's has a history of being a good neighbor. Skilled medical professionals who make these helicopter runs will make the essential decision about landing site choice. The Children's site will be maintained only for critical patients, reducing the time until they receive treatment. I support a position which increases the chances for these children.

Thank you for considering this information.

Best regards,

Lynn Oliver

Lynn Oliver, Deputy Chief
Fire Division Commander
King County Fire Chiefs Association,
Boardmember

cc. Trueman Katz, President & CEO
Children's Hospital and Medical Center

John Nett, M.D., Medical Director
Children's Hospital and Medical Center

Jim Davis, Fire Chief, King County Fire 36
President, King County Fire Chiefs Association

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

May 22, 1992

To whom it May Concern;

While the Childrens Hospital serves an important purpose, its location surrounded by single family residences poses some problems. I am very concerned about the granting of a conditional use permit to Childrens to use their grounds as an emergency Heliport. This entails —

① Added very loud noise which is aggravating
② Flights (low) over my home, which is dangerous

Please do not grant this permit. Have them set up pediatric emergency at UW or Harborview, instead.

Diana Lull
4123 - 42nd Ave NE
Seattle WA 98105

RECEIVED BY
92 JUN -2 AM 11:46
OFFICE OF
HEARING EXAMINER

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FAIR BUDGET ACTION CAMPAIGN

P.O. Box 31151 · Seattle, WA 98103 · (206)548-8370 · FAX 5488359
W. 315 Mission · Spokane, WA 99201 · (509)326-8110

May 29, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

RECEIVED BY
92 JUN -2 AM 11:45
OFFICE OF
HEARING EXAMINER

Dear Hearing Examiner:

I am writing in support of the request of Children's Hospital and Medical Center to obtain a permit from the City of Seattle to build a helicopter landing pad outside the Emergency Room on the Laurelhurst campus.

Children's Hospital has done more than its share of compromising to meet any adverse environmental concerns of the surrounding neighborhood. The primary concern of the City should be the safety and lives of our children. Helicopter transport directly to Children's Hospital can mean the difference between life and death because it reduces transport time to the Hospital and the number of times a patient must be moved.

As Director of Fair Budget Action Campaign, I am deeply concerned about issues affecting children in Washington state. I strongly support the request of Children's Hospital and Medical Center. As a resident in the surrounding neighborhood, I feel that the benefits to the potential children and families involved far outweigh any perceived inconvenience to the neighborhood.

Sincerely,

Kathy Morefield

Kathy Morefield, Director
Fair Budget Action Campaign

A voice for low-income people in Washington state

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RECEIVED BY
92 JUN -1 PM 12: 24
OFFICE OF
HEARING EXAMINER

5822 Anne Arbor Avenue NE
Seattle WA 98105
May 29, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Re: Children's Hospital & Medical Center

Dear Hearing Examiner:

I understand you are currently taking comments on a permit application by Children's Hospital and Medical Center ("Children's") for construction of a helicopter landing pad or helistop outside the emergency room at Children's Laurelhurst campus. I am submitting this letter in support of Children's permit application.

My wife and I are residents of the Hawthorne Hills neighborhood and live in close proximity to Children's. We have always viewed Children's as an extremely valuable asset of the greater Seattle area and have considered ourselves fortunate to live near Children's.

We understand the helistop would be limited to use for transportation of only the most critically ill or injured children. We also understand that Children's has agreed to other mitigation measures to minimize the impact on the surrounding neighborhoods. Thus limited we view a helistop as a logical, important and necessary facility to enable Children's to continue to provide care for children of our area. We frankly are dismayed that residents of Laurelhurst or other surrounding neighborhoods would oppose the heliport. We view such opposition to be simply selfish and short-sighted.

I believe the majority of Hawthorne Hills' residents also support the helistop application. I am the Past President and a present trustee of the Hawthorne Hills Community Club. When this matter came up at our last meeting, the Board of Trustees was unanimous in its support of Children's helipad application.

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Therefore, on behalf of my family and the Hawthorne Hills Community Club, I urge you to approve Children's helistop application.

Very truly yours,

Douglas E. Wheeler

cc: Hawthorne Hills Community Club

K:\CG1\DEW\13302DEW.LTR

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ROBERT WAGNER MD FAAP
PEDIATRICS
1638 MAIN STREET
P.O. BOX 8
FREELAND, WA 98249

OFFICE TELEPHONE
(206) 331-1314
(206) 678-6848

ANSWERING SERVICE
(206) 675-5975

RECEIVED BY
92 JUN -1 PM 12:24
OFFICE OF
HEARING EXAMINER

May 28, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Hearing Examiner:

This letter is in support of a helistop for Children's Hospital of Seattle. I have trained there, transported patients there and now serve as an outlying pediatrician with occasional referral needs for critically ill patients.

I concur with the need for mitigation efforts to minimize noise pollution effects on the community, but I believe that for a few critically ill patients, the helistop would be useful.

Sincerely,

Robert Wagner, M.D.

RW/sae

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walla walla clinic
1520 NORTHWEST TIETAN • (509) 525-3720
WALLA WALLA, WASHINGTON 99362

RECEIVED
92 JUN -1 PM 12:43
OFFICE OF
HEARING EXAMINER

May 26, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 2nd Avenue
Seattle, WA 98104

Dear Hearing Examiner:

As a physician who refers critically ill children to the Children's Hospital and Medical Center, I support and hope that you will be able to support a helicopter landing pad or heli stop at Children's Hospital.

Sincerely,

CARL E. NELSEN, M.D.

CEN/jel

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FORKS COMMUNITY HOSPITAL

"Pioneers in Rural Health Care"

May 28, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle WA 98104

RECEIVED BY
92 JUN -1 PM 12:2
OFFICE OF
HEARING EXAMINER

To Whom It May Concern:

I am writing in support of a helicopter landing pad located on the Laurelhurst Campus of Children's Hospital and Medical Center.

Direct air ambulance service to tertiary care facilities such as Children's Hospital and Medical Center is a critical component of the emergency medical response system in Western Washington.

Under the best conditions, round trip air transport time for critically ill or injured children from Forks Community Hospital is already several hours. A helicopter landing pad will reduce the time between stabilization of the patient in Forks and initiation of treatment at Children's Hospital.

I urge the City of Seattle to consider the regional impact of this issue and grant a permit to Children's Hospital for this important service.

Thank you.

Sincerely,

Eric P. Jensen
Administrator
Hospital Technical Advisory Committee Member
EMS/Trauma Steering Committee

cc: Treuman Katz, President & CEO, Children's Hospital & Medical Center

RURAL ROUTE 3, BOX 3575 • FORKS, WASHINGTON 98331 • PHONE (206) 374-6271

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Central Washington Hospital
1300 Fuller St. P.O. Box 1887 Wenatchee, WA 98807-1887 (509) 662-1511

RECEIVED BY
92 JUN -1 PM 12:20
OFFICE OF
HEARING EXAMINER

Board of Directors
Don Hockinson
Chairman
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Thomas J. Troy
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Joe Evans
John Jenkins, M.D.
Chief of Staff
Maryann Johnson
Stephen Knox, M.D.
Grace Lynch
Edward Nash, M.D.
Louis Van Doren

May 27, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

RE: Children's Hospital & Medical Center
Helicopter Landing Pad

To Whom It May Concern:

I am writing in support of the application by Children's Hospital & Medical Center to build a helicopter landing pad, a helistop, near the emergency room of the Children's Hospital campus. As a regional referral center for North Central Washington, Central Washington Hospital is a periodic user of emergency helicopter transport to Children's Hospital. It is unconscionable to allow children to be landed elsewhere and then additionally be transported to the Children's facility for lack of a helipad. I can understand the concern of neighbors near the Children's Hospital, however, the additional trauma and precious time lost to the children is a catastrophic event, not a momentary unpleasantry caused by an increase in decibel level.

It is my understanding three to five of these children will require landing at the helistop at Children's each month. This is such a small inconvenience for such an enormous benefit and advantage to children, I would urge your approval of the Children's permit request. Children's has provided me with a considerable list of facts in brief that describe their efforts to mitigate the effects of their proposal. As I read them I am struck by how hard Children's is working to recognize the inconvenience to the neighborhood while advocating for our children whom they serve. I trust what is a sensible proposal at face not become an interminable debate that reflects badly on the community of Seattle who I know cares far more about our children than the few in the neighborhood opposing this plan.

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Central Washington Hospital

I urge you to do what is right and approve the application by Children's to establish this greatly needed facility.

Sincerely,

THOMAS J. TROY
Administrator

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RECEIVED BY
92 JUN -1 AM 10:49
OFFICE OF
HEARING EXAMINER

May 27, 1992

Office of the Hearing Examiner
City of Seattle
1020 Alaska Building
618 Second Avenue
Seattle, Washington 98104

Dear Sir:

I am writing to you to enthusiastically support Children's Hospital and Medical Center's effort to construct a helistop for emergency medical services. As a resident of the Laurelhurst neighborhood I am very proud to have Children's nearby, and, I, like many others in our neighborhood, believe that the adequate and safe delivery of emergency medical services to children in the region is of the highest priority.

Sincerely,

Thomas N. Thompson
3617 47th Avenue N.E.
Seattle, WA 98105

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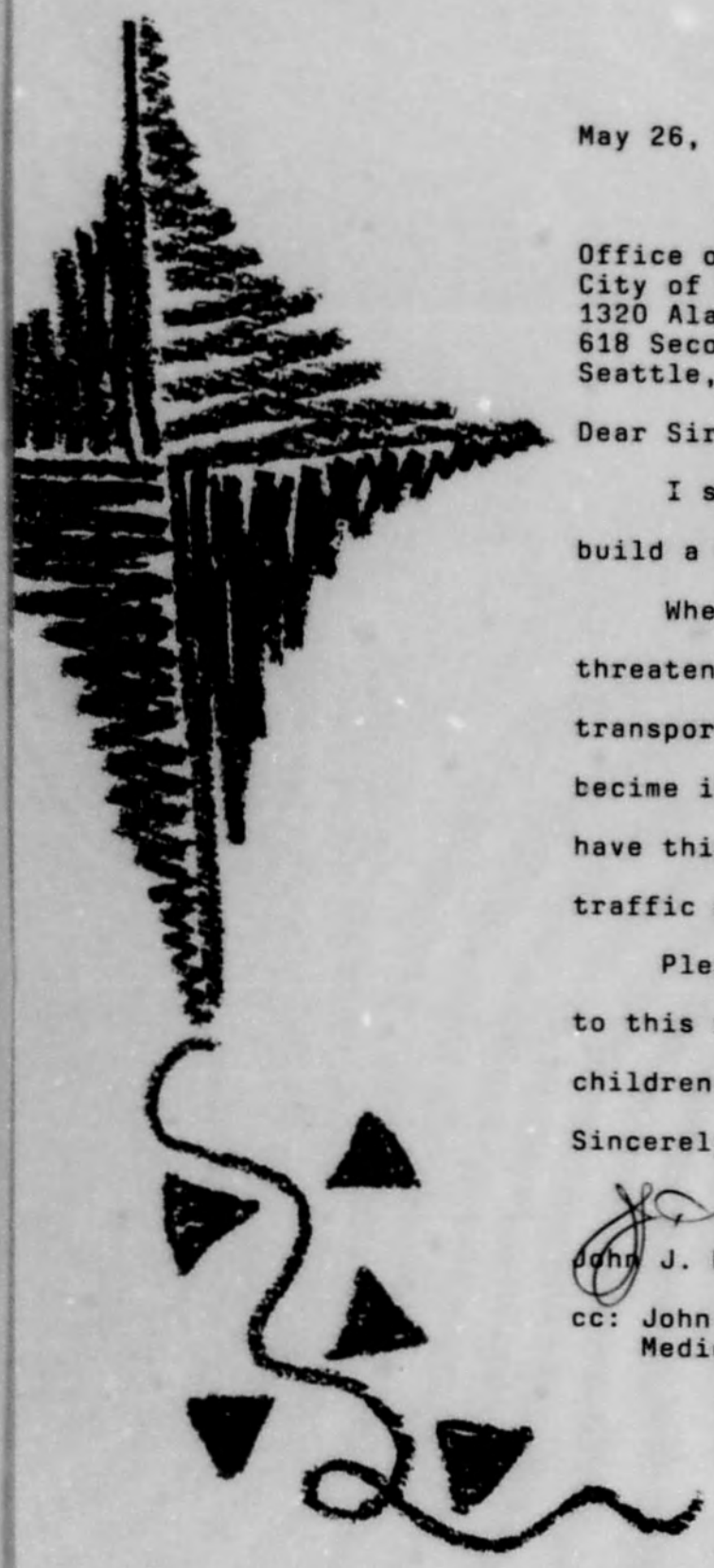
The Children's Clinic

RECEIVED BY
92 MAY 29 PM 12:02
OFFICE OF
HEARING EXAMINER



May 26, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Ave
Seattle, Wa 98104

Dear Sirs,

I strongly support CHMC'S effort to build a Heliopad on the hospital grounds.

When I have a child with a life-threatening illness, a child who needs transport to Children's, a child who has becime ill in a Friday afternoon I need to have this child fly over the densely packed traffic on th I-5 corridor.

Please give very serious consideration to this request, for the sake of "all" children in the Sound area.

Sincerely,

John J. Klekotka, M.D.

cc: John Neff
Medical Director CHMC

Edmonds
Stevens Professional Center
21616 - 76th Ave. W. • Suite 108
Edmonds, WA 98026
(206) 778-0191

Mill Creek
Mill Creek Professional Center
16030 Bothell-Everett Hwy. • Suite 220
Mill Creek, WA 98012
(206) 481-4101 • (206) 338-0752

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UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

School of Medicine
Department of Medicine
Division of Nephrology, RM-11

RECEIVED BY
92 MAY 29 PM 12:04
OFFICE OF
HEARING EXAMINER

May 24, 1992

Office of Hearing Examiners
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

Dear Hearing Examiners:

I write as a resident of Laurelhurst in strong support of the proposal that Children's Hospital Medical Center obtain a permit to build a helicopter landing pad outside the emergency room on the Laurelhurst campus. Although our home is only about four blocks from the hospital (4416 54th Avenue N.E.), the impact of helicopter activity at Children's Hospital on the neighborhood is trivial to non-existent. The possibility that this degree of disruption would cause any significant delay in constructing this important and necessary medical facility is not understandable to me. The quality of the services provided as a consequence of this should far outweigh any considerations related to impact on the community in a situation where such impact is so negligible.

Again, I join what I hope are the majority of my neighbors in providing strong support for the proposal of Children's Hospital to build a helicopter landing pad outside of the emergency room.

I appreciate you attention to this matter.

Sincerely yours,

William G. Couser, M.D.
Professor of Medicine
Head, Division of Nephrology

WGC:msw

cc: Dr. John Neff

Telephone: (206) 543-3792
FAX: (206) 685-8661

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Olympic Memorial Hospital

939 Caroline
Port Angeles, WA
98362

(206) 457-8513

Public Hospital
Dist. No. 2 of
Clallam County

RECEIVED BY
92 MAY 28 PM 12:03
HEARING EXAMINER

May 27, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

To Whom It May Concern,

I am writing to express my support for the approval of a permit for Children's Hospital and Medical Center to build a helicopter landing pad outside the Emergency Room on Laurelhurst Campus.

Periodically we are faced with the need to transport children to larger facilities when their well-being demands care beyond our scope. These situations are often life threatening and every second saved improves the child's chances. Considering the twenty-minute flight from our rural community to Seattle, the ability to land directly outside the emergency room could be crucial to their survival.

I urge you to support this request for a helistop. If I can be of further assistance, please contact me.

Regards,

Allen K. Remington
Administrator

AKR:ms

cc: John Neff, M.d.
Medical Director
Children's Hospital

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Columbia County Hospital District

DAYTON GENERAL HOSPITAL BOOKER ANNEX BOOKER REST HOME ANNEX

1012 South Third Street, Dayton, Washington 99328-1696 (509) 382-2531

May 27, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Ave.
Seattle, Wa. 98104

Dear Sirs:

Dayton General Hospital is a small general hospital located in Rural S.E. Washington. Our medical staff consist primarily of Family Practice Physicians. Because of our rural location we find ourselves frequently needing the services of helicopter transport to larger medical facilities. The addition of a heliport has greatly improved our ability to provide a greater level of safety services for our area.

We sincerely support the need to construct a helistop for Children's Hospital & Medical Center.

Sincerely,

Oral R Compson

Oral R. Compson
Administrator

ORC:jld

RECEIVED BY
92 MAY 29 PM 12:02
OFFICE OF
HEARING EXAMINER

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file

KLICKITAT VALLEY HOSPITAL

310 S. Roosevelt
Post Office Box 5

Goldendale, Washington 98620
(509) 773-4022

RECEIVED BY
92 MAY 28 AM 11:08
OFFICE OF
HEARING EXAMINER

"Pride in Caring"

26 May, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

TO WHOM IT MAY CONCERN:

This letter is written in support of the application of Children's Hospital to construct an on-site helistop to facilitate the safe delivery of critically ill and injured children to their facility. Children's Hospital is the facility of choice to receive such patients since they are dedicated solely to the care of children. They are an invaluable resource to the City of Seattle and the entire State. Children's Hospital, and certainly their small patients, deserve favorable consideration of their proposal.

As a rural hospital administrator, and a member of the steering committee which is attempting to improve trauma care for the State of Washington, I can attest to the often life saving potential of rapid and efficient helicopter transportation of the injured. It is frankly inconceivable to me that the minor noise created by an occasional helicopter landing could be regarded as more significant than the potential for saving even one child's life.

It appears to me that Children's has made every reasonable effort to address the concerns of the opponents of the project. I might add that our heliport, adjacent to the hospital, is located in a residential area, but is regarded by our neighbors and the entire community as a valuable and necessary community asset, well worth the inconvenience of a little noise from time to time.

Please give Children's proposal your favorable consideration!

Sincerely,

MERLIN L. TRAYLOR, ADMINISTRATOR

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3925 48th Ave. N.E.
Seattle, WA 98105-5228
27 May 1992

RECEIVED BY
92 MAY 28 AM 11:08
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
1320 Alaska Building
618 Second Ave.
Seattle, WA 98104

Dear Sir/Madam,

We are writing to you in regard to Children's Hospital and Medical Center proposed plan to build an on-site helistop on their campus at 4800 Sandpoint Way N.E.

We feel it is extremely unsafe to have aircraft activity over thickly populated residential areas such as those surrounding CHMC. This particular area has many condos, apartment complexes, private homes, two schools, a community center, playground and a hospital full of sick children.

We believe the CHMC facilities at Harborview Medical Center should be expanded to include a CHMC trauma unit in conjunction with the present Harborview trauma center for adults and children. A regional trauma center would be ideal. This should eliminate the necessity of impacting many neighborhoods in the city with requests for individual on site hospital helistops.

We further believe the University and CHMC could successfully develop a helistop at the U of W Intermural Field where helicopters have been landing for years. This area can be reached over open space and is only minutes away from CHMC and the U of W Hospital.

Thank you for your consideration in this matter,

Yours truly

Fred M. Wright Patricia O. Wright

We would like to receive a notice of the Hearing Examiner's recommencation.

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re: Child's Hosp Helicopt Landing pad

Costa A Lazzaretti
5531 34th Ave NE
Seattle WA 98105

RECEIVED BY
92 MAY 27 AM 11:38
OFFICE OF
HEARING EXAMINER

May 22, 1992

Dear Sir:

I hear airplanes fly over my house all day and nite. I dont complain. These planes are not for emergencies. I for one would be happy to know I played a part in letting a helicopter land outside the Emergency Roomdoor if only one life was saved out of a hundred landings.

I think it is a crime that the U. of W. Intramural Field has to be used.

The people living so close dont want the noise. If their kids had to be pickedup by a helicopter to rush to a hospital in Tacoma, they wouldn't care if it landed in their front yard— or how much noise it made.

Please issue the needed permit. Some day it could be used for a child of some one you know and love.

Yours
Costa A. Lazzaretti.

My husband has expressed both our feelings so beautifully, I can only add my signature.

Sincerely,
Carol Ann Lazzaretti

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✓ Hearing Examiner
1300 Alaska Bldg.
615 Second Avenue
Seattle, WA 98104

-and- Mr. Ken Schram
KOMO TV - Ch. 4
100 4th Ave N
Seattle 98109

Letter to Editor
The Seattle Times
P. O. Box 70
Seattle, WA 98109

Children's Orthopedic Hospital (COH) Shakes, Rattles and Rolls its Neighbors in Laurelhurst.

Gentlemen: May 26, 1992.

I live directly across the street for the COH parking garage.

We have been increasingly harassed by the sound of low-flying helicopters, the senseless abuse of ambulance sirens, false alarms from parked cars with faulty security systems, and frequent accidents as automobiles attempt to access Sand Point Way from N.E. 50th Street due to increased traffic congestion.

Thousands of neighborhood parents and children would be safer and better served if the hospital closed down its helipad and relied on the helipad located near by at the U/W playfield, or the pad at Harborview Hospital.

No persuaive evidence has been offered us to demonstrate the need for a helipad in our immediate neighborhood, and expert opinion opposing COH's helipad, recorded at earlier hearings, does not appear in the Environmental Impact Study!

There was a time when we supported COH by volunteering time and purchasing greeting cards. However, in recent years, the administration of COH has become too powerful, too greedy, and too insensitive to warrant the support of its neighbors.

Instead of voting to <u>expand</u> COH's existing helipad and garage facilities, my recommendation is that COH abandon it and make better use of the nearby pad on the U/W playfield and the pad at Harborview. Furthermore, that COH levy stiff penalties on owners of faulty security systems, that the City of Seattle enforce noise polution ordinances against ambulance companies and that a stoplight be installed at the corner of Sand Point Way and N.E. 50th Street before someone is killed.

Sincerely yours,

John McFalls

John McFalls
4204 N.E. 50th St.
Seattle, WA 98105

cc: Mayor Norm Rice
City Council
NEFREN

RECEIVED BY
92 MAY 27 AM 11:30
OFFICE OF
HEARING EXAMINER

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Hearing Examiner
1320 Alaska Bldg.
618 Second Avenue
Seattle, WA 98104

-and-

Mr. Ken Schram
KOMO TV - Ch. 4
100 4th Ave N
Seattle 98109

Letter to Editor
The Seattle Times
P. O. Box 70
Seattle, WA 98109

Children's Orthopedic Hospital (COH) Shakes, Rattles and Rolls its Neighbors in Laurelhurst.

Gentlemen: May 26, 1992.

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Sincerely yours,

John McFalls

John McFalls
4204 N.E. 50th St.
Seattle, WA 98105

cc: ✓ Mayor Norm Rice
City Council
NEFREN

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Hearing Examiner
1320 Alaska Bldg.
618 Second Avenue
Seattle, WA 98104

-and-

Mr. Ken Schram
KOMO TV - Ch. 4
100 4th Ave N
Seattle 98109

Letter to Editor
The Seattle Times
P. O. Box 70
Seattle, WA 98109

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Sincerely yours,

John McFalls

John McFalls
4204 N.E. 50th St.
Seattle, WA 98105

cc: ✓ Mayor Norm Rice
✓ City Council
NEFREN

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NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

4709 46th NE
Seattle, Wash 98105
May 26, 1992

To
Office of the Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

From
Mrs. Gladys F. Savage
4709 46th NE
Seattle, Washington 98105

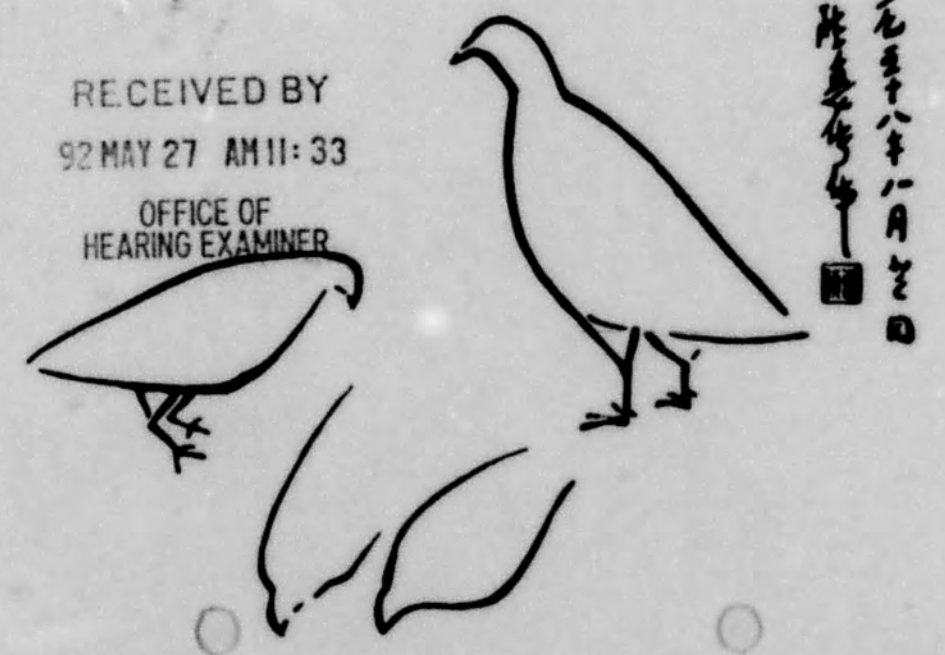
Re: Support for Children's Hospital Rezone & Heliport at Children's Hospital

Over fifty years ago our youngest son, John, then 2½ years old became ill and our Dr. Ruby asked us to call Dr. LeCocq. He came and called Children's Hospital at once asking specifically for certain nurses and anesthetic for an operation. It was streptococcal mastoiditis often Meningitis and for which most children did not recover. After an operation and then a second operation John recovered. We knew the agony of parents with a sick child in danger and the gratitude we have for his delivery. Penicillin had not yet appeared. Even though the diagnosis came a little late there was still a long period of recovery.

We learned that astoyglitis often was diagnosed as otitis because it was, during World War I, 95% fatal.

When I think that any child should be delayed

RECEIVED BY
92 MAY 27 AM 11:33
OFFICE OF
HEARING EXAMINER



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Whidbey General Hospital

RECEIVED BY
92 MAY 27 AM 11:29
OFFICE OF
HEARING EXAMINER

May 26, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA. 98104

Dear Sir:

Whidbey General Hospital has followed, with great interest, the permit process that Children's Hospital and Medical Center has gone through to build a helicopter landing pad on their campus. We have supported their efforts over the past eight years.

On many occasions each year we count on the assistance of the regional air ambulance service to transport critically ill or injured children from Whidbey General Hospital to Children's Hospital. These are life saving decisions. To not have the ability to land the helicopter on the Children's Campus makes no sense.

We wholeheartedly support the need for Children's Hospital to construct a helistop on their campus to ensure the adequate and safe delivery of emergency medical services to the children of our region.

Sincerely,

Robert L. Zylstra
Administrator

cc: Trueman Katz
President and CEO
Children's Hospital

P.O. Box 400 • 101 North Main Street
Coupeville, Washington 98239-0400
206 678-5151 • 206 321-5151

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RECEIVED BY
92 MAY 27 AM 11:29
OFFICE OF
HEARING EXAMINER

3879 43rd NE
Seattle WA 98105
May 25, 1992

Office of Hearing Examiner
City of Seattle

Subject: Helicopter Landing Pad at
Children Orthopedic Hospital
at 4800 Sandpoint Way

It makes me very disillusioned that there would be any question about building a helicopter Landing Pad at Childrens Hospital for critically ill patients.

There is no excuse for not allowing the pad. It's life or death for kids!

The only possible objection is that some Laurelhurst (I am one but do not agree with my neighbors who oppose the pad)

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

that they don't want the noise and they cry 'unsafe for helicopter'. Basically they simply don't want the pad in their neighborhood.

Kid's life is more important than the little bit of noise the helicopter makes. If I hear a helicopter taking a Kid to COH, I just think "I hope they make it".

Anyone opposing the pad has no comprehension of what it's like to have a Kid in a critical medical condition. Every opponent of the pad would be outraged if they had a sick Kid and didn't get the quickest most expert care for their Kid.

Build the pad. I welcome it. Laurelhurst resident, mother and teacher. Augusta N. Howe.

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May 16, 1992

RECEIVED BY
92 MAY 27 AM 11:28
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
1320 Alaska Bldg.
618 Second Ave.
Seattle, WA 98104

Dear Sir:

I, an individual, totally object to a helistop on the campus of Children's Hospital & Medical Center (CHMC). I live nearby. Each flight in and out makes a low-flying turn right over my roof. The whole house vibrates. The dishes clink. My nerves are shattered. I never know whether the plane will make the turn or crash (this any time during day or night).

Our lives are endangered, our health is endangered, our property is at risk.

I find it completely unnecessary to have two helistops within a mile location. The University of Washington intramural field is adequate and accessible in open space whereas the CHMC campus is surrounded by residential areas.

We the taxpayers have not been given fair consideration. Our rights to a safe neighborhood have been totally disregarded.

Please stop this helistop plan and construction on the campus of CHMC. Thank you.

Sincerely,

Helen Newman

Helen Newman

cc: Mayor Norm Rice
City Council members
File

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RICHARD L. MEHRER

5005 48th Avenue Northeast, Seattle, Washington 98105-2928
(206) 524-3132

RECEIVED BY
92 MAY 26 PM 12:52
OFFICE OF
HEARING EXAMINER

May 23, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

RE: Proposed Helipad at Children's Hospital

Dear Hearings Examiner,

I am writing to offer my unqualified support for the helipad at Children's Hospital, and to express my dismay at the length of time this has taken. Is there a reasonable explanation for this lengthy process?

I have been a resident of the Laurelhurst community for nearly six years, part of that time living in an apartment adjacent to Children's Hospital. I am not connected with the hospital in any way other than being a neighbor. I do not have children.

The noise is barely more that that of the crowds at the stadium when the Husky's score a touchdown. The danger is far less that attempting to enter traffic on Sandpoint from 50th Street at rush hour.

It is inconceivable that anyone could object to the noise of the chopper and not also object to the noise of fire engines responding to an emergency, yet I do not see any organized resistance to the sirens.

Let's get on with this process. The longer we wait the more expensive the construction will be and the more my insurance rates will increase to cover hospital costs.

Cordially,

Richard L. Mehrer

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RECEIVED BY
92 MAY 26 PM 12:52
OFFICE OF
HEARING EXAMINER

May 22, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Ave.
Seattle, WA 98104

Sirs:

We are in support of Children's Hospital and Medical Center's attempt to build a helicopter landing pad outside the emergency room on its Laurelhurst campus.

We live at the Laurelon Terrace Comdiminium, a complex of townhouses, whose eastern boundry abuts the hospital grounds. The helicopters fly right over us, and the noise is very little bother in comparison to the great importance of saving young lives.

We encourage you to issue the necessary permits to build the landing pad to Chldren's Hospital.

Sincerely,

Mr. & Mrs. O.L. Almquist, Jr.

Mr. and Mrs. O.L. Almquist, Jr.
4604 41st Ave. N.E.
Seattle, WA 98105

Franklin B. Brown

Franklin B. Brown
4011 N. E. 46th St.
Seattle, WA 98105

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THE DOCTORS CLINIC
OF SILVERDALE

9398 Ridgetop Boulevard N.W. Silverdale, WA 98383 Telephone: 206/692-2700

May 18, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle WA 98104

RECEIVED BY
92 MAY 26 PM 12:51
OFFICE OF
HEARING EXAMINER

Dear Sir:

I am writing in support of granting a permit from the City of Seattle to Children's Hospital and Memorial Center to build a helicopter landing pad outside the emergency room on their Laurelhurst campus.

I am a family physician in Silverdale, WA, and use Children's Hospital as a referral and consultation source. In my nine years of practice in this community, I have seen a number of children from our area require emergency therapy at Children's Hospital. On occasion, these children are so critically ill or injured that they require immediate evaluation at Children's Hospital, and helicopter transportation may be lifesaving.

It is my understanding that helicopters are already landing at Children's Hospital outside the emergency room, and the request is to build a helicopter landing pad or helistop to improve safety.

Please closely evaluate this situation, and if you agree, then grant permission for building such a helistop.

Sincerely,

Carol A. Pierce, M.D.

CAP:rap

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Peninsula Children's Clinic
902 E. Caroline Street
Port Angeles, WA 98362

Infants, Children, Adolescents

Phone: 457-8578

- EUGENE F. TURNER, M.D., F.A.A.P.
- JAMES E. MANTOOTH, M.D., F.A.A.P.
- JOHN D. WEGMANN, M.D., F.A.A.P.
- MADELINE HARRINGTON, M.D., F.A.A.P.
- OTERO FLOWERS, M.D., F.A.A.P.

May 19, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Bldg.
618 Second Ave.
Seattle, WA 98104

Dear Sir:

I am writing in support of the helicopter landing pad at Children's Hospital and Medical Center. This ongoing controversy has intrigued me as it reflects on human behavior. Specifically, how could anyone not get a warm feeling knowing that some ill child is being rushed to medical care when they hear the helicopter. Unnecessary noise can and should be irritating to a neighborhood. But this is hardly unnecessary. During my training in Pediatrics at that hospital I lived in the Laurelhurst neighborhood for a year and enjoyed the neighbors and the neighborhood in general. I think the neighbors basically don't understand the importance of this service. Having that hospital, the premier children's referral hospital for the Northwest United States, even with its noise, should fill the Laurelhurst neighbors with pride. And I'm sure it does for most of the neighbors.

Practicing Pediatrics in a rural area (Port Angeles), I depend upon Children's Hospital to receive our critically ill children for tertiary care, which is not available on the Olympic Peninsula. The transfers are generally made by Airlift Northwest helicopters. Sometimes the patients are so ill that even a few minutes can make a difference. Sometimes the children die en route. Even though this is the exception, I appreciate the more critical cases being able to land directly at Children's Hospital. I further suspect that even the complaining neighbors would want their children/grandchildren to be given this courtesy, too.

Sincerely,

James E. Mantooth MD

James E. Mantooth, M.D.

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OFFICE OF
HEARING EXAMINER

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Northwest Asthma
& Allergy Center, P.S.

RECEIVED BY
92 MAY 26 PM 12:47
OFFICE OF
HEARING EXAMINER

C. Warren Bierman, M.D.
William E. Pierson, M.D.
Gail G. Shapiro, M.D.
Clifton T. Furukawa, M.D.
Leonard C. Altman, M.D.
Frank S. Virant, M.D.
Paul V. Williams, M.D.
Dominick A. Minotti, M.D.
Sharon C. Sack
Administrator

May 18, 1992

Office of Hearing Examiner,
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

RE: Children's Hospital and Medical Center Helistop Proposal

TO WHOM IT MAY CONCERN:

I would like to go on record as being strongly in favor of allowing Children's Hospital and Medical Center to establish a helistop on their campus immediately adjacent to their emergency room.

As a physician at an outlying community hospital, I have had numerous opportunities to refer critically ill and injured children and neonates to Children's Hospital for care. On many occasions, these infants or children are too ill to withstand any additional handling that might be required when landing at a facility distant from the Children's Hospital and requiring transferring to an ambulance.

As a referring physician and as a parent, it seems to be potentially tragic if a child should die simply because some neighbors do not want to be awoken by a helicopter in the night.

Sincerely,

Paul Williams MD

Paul V. Williams, M. D.

PVW/mer

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Physicians Affiliated with the University of Washington School of Medicine, Children's Hospital and Medical Center and A.S.T.H.M.A. Inc.

120 N. 17th Mt. Vernon, WA 98273 206-424-4410 FAX 206-424-0749
4540 Sand Point Way NE Seattle, WA 98105-3914 206-527-1200 FAX 206-523-0724

Bellingham Pediatrics
ASSOCIATES

RECEIVED BY
92 MAY 26 PM 12:46
OFFICE OF
HEARING EXAMINER

May 19, 1992

RE: Helicopter landing pad located at Children's Hospital and Medical Center

To Whom It May Concern:

This is to confirm my immediate and absolute support of a helipad located close to Children's Hospital and Medical Center emergency room. As an outlying community pediatrician I have periodically required the emergency evacuation of a critically ill child, one for example, that was in septic shock on intensive life support machines.

I have been extremely grateful for the helicopter to transport patients to Seattle for further care. The families have been grateful too.

But it is more than being grateful.

We as physicians, as well as families with a severely injured or sick child, expect a rapid and efficient transport method. It is the standard of care. This means that there should be no cumbersome intermediate transfers of body and equipment to and from vehicles in variable weather conditions. IT DOES MEAN that helipads are located next to the hospital so more direct transfer between hospital and helicopter takes place. It will take only one lawsuit involving a cumbersome transfer to or from a vehicle (where equipment fails or life supporting tubes or catheters are pulled out), or a vehicle stuck in traffic with a critically ill patient, to demonstrate the wisdom of this adjacent helipad.

PLEASE SEE THE WISDOM. Please allow for the establishment of a helipad at Children's Hospital and Medical Center for critically sick or injured children where seconds count and where the ease of moving delicate instruments, catheters and intensive care equipment is so important.

For the sake of children,

Steven P. Wisner, M.D.

SPW/jrf

STEVEN P. WISNER, M.D., F.A.A.P.
WARREN D. ERVIN, M.D., F.A.A.P.
SCOTT W. McGUINNESS, M.D., F.A.A.P.
KENNETH I. JERNBERG, M.D., F.A.A.P.

3015 SQUALICUM PARKWAY #180
BELLINGHAM, WASHINGTON 98225
Phone: 733-1911 / 384-1804 (County)
Fax: 733-2014

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PEDIATRIC ASSOCIATES OF WHIDBEY ISLAND, P.S.
9049 900TH AVENUE WEST
OAK HARBOR, WASHINGTON 98277
TELEPHONE (206) 679-6166

RECEIVED BY
92 MAY 26 PM 12:45
OFFICE OF
HEARING EXAMINER

May 20, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Bldg.
618 2nd Ave.
Seattle, WA 98104

To Whom It May Concern:

I write as a Pediatrician from an outlying community on Whidbey Island to support the helicopter pad at Children's Hospital and Medical Center. I have personally been, in years past, the accompanying physician who had to land with a critical child at an outlying soccer field and then make a critical transfer of care to ground ambulance, that may or may not be down below when we arrive at the scene.

There is no question that the most efficacious transport would be to land right at a landing pad outside the Emergency Room.

Thank you very much.

Sincerely,

Jane A. Mays, M.D.

JAM:llh

cc: Dr. Ron Lemire
Children's Hospital & Medical Center

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Charles R. Nelson *4921 NE 39 Street, Seattle WA 98105-5208/ (206) 524-8149*

May 21, 1992

To:
Office of Hearing Examiner
1320 Alaska Building
618 Second Ave.
Seattle, WA 98104

In re: Project # 8405870 & 9106441/ CF # 297288 & 298740

We are opposed to a heliport on the CHMC campus because it presents and unacceptable safety hazard. As you know, the vicinity around CHMC includes the Laurelhurst Elementary School as well as residential buildings. The consequences of a crash could well be catastrophic, and the City of Seattle would certainly share in the liability for it.

I wish to be notified of your recommendation.

Sincerely yours,

Charles R. Nelson

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92 MAY 22 AM 11:22
OFFICE OF
HEARING EXAMINER

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NORTHWEST PEDIATRICS
Specialists in Children's Healthcare, Birth to Maturity
3149 Ellis Street, Bellingham, WA 98225
(206) 734-4302 or 354-3277

RECEIVED BY
92 MAY 22 AM 11:21
OFFICE OF
HEARING EXAMINER

May 19, 1992

Office of Hearing Examiner, City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sirs:

Northwest Pediatrics is one of two busy Pediatric group practices in Bellingham, WA. We serve the residents of Whatcom, Skagit, Island, and San Juan counties. We fully support the application of Children's Hospital and Medical Center for a permit to build a helicopter landing pad outside the Emergency Room on the Laurelhurst campus of the hospital.

St. Joseph Hospital is the only hospital serving Whatcom County. A helicopter landing pad is located on the hospital campus within 100 yards of the hospital. All helicopters transporting patients to or from this hospital use this landing pad. More than 50% of the infants and children transported from our institution to Children's Hospital and Medical Center are in critical or unstable condition. There have been documented cases over the past 2 years in which patients transported by helicopter from St. Joseph Hospital have deteriorated while being transferred from the helicopter to an ambulance at a site distant from Children's Hospital and Medical Center.

We feel that it is critical that a helicopter landing pad be sited near Children's Hospital and Medical Center on the Laurelhurst campus. Please feel free to contact any one of us with regards to our support for the permit.

Sincerely and professionally,

Kenneth B. Gass, M.D.

David L. Johnson, M.D.

Dale H. Heisinger, M.D.

Steven Ban, M.D.

Benjamin C. Kuiken, M.D.

David P. Finnigan, M.D.

cc: John Neff, M.D.
Childrens Hospital and Medical Center

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PEDIATRIC associates

JOHN T. KARPEL, M.D., INC., P.S.
ROBERT T. CARSLEY, M.D., INC., P.S.
HENRY L. deGIVE, M.D. INC., P.S.
THOMAS S. MEREDITH, M.D.
SARA MURDOCH, M.D.

SUITE K, 3525 ENSIGN ROAD
OLYMPIA, WA 98506
(206) 456-1600

RECEIVED BY
92 MAY 22 AM 11:21
OFFICE OF
HEARING EXAMINER

May 18, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, Washington 98104

Dear Sirs:

I recently had occasion to refer a child to Children's Orthopedic Hospital and Medical Center on an emergent basis. The child had a bowel condition which normally would have resulted in his losing most of his bowel and perhaps his life in the process.

It was only because of the availability of helicopter transport that this child survived intact. Indeed, it is only because of the availability of helicopter transport that he survived at all.

I could continue to give you other examples of how important this service is to the surrounding communities, but this one vignette really says it all.

I hope that you will take this into account in your deliberations on the permit that Children's Hospital is seeking from the City of Seattle to build a helicopter landing pad.

Thank you for your attention to this matter.

Sincerely yours,

Henry L. deGive, M.D.

HLD:ma

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File

KITSAP CHILDREN'S CLINIC
2625 WHEATON WAY
BREMERTON, WASHINGTON 98310-3382
PHONE 479-1651

WARD L. HINRICHS, M.D., FAAP
MICHAEL J. BOYER, M.D., FAAP
RUSSELL B. VOEGTLEN, M.D., FAAP
ANNE METTE SMEENK, M.D., FAAP

R. RONALD DIONNE, M.D., FAAP
SUSAN L. REIMER, M.D., FAAP
CHRISTINE H. LARSON, M.D., FAAP

RECEIVED
92 MAY 20 AM 11:20
OFFICE OF
HEARING EXAMINER

May 18, 1992

Office Of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

To Whom It May Concern:

This letter is in regard to Children's Hospital and Medical Center's request for a permit to build a helicopter landing pad outside the Emergency Room on the Laurelhurst Campus of the hospital.

As a pediatrician practicing in Bremerton, Washington, I know how important it is to be able to quickly transport a critically ill patient to Children's Hospital in Seattle. To drive around through Tacoma, over the Tacoma Narrows Bridge or to wait for the next ferry is not an appropriate means of transportation of a critically ill child.

I fully support the necessity of constructing a helistop to insure the adequate, safe delivery of emergency medical services to children in our region.

Thank you.

Respectfully yours,

Ward L. Hinrichs, M.D.
Pediatrician

WLH:lj

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CALAWAH MEDICAL CLINIC
R.R. 3 BOX 3576
FORKS, WASHINGTON 98331

TELEPHONE (206) 374-2500

RECEIVED BY
92 MAY 21 AM 11:23
OFFICE OF
HEARING EXAMINER

May 19, 1992

Office of Hearing Examiners
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

RE: Children's Hospital and Medical Center Permit
For Helicopter Landing Pad

Dear Hearing Examiners:

I write this letter requesting support for the requested permit for Children's Hospital and Medical Center to build a helicopter landing pad at their Laurelhurst campus. I write this as one who sends referrals to CHMC, utilizing the Airlift Northwest helicopter. As such, most of the patient's that I refer are critically ill and flown in from Forks, Washington. Most often, Children's Orthopedic is the hospital best equipped to handle the emergencies that we send. As noted, most of the patients are critically ill and require immediate attention. I am concerned regarding possible delays in treatment to my patients whom I send over via the helicopter if they were to have to land elsewhere and then be transported by ground ambulance to Children's Orthopedic. I think that this could seriously compromise their care, and may result in harm to such patients. I would therefore urge you to approve the permit.

If you have any questions, please do not hesitate to contact me.

Sincerely,

John M. Shima, M.D.

JMS:db

cc: File

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ELISE J. HERMAN, M.D.
Pediatrics

200 East Sixth Ave. • Ellensburg, WA 98926
(509) 925-9891

5·18·92

To Whom it May Concern -

I am writing with regard to the seeking of a permit by Children's Hospital to build a helicopter landing pad outside the emergency room on the Laurelhurst campus. I feel that this is crucial to providing adequate critical care to some of our most ill pediatric patients.

Sincerely,
Elise Herman MD

RECEIVED BY
92 MAY 21 AM 11:21
OFFICE OF
HEARING EXAMINER

RECEIVED B
92 MAY 21 AM 11:2
OFFICE OF
HEARING EXAMINER

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PEDIATRIC ASSOCIATES OF WHIDBEY ISLAND, P.S.
9049 900TH AVENUE WEST
OAK HARBOR, WASHINGTON 98277

TELEPHONE (206) 679-6166

May 18, 1992

RECEIVED BY
92 MAY 21 AM 11:16
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner/City of Seattle
1320 Alaska Bldg.
618 2nd Ave.
Seattle, WA 98104

Dear Office of Hearing Examiner:

I am a private Pediatrician in private practice on Whidbey Island. My practice encompasses a large rural area. As a result, we practice in a very small community hospital that has limited ability to care for critically ill children. Critically ill children are flown by helicopter to Children's Hospital in Seattle. Most critically ill children travel this way because it is a two hour ride by ambulance from our island and that is too long for transport of critically ill children because their status can change within minutes.

I am writing you to wholeheartedly support the need for Children's to construct a helistop. Children's have a remarkable capacity to decompensate very quickly and this can occur within a matter of minutes. It is absolutely essential that they reach their destination and receive care as quickly as possible. We have found with some of our very critically ill children that the transport to Children's Hospital is hampered because the helicopter has to make another stop at the University of Washington intramural field and then the child transported by ambulance. Every shuttling of the child from one vehicle to another risks the loss of life supporting I.V.s and tubes and also causes the child oxygen level, in many cases, to drop unnecessarily. It is very important that these transfers occur so that there is a minimum amount of transferring from one vehicle to the other.

Certainly there are children in our practice who are critically ill and not capable of being cared for by us, but yet still stable. These patients can be transferred from another facility to an ambulance without compromising their care. We are happy to so designate which children are that way while we are taking care of them. However, we transfer a significant number of unstable children who desperately need to be able to be transported directly to the facility.

I wholeheartedly support the helistop at Children's. I feel that this is a great step in providing equal access to critical care medicine for the children in rural areas just as they would receive in the City of Seattle.

Sincerely,
Sandra W. Horning, MD
Sandra W. Horning, M.D.

SWH:llh

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Peninsula Children's Clinic
902 E. Caroline Street
Port Angeles, WA 98362

Infants, Children, Adolescents

Phone: 457-8578

- EUGENE F. TURNER, M.D., F.A.A.P.
- JAMES E. MANTOOTH, M.D., F.A.A.P.
- JOHN D. WEGMANN, M.D., F.A.A.P.
- MADELINE HARRINGTON, M.D., F.A.A.P.
- OTERO FLOWERS, M.D., F.A.A.P.

RECEIVED BY
92 MAY 21 AM 11:15
OFFICE OF
HEARING EXAMINER

May 18, 1992

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Dear Sirs:

I am writing this letter to enthusiastically support Children's Hospital request to build a helicopter landing pad outside the Emergency Room of the Hospital in Laurelhurst. I have been in private pediatric practice in Port Angeles for the last eighteen years, and I have had many occasions to refer critically ill infants and children to Children's Hospital for specialized medical care. Earlier in my practice, before the Airlift Northwest services were available, I used to transport patients myself via U. S. Coast Guard helicopters from Port Angeles to Seattle. In those days, we had to land at the University of Washington athletic fields, and ground transport by ambulance to Children's Hospital. There were occasions when the extra time and moving of the patient during ground transport from the helicopter to the Hospital added considerable stress to all those involved in the transport, although I recall no incidents where it actually resulted in the death of the patient. At any rate, those of us in outlying communities such as Port Angeles, greatly appreciate having helicopter access to Children's Hospital and stronly believe in the necessity of having immediate access to the Hospital by the helicopter transport crew for critically ill children. Those minutes can indeed make a life or death difference in some occasions. I have reviewed the Children's Hospital Helistop Proposal, and I feel that their request to allow landings at the Hospital for truly critically ill children is reasonable, and I stronly urge you to support this application. Incidentally, the Airlift Northwest helicopters that provide transport from the Hospital in Port Angeles land at a helipad in the Hospital parking lot. This helicopter landing site is located within 50 to 100 yards of residential homes in the neighborhood adjacent to the Hospital. Airlift Northwest helicopters fly to and from this spot several times a week, and on occasions, several times a day. To my knowledge, there have been no complaints in this community about this helipad being located this close to the Hospital. Granted, it provides some inconvenience for people on a temporary basis, but this must be weighed against the potential of the Children's Hospital Helipad pro-

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viding a truly lifesaving service.

Please support this proposal.

Thank you for your attention.

Sincerely yours,

John D. Wegmann, M. D.

JDW:hew

C: Treuman Katz
President and CEO

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THE DOCTORS CLINIC
OF PORT ORCHARD

1605 Woodridge Drive SE Port Orchard, WA 98366-3816 Telephone: 206/871-5000

May 18, 1992

RECEIVED BY
92 MAY 21 AM 11:14
OFFICE OF
HEARING EXAMINER

Office of the Hearing Examiner
City Of Seattle
1320 Alaska Building
618 2nd Ave.
Seattle, WA 98104

Dear Sir:

This is a letter to outline my strong conviction that a helicopter landing pad should be approved for use of critically ill children at the Children's Hospital Medical Center campus. As a practicing pediatrician in Kitsap County I have had numerous experiences with children who had an immediate need for Level III capabilities, as opposed to the primary services that we offer in community hospitals. Some children who are in the critically ill situation cannot be expected to have to be moved from one form to another of transport vehicle. Each time a patient transfer is made, such as from helicopter to ambulance, there is always a risk of injury in the confusion. The child may be placed in a more compromised situation.

I understand that more routine transports from Kitsap County to Children's certainly could be handled via ground transportation or helicopter run to a different site in King County that would then allow for easy ground transport to Children's. It is very important to realize though that there is a small number of children in which every moment counts and as I stated above, every transfer between vehicle puts the child at greater risk.

I understand there may be the occasional inconvenience of noise momentarily to the population about Children's Hospital, but in the larger picture of medical needs of the entire Western Washington area, there will be the occasionally critically ill child that requires the ability to get to the hospital as soon as possible.

Please feel free to contact me if you have further questions in regards to this matter.

Respectfully submitted,

John Corrales-Diaz, M.D., F.A.A.P.

JCD:bjn
cc: John Neff, M.D.
Children's Hospital

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Kathleen Johnston
1603 N. W. 197
Seattle, Washington 98177

May 18, 1992

RECEIVED BY
92 MAY 19 AM 11: 12
OFFICE OF
HEARING EXAMINER

Office of Hearing Examiner
1320 Alaska Bldg.
618 Second ave
Seattle, Wa 98104

Dear Examiners:

As a land owner in the Kinderemere Circle near the Childrens Hospital - I feel a strong responsibility to my tenants to ask that the Environmental Determination be appealed.

The noise factor and vibrations of surrounding buildings must be considered. It is frightening to be awakened in the night by the shaking of buildings - a health hazard.

Taxpayers should be considered as well as business concerns.

We would appreciate your consideration of the above conditions.

Yours Sincerely,
Kathleen N. McHugh-Johnston

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May 16, 1992

Office of Hearing Examiner
1320 Alaska Bldg.
618 Second Ave.
Seattle, WA 98104

Re: Helistop at Children's Hospital & Medical Center, #'s 8405870 and 9106441. (CHMC)

I have received the Notification of the Conditional Use Recommendation of the above proeject. I object and appeal the recommendation.

A helistop at CHMC is unsafe, unwise, unnecessary as follows:

1. CHMC is co-financing and using helistop with University of Washington at the Intramural Field. (UW)
2. UW helistop at the Intramural Field is less than a mile from CHMC. This site has been used prior to helicopters at CHMC for many, many years with no loss of patient lives as acknowledged by CHMC.
3. Clear approach to UW helistop at the field site.
4. Approach over dense residential neighborhood at CHMC campus.
5. Low-flying and turning on both in and out flights at CHMC over homes and condos pose extreme danger to residents. CHMC personnel and patients also at risk.
6. Endangerment of innocent, individual citizens' lives is being disregarded.
7. Documented history of helicopter malfunction and crashes, including medical helicopters. Most crashes occur at time of take off or landing. As recently as March, 1992, 3 medical helicopters crashed--March 5, 6, 7. These crashes occurred in Arizona, Michigan, Alaska. SEE news articles in the Seattle Times.
8. Planned expansion (45% of present buildings) at CHMC--both vertical and horizontal--lessens maneuverability space for helicopter landings, turning, take off at CHMC.
9. The expanded building at CHMC is basically for research labs and doctor offices. Patient beds are becoming secondary as CHMC becomes an adjunct of UW Hospital & Medical Center & School.
10. Harborview Hospital already has a helistop in place and a well-developed trauma center and pediatric department.
11. Noise pollution and vibration is high and at any time of day or night.
12. Institutional encroachment in a residential neighborhood destroys the quality of life for the neighborhood.
13. In the FEIS it is stated CHMC cannot refuse any helicopter landings, even the Army MAST planes, which are clearly oversize for residential neighborhood landings and for size of proposed helistop site at CHMC.
14. The estimated average of 15 to 21 patients per month landing at CHMC, meaning 30 to 42 overflights (in & out), could be exceeded as competing helicopter service occurs, according to the FEIS.
15. Omitted in the FEIS are clear, exact criteria/guidelines for helicopter usage, decision-making process as to who determines when and where and which hospital the helicopter uses.
16. Airlift Northwest and CHMC will keep a log of flights but should not be allowed to monitor their own work/decisions. Who will monitor the flights and landings?
17. We who live near and/or contiguous to CHMC property are alarmed over the expansion, including the helistop, at CHMC. In 1952 the hospital outgrew its site on Queen Anne. It has now outgrown its site at Sand Point and Laurelhurst residential area. It is time this property revert to its original residential status.

PLEASE STOP A TRAGEDY FROM HAPPENING (CRASH AND/OR CONFLAGRATION) IN A RESIDENTIAL NEIGHBORHOOD BEFORE IT OCCURS.

Mrs. Maryann E. Spangler
4013 N.E. 46th St.
Seattle, WA 98105

Maryann E. Spangler

cc: Mayor Norm Rice
Seattle City Council
Files

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

May 16, 1992

Office of the Hearing Examiner
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

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92 MAY 19 AM 11:14
OFFICE OF
HEARING EXAMINER

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Dear Hearing Examiner,

Resident: I reside at 4712 - 33rd Avenue NE. This locates me just north of the intramural field helistop on the UW campus & just west of the helistop at Children's.

I have several concerns regarding the helistops:

Issues:
1) landing & take-offs
2) length of time helicopter is left running while on the ground
3) definition of <u>emergency</u>

Explanation: 1) Many times the helicopter pilots either do not know where to land, or just they are sightseeing, and/or they approach & take off in large, low circles for their convenience. These machines should be able to drop from high altitude directly to the helistop without <u>Buzzing</u> the neighborhood several times.

2) Often a helicopter lands & sits idling even after the patient is long gone on a ride to the hospital. Specific limits

in minutes, such as 5 minutes, seem reasonable to keep the engine active. If we are talking about emergency conditions 5 minutes is an adequate space of time to complete patient transfer & vacate the area. I have often wondered what the pilots do for 40 or 45 minutes (almost 2hrs. is the record!) idling their engines in the middle of the night after delivering a patient. Time is not of importance to them it appears - or is it?

3) What is an emergency? Does it have to be a life & death situation to be an emergency? If it's not life & death then where is the cut-off on determining whether these flights are really needed or are used as a matter of convenance. Emergency, to me, means time is important. Judging from several observations of helicopters landing and having to wait for ground transport to pick up the patient time does not appear to be critical.

Recommendations: Very reluctantly approve heliport <u>only</u> with <u>STRICT</u> & <u>ENFORCEABLE</u> rules. This can be as important for the health of a neighborhood as for patients!

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Suggestion: This can work for everyone although there are significant costs to many people. Since were in this for a long time anyway of encouraging development of quieter helicopters?. If not then the rules are black & white & if violated there is a penalty.

Closure: As you can tell this is a big issue for me & my family & my neighborhood. I encourage you to take it very seriously and judge accordingly.

Sincerely,

Greg Schell

P.S. I would like to receive a notice of the Hearing Examiner's recommendation.

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6/27/92

To: Ruperta Alexis
Deputy Hearing Examiner
Room 1320 - Alaska Bldg.
618 - 2nd Avenue
Seattle WA 98104.

From: William H Torrance
4211 - 51st NE
Seattle WA. 98105

I support all NEFRN's proposed conditions re. CHMC.

RECEIVED BY
92 JUL -1 AM 11:21
OFFICE OF
HEARING EXAMINER

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Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

RECEIVED BY
92 JUL -1 AM 11:21
OFFICE OF
HEARING EXAMINER

Dear Ms. Alexis:

I am writing in regard to the proposed HELIPAD at CHILDREN's HOSPITAL. I STRONGLY SUPPORT THE NEW MITIGATING CONDITIONS proposed by the NEFRN Neighborhood group. I believe these are necessary to regulate the impact of a helipad built so close to a residential neighborhood. Thank you very much for your consideration.

Sincerely,

Michael O. Perlman
4500 NE 50th
Seattle, WA 98105
(206) 527-4537

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Seizure

RECEIVED BY
92 JUL -6 AM 11:16-92
OFFICE OF
HEARING EXAMINER

Children's Hospital & Medical Center

My name is Sylvia Porter. I am supporting the case of the Helicopter Landing Pad simply because in January of 1990 my daughter had a grand mal seizure for the first time in her life and mine. She was taken to Valley Medical hospital, under the assumption of her having spinal manigist. They transported her to Childrens by air lift. That saved her life considering time was at hand. I completely support the air lift helicopter land pad.

Thousands of kids uses the helicopter a year from other states. Without this my daughter may have lost her life.

Thank You
Sylvia Porter
Sylvia Port

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Vincent P. Fay
5119 NE 52nd Street
Seattle, WA 98105
29 June 1992

RECEIVED BY
92 JUL -1 AM 11:21
OFFICE OF
HEARING EXAMINER

Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Please be advised that I support all of the attached NEFRN proposals concerning helicopter landings at Children's hospital Medical Center.

Sincerely,

Vincent P. Fay
523-3359

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NEFRN-PROPOSED CONDITIONS

1. Approval of the helistop at the Children's Hospital Medical Center (CHMC) Kitchen Garden site is temporarily granted for a period not to exceed two (2) years. During this time, the helistop proposal for the Kitchen Garden site shall be reviewed as part of the CHMC Master Planning process.

   If, through the Master Planning process, City Council approves a more permanent helistop at the Kitchen Garden site, conditions contained in this temporary approval of the helistop at the Kitchen Garden site shall be incorporated into the adopted CHMC Master Plan, together with any additional conditions that may be identified and required by City Council. The Kitchen Garden helistop shall cease operation at the end of this temporary approval period if the helistop is not approved in the CHMC Master Plan.

   [New NEFRN Condition]

2. Approval and operation of the Kitchen Garden helistop on the CHMC campus is dependent upon concurrent approval and operation of the Intramural Activities/Graves Field site. If, for any reason, the Graves Field helistop is not approved, or ceases operation after approval, the use of the Kitchen Garden site shall not be expanded in any way beyond this conditional approval.

   [New NEFRN Condition].

3. Approval for the helistop on the CHMC campus is limited solely to the proposed Kitchen Garden site as shown on Figure 5 of the April 1991 Final Environmental Impact Statement. Location of the helistop on any other portion of the CHMC campus will require additional environmental review and new land use approvals, including as part of the CHMC Master Plan review process.

   [New NEFRN Condition]

4. Only the most critical and life-threatening medical emergencies shall be allowed to land at CHMC. All other patients shall land at the Intramural Activities field site. The initial decision whether to land at the Kitchen Garden site or the Intramural Activities field is to made by the referring physician and/or attending medical team. For patients whose condition deteriorates in flight, the medical team on board the helicopter may decide to land at CHMC. The following conditions indicate a landing at CHMC is appropriate:

   a. unstable airway;
   b. inability to ventilate/oxygenate;
   c. inability to maintain adequate cardiac output;
   d. inability to maintain adequate cerebral bloodflow; or
   e. the persistence of unstable vital signs despite heroic attempts to control them.

   [DCLU Condition No. 1]

5. Landings at the CHMC Kitchen Garden site shall not exceed an average of 6 landings per month (calculated for each three-month quarter) and shall not exceed 15 landings in any given month. Additional landings that are clearly due to catastrophic events shall not be subject to the above limitations.

   [New NEFRN Condition]

6. Only Augusta 109 helicopters, with a four-bladed rotor, shall be permitted to land at the CHMC campus helistop, in order to reduce noise impacts and reduce the potential for helicopter accidents in the CHMC area. Should Airlift Northwest or another aeromedical vendor seek to establish regular flights to CHMC in helicopters other than the Augusta 109 studied in the EIS, a supplemental EIS must first be prepared to evaluate the noise impacts of the new equipment, and new land use approvals must first be obtained. Two-bladed rotor helicopters, such as but not limited to the Huey helicopters typically used by the Military Assistance to Safety and Traffic (MAST), Coast Guard, and Navy, are prohibited from landing at the CHMC campus.

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To help ensure that the above restriction is observed, the size of the helicopter concrete landing pad at the Kitchen Garden site shall not exceed 20 feet by 20 feet.

[Revised DCLU Conditions No. 2 and No. 7]

7. A Medical Review Committee shall be established to review compliance with Conditions 4, 5 and 6, allowing only the most critically ill patients and only certain helicopters to land at CHMC. The Committee shall consist of the following 5 members:

a. One representative of CHMC selected by the Chief Executive Officer, who will co-chair the Committee with the representative from the Laurelhurst Community Club (LCC) described below;

b. One representative of the Laurelhurst residential neighborhood selected by the LCC, who will co-chair the Committee with the CHMC representative;

c. Two general non-CHMC-affiliated pediatric practitioners (primary care physicians), to be nominated and agreed upon by both the CHMC and LCC members in a) and b) above;

d. One representative with experience in emergency airlift services, to be nominated and agreed upon by both the CHMC and LCC members in a) and b) above.

Committee members will be appointed for up to a three year term, with replacements to be made by the original appointing authority. Committee members in b), c) and d) shall have no affiliation with CHMC, the University of Washington Hospital, Airlift Northwest or other organization that may present a potential conflict of interest, or the appearance of a conflict of interest. Nominees for positions c) and d) above shall submit to the CHMC and LCC Committee members a statement disclosing any potential conflict of interest, including but not limited to any past or present affiliation with CHMC, the University of Washington Hospital and Airlift Northwest, which can be evaluated by CHMC and LCC.

The Committee shall meet quarterly to review and evaluate helicopter transports to CHMC. To facilitate this review, CHMC will make available to the Committee all helicopter and medical data relating to each landing, including the number and type of helicopter landings, progress notes from the transport team and transfer notes from the referring institution and physician. It will be CHMC's responsibility to ensure patient-identifying information is removed prior to release of medical data to the Committee. The Committee shall evaluate the data to determine whether the use of air transport directly to the CHMC campus was justified in each case and whether the operation of the helistop complies with Conditions 4, 5 and 6. The Committee evaluations shall be included in a report submitted after each quarterly review meeting to the Department of Construction and Land Use (DCLU), the Chief Executive Officer of CHMC, LCC, the Airlift Northwest Executive Committee and Medical Director, and the Citizens' Advisory Committee for CHMC Master Plan. The report shall be made available to the public upon request and for a reasonable duplicating fee.

The Committee shall adopt rules and procedures as necessary to ensure compliance with laws and administrative rules governing confidentiality of patient medical records, while also providing for public input and review of the Committee's work. Each Committee member for positions b), c) and d) above will be compensated for his/her service on the Committee at the rate of $100.00 per landing, and all Committee members may be reimbursed for reasonable out-of-pocket expenses identified by the rules promulgated by the Committee. Compensation and expense reimbursement shall be paid by CHMC. CHMC shall provide administrative and staff support needed by the Committee, including assistance in preparing the quarterly report for Committee review and approval.

The Committee shall monitor CHMC helicopter landings for as long as there remains a helistop on the CHMC campus. Changes in Committee structure and operation shall be made only upon concurrence by CHMC, LCC and DCLU.

[Revised DCLU Condition No. 3]

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8. CHMC shall report on a quarterly basis to the Committee and to the community the number and nature of helicopter landings at the Intramural Activities/Graves Field site.

[Revised DCLU Condition No. 4]

9. Use of the CHMC campus helistop is limited solely to the transport of patients (and accompanying medical transport teams). Helicopters shall not be allowed to land at CHMC campus to transport medical staff prior to (or after) patient transport, or to transport organs, tissue, medical treatments, medical equipment or any other material not specifically required for and accompanying a patient.

[Revised DCLU Condition No. 5]

10. DCLU shall review the quarterly reports of the Medical Review Committee. More than one landing in violation of Condition No. 4, 5 or 6, above, in any given month shall be grounds for DCLU suspension of the helistop permit for the Kitchen Garden site. CHMC may request reinstatement of the suspended conditional use permit by appealing to the Hearing Examiner, who shall then hold a public hearing during which CHMC and the general public may offer testimony regarding the violations, suspension and requested reinstatement. The Hearing Examiner shall reinstate the helistop conditional use permit based only on effective, specific corrective measures that will be implemented to prevent repeated violations.

[Revised DCLU Condition No. 6.]

11. The flight paths for approach and departure to the CHMC and Intramural Activities/Graves Field helistops shall be strictly maintained as described in the Final EIS and shall to the greatest extent possible avoid residential areas. All helicopters shall follow the primary flight path along Northeast 45th Street and Sand Point Way, entering the CHMC campus from the north and northwest. The secondary flight path, which enters the CHMC campus from the northeast over the residential neighborhood, shall be followed only when winds out of the northwest quadrant are in excess of approximately 17 knots. Airlift Northwest and any other regular carrier shall establish a training program to introduce all pilots to the approved flight paths.

More than one deviation from or unjustified use of the approved flight paths per month shall be grounds for DCLU suspension of the helistop permit at the Kitchen Garden site. CHMC may request reinstatement of the suspended conditional use permit by appealing to the Hearing Examiner, who shall then hold a public hearing during which CHMC and the general public may offer testimony regarding the violations, suspension and requested reinstatement. The Hearing Examiner shall reinstate the helistop conditional use permit based only on effective, specific corrective measures that will be implemented to prevent repeated violations.

[Revised DCLU Condition No. 8.]

12. Prior to beginning regular use of the Kitchen Garden helistop, all Airlift Northwest (ALNW) pilots shall make at least one test landing and take-off at the site. CHMC and ALNW shall schedule the training/test flights for a weekday between the hours of noon and 3:00 p.m. Advance notice of at least ten (10) days shall be given to the surrounding communities of the test/training time, date and expected number of flights. The number of flights shall be held to the minimum necessary to provide adequate training.

[DCLU Condition No. 9.]

13. New pilots shall make at least one landing at CHMC under supervision of a pilot experienced in landing at CHMC prior to unsupervised patient transport landings. Non-patient transport training flights, if desired, may be scheduled no more than twice per year without approval from DCLU. Notice of training flights shall be provided to surrounding communities as stated in Condition 13.

[DCLU Condition No. 10.]

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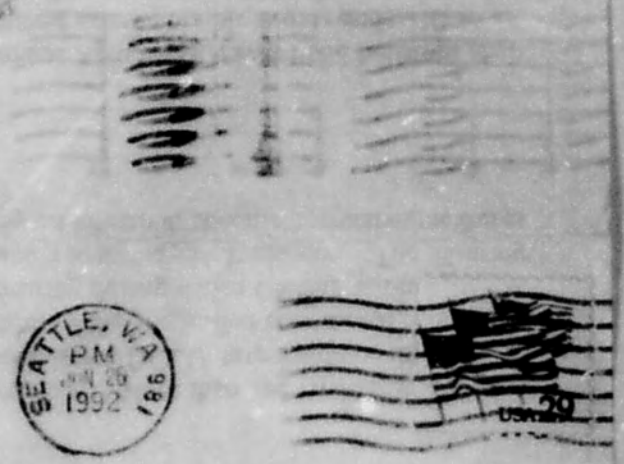
NEFRN



Vincent Fay
5119 NE 52nd st.
Seattle, WA 98105

RECEIVED BY
92 JUL -1 PM 2:21
OFFICE OF
HEARING EXAMINER

6/30/92

Dear Ms. Alexis,

I am writing to urge you to support and adopt the conditions proposed by NEFRN regarding the establishment of a helipad at CHMC. Because of Children's well-documented history of non-compliance with city ordinances, their heroic efforts to circumvent any state or city established information-gathering process pertaining to land use development, and their total lack of regard for the neighborhood in which they are located, it is imperative that the conditions placed on this permit demonsirate an overwhelming concern for the safety of the neighborhood and be "weasel proof." Once adopted, these conditions must be strictly monitored and enforced by the City. Let's not leave the fox in charge of the hen house AGAIN.

Children's is not a civic minded institution. This is an institution that filed suit against DSHS rather than comply with their Certificate of Need process regarding the helipad. Health planning issues and certainly helicopter transport should have been considered from a broader state perspective and the discussion not limited to local areas.

This is an institution that ignores conditions the City places on its permits as demonstrated by the permit issued for their parking garage in 1981. It was only when CHMC applied for the helipad permit in 1984 that the City became aware that those conditions had not been honored. This is an institution that CONTINUED to ignore the City's conditions until the City threatened to hold other permits hostage.

This is an institution with an irresponsible and arrogant administration that has been unaccountable to the community, (no master plan) the city and the state. Their unwillingness to provide justification information for this helipad has slowed this review process every step of the way, dragging the process on unresolved for eight years. The travesty of this situation is that the record has become so voluminous that pertinent information has been lost or mysteriously disappeared. Suuch information was the testimony given by Paul Russell, a retired U.S.Coast Guard Captain and Flight Crew Instructor for the Boeing Commercial Airplane Co., given at a public hearing held at the Laurelhurst Elementary School in 1985 regarding the proposed helipad. Mr Russell testified a second time regarding the issue of safety as it pertained to the helipad in 1988 before Hearing Examiner, Margaret Klockars regarding MUP #887060. I am enclosing this testimony for you to read since the city lost record of his initial comments. Other pilots also testified at that first public hearing that the proposed helipad raised serious safety concerns but I do not have a copy of the testimony given by Mr. Richard Merrill or Mr. Bart Baxter to forward to you. Is the record really complete without their statements? Mr. Russell's comments have particular relevance to NEFRN's proposed conditions #3, 6, 11, 12, and 13.

I am alarmed that in the proposed conditions that Children's seems to have sole responsibility for turning over flight information to the review committee. We have found in the past that some of the periodic reports issued by CHMC describing landings at the hospital have been

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incomplete and neighborhood complaints forced Childrens to issue addendums. The quarterly report was initiated only after repeated requests from the community. Airlift Northwest keeps a log of all of its flights and they should be required to submit those records to the review committee as well.

Condition #10 is extremely important as CHMC representatives have asserted on many occasions that once the helipad is constructed they will have no control over who lands there. I have already witnessed the illegal landings of the KIRO helicopter, other EMS helicopters and a military helicopter at the proposed site or CHMC's parking lot. The ability to hold a public hearing during which neighbors could testify about violations is very important. When Children's was found to be in violation of the land use code and Joe Garcia, a representative of the City convened a hearing, neighbors were not allowed to speak.

During the many years that I resided one block from Children's I witnessed repeated deviations from the flight path that were not provoked by weather conditions. Condition #11, which describes a mechanism for dealing with this situation is very important.

In closing, I would like to take the opportunity to remind you that there is no agency that has direct authority over the operation of EMS transport systems. The FAA has issued guidelines for the siting and operation of helipads but they are no more than that--just guidelines. They are not regulations. Once this helipad is in place, it will be the City's sole responsibility to monitor how it is used and to enforce the conditions placed on the permit. Because this service has been allowed to operate illegally for the past eight years, NEFRN is quite capable of identifying potential problem areas. The NEFRN proposals gives the city a mechanism for dealing with those problems as they arise, firm ground to stand on, and puts necessary safeguards in place for the community. I urge you to adopt these proposed conditons without delay.

Sincerely,

Liz Anderson (comm)

Liz Anderson
3923 NE 38th
Seattle WA 98105

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July 7, 1992

Office of Hearing Examiner
Room 1320
Alaska Building
618 Second Avenue
Seattle, Wa 98104

1-82
RECEIVED BY
92 JUL 10 PM 1:16
OFFICE OF
HEARING EXAMINER

RE Hearing Examiner File- MUP-92-020
Project # 9005954, Meadowbrook Nursing Home, 3540 N. E. 110th st.
Seattle, Wa 98125
Louis and Virginia Sternberg,Owners

Dear Hearing Examiner:

I was unable to stay for the entire day of the hearing on June 10th but I have listened to the tapes of the hearing and have looked at copies of the new proposal. I am in agreement with the decision of the DCLU to deny the Administrative Conditional Use and Variances.

The Sternbergs have two lots that are now used for single family residences, one on N. E. 110th and the other on 38th Ave. N. E. They have gone to great lengths to describe the poor condition of the house on N. E. 110th, but are now collecting almost $600.00 a month in rent. The property on 38th N.E. is to be divided into two lots with the westerly portion to be added to the Nursing Home property. This is an encroachment of our residential neighborhood which our zoning laws are supposed to protect. It is obvious that that portion which is not proposed to be included in this project at this time will be used in some future expansion.

I think that too much emphasis is being given to the Certificate of Need issued by the DSHS. This certificate was issued only on the information submitted by the Sternbergs in the bidding process. It is my understanding that the DSHS wanted community input on the project so the Sternbergs went out of the residential neighborhood to the Lake City Chamber of Commerce to get a letter of recommendation. I spoke to Mr. Tony DeMeistro, an active member of the chamber and one of those who voted to send the letter of recommendation. I asked him if he had spoken to any of the residents who were personally affected by the proposed expansion of the Nursing Home, he said he had not and was taken back by the idea that that should have even been a consideration. But he also said he thought that the DCLU had already approved the project. I believe that it should have been pointed out to the DSHS that the community recommendation came from the business community and not the residential neighborhood directly affected by the proposed expansion.

Mr. Sternberg stated during the 6/10 hearing that there was no opposition to their proposed expansion in 1987. Well my husband and I were adamantley opposed as were our neighbors on all sides. We discussed it on a number of occasions after Mr. Sternberg had come around with his petition . We watched and waited for him to return again with the petition or for some further notice of the proposed expansion, after much time passed we concluded the project was scrapped because of lack of community support.

The next time around they shrewdly avoided the neighborhood and went to the business community where they could get what they needed.

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7-7-92

2 of 2

I have enclosed a copy of the environmental checklist submitted by the Sternbergs 2/26/91. In view of the fact there were a number of erroneous or misleading answers to the questions on this check list I can't but wonder if answers to a similar type of questionaire were required by the DSHS and if so who was there to scrutinize the answers for accuracy like the DCLU did with the Environmental Check List.

Please see attached copy marked "A" which is page 5 paragraph one of a June 25 ,1991 letter to the DCLU from the Sternbergs,stating that the neighborhood was notified of a presentation by the architects of the proposed expansion on Aug 24th , 1990, Neither I nor any of the neighbors I have talked to, who are directly affected , had ever heard of this. That is why it came as such a shock when the Sternbergs came around with there 3/23/91letter saying the expansion had been approved. It is my understanding that these presentations were never prefaced with any mention of the necessity to get approval from the DCLU,but were presented as a DONE DEAL, just like their letter dated 3/23/91 to the neighbors, please see attached copy marked "B", some people took the letter to mean that they would have no voice in the matter.

When the Sternbergs bought the Nursing Home in 1986 they signed a Statutory Warranty Deed that contained a covenant restricting the number of patients , to be accommodated, to no more than forty seven (47) . They went about their plans for expansion anyway. With this cavalier attitude how can Mr. Sternberg expect that any written guarantee of his would be taken seriously, such as the one he stated during the 6/10 hearing, that he would put in writing that the property on 38th N,E would never be used for access to the Nursing Home.

I am sorry that this letter seems to ramble but I'm trying to express some of my concerns and frustrations. When the last expansion was given approval in 1971 it was given by the Hearing Examiner on the condition that maximum beds would be limited to no more than forty seven (47). Here they are again asking for more beds and more building space. How can there be any doubt what they will be asking for in the future.

Any delays in this process were not the fault of those opposed therefore the manner in which this latest proposal was thrown in at the last minute during the hearing is very disconcerting. It was the Sternbergs who requested and were granted the extensions that have caused this to drag on so long.

Please put me on record as being opposed to this new proposal and the manner in which it was presented.

Sincerely,

Kathryn L Buckley

Kathryn L. Buckley
3621 N. E. 110th
Seattle, Wa 98125

encl. 3

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"A"

Response: All residents of The Meadowbrook were informed, starting over two years ago. On Friday, August 24, 1990, after the award to The Meadowbrook of 34 additional beds, a major presentation by the architect was made to all guests, residents, their families, staff, plus friends of The Meadowbrook. You will find enclosed a picture of Ms. Betty Bartholomew, the Executive Director of the Lake City Chamber of Commerce, taken at the presentation of the plans to residents, friends, neighbors and families on Friday, August 24, 1990. This presentation was well attended. In addition to this special occasion, the Resident Council had a private presentation on Monday, December 17, 1990, and the Famil, Council on Friday, April 12, 1991.

Statement: . . . "The owners have told us that they had contacted everyone in the 98125 zip code area."

Response: No such statement was ever made by us. The only mention of the zip codes occurred when we were asked where most of our residents came from. Our response was the 98125 zip code, which is The Meadowbrook zip code.

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CHMC HELISTOP

8405870 : 6 BROWN FILES
1, 2, 3, 3A, 4, 5

9106441 : 1 BROWN FILE

2 COPIES COMPLETE E/S (Draft + 3 vol. final)

Tapes (2) From Public Health Dept Mtg 10.24.85
Tapes (2) From Draft E/S Hearing 9.23.86

Two Orange Council Files, with extra copy of Decision/Recommendation attached.

RECEIVED BY
92 JUN 22 PM 1:28
OFFICE OF
HEARING EXAMINER

FLL
6/22/92

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5003 45th Ave. N.E.
Seattle WA 98105
June 30, 1992

RECEIVED BY
92 JUL -1 PM 2:20
OFFICE OF
HEARING EXAMINER

Ruperta Alexis
Deputy Hearing Examiner
Room 1320 Alaska Building
618 Second Street
Seattle WA 98104

Dear Ms. Alexis:

I live near Children's Hospital (CHMC) and have been an active participant for years in the controversy over CHMC's helipad. I support the NEFRN-proposed conditions as being fair and reasonable in view of the history of this helipad. In fact, many of NEFERN-proposed conditions are similar to views expressed by Dr. Bud Nicola and other physicians over the last few years. When Dr. Nicola was Director of the Seattle-King County Department of Public Health, in a report he wrote to the Department of Construction and Land Use (December, 1985) he assessed the medical need for the CHMC helipad based on his medical background, discussions he held with physicians and nurses at CHMC and elsewhere, and review of the emergency medical research literature.

I would like to give evidence of concurrence of some NEFRN-proposed conditions with views expressed by knowledgeable physicians such as Dr. Nicola as shown in their (enclosed) letters, as well as my own thoughts based on years of experience in working on this issue and my background as a graduate nurse and medical sociologist.

NEFRN-Condition #1: proposes that approval of the helistop on CHMC campus be temporary, pending review of the CHMC Master Plan. This is of utmost importance as it directly affects the safety of the helicopter landings. Any further building on the north side of the hsopital, particularly near the helistop location, would further restrict an already-restricted landing site. Concerns about the safety of the site have been raised by pilots who are not involved with Airlift Northwest, such as Paul Russell.

NEFRN-Condition #2: proposes that approval of the CHMC helistop depend on concurrent approval of the Graves/intramural field site. It is important that this helistop approval at CHMC be seen as a "package deal" with the UW Graves field. If the Graves Field site is not available, the "whole deal is off," since the conditions would be dramatically changed, i.e., there would be pressure for more landings at CHMC. Dr. Nicola points out in his report on page 5, paragraph 3, "In most cases, one single site near Graves Field would be adequate for both the UW and COH; however, there will be a small number of cases...where the ability to land at the hospital may be life-saving." Without the Graves Field site, then, more landings would take place at CHMC campus than are STRICTLY MEDICALLY NECESSARY.

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This is undesirable since CHMC is in a single-family residential community and near an elementary school, so the risk to safety and the noise problems from the helicopter should be kept to a bare minimum.

NEFRN Condition #5 : Landings shall not exceed an average of 6 per month and shall not exceed 15 landings in any given month (except for catastrophes). Given the historical number of landings--i.e., 23 MAST trips during 1983-84 (12 per year)-- 6 per month as proposed by NEFRN seems generous. Also, 6 is exactly the number of landings CHMC Medical Director John Neff said is likely, at a public hearing in 1985 (Corr, P.I. article, enclosed). And, in his report, Dr. Nicola stated that "3 to 4 of these patients (per month) may have a need for helicopter transport to the doors of the hospital" (page 5, paragraph 4). Then, to account for seasonal variation in disease and to leave room for unintended error in determining who should be transported to the CHMC doors, Dr. Nicola estimates that 10 expected helicopter transports...per month was an "upward bound." (page 5, paragraph 6). So NEFRN's condition #5, placing 15 per month as an upward bound is generous and should be included as a condition of the permit.

NEFRN Condition #7: The makeup of the medical review committee should include one representative from CHMC, a Laurelhurst resident, 2 non-CHMC pediatricians and an emergency airlift person. Since CHMC apparently does not challenge DCLU's condition No. 3, which states that a Medical Review Committe shall be established with a number of non-CHMC affiliated members, I shall not trot out my quotes from experts who state how important it is to have "outside review." But I feel strongly that the lone Laurelhusrt resident on the review panel would have a difficult time getting her or his views across without additional allies. Health care providers such as physicians and nurses tend to have a narrow view of what should be considered in providing health care. They often are not aware of larger, community and even citywide factors that should be considered in their intensive attention to the individual patient's needs. For that reason I believe that a representative from the Seattle- King County Department of Public Health would be a useful addition to the team. I have met and talked with a number of Dept. of Public Health staff, including Dr. Nicola, and have always found them to be fair and knowledgeable, with a broader, more public health perspective than most direct care providers have.

NEFRN Condition # 8. CHMC shall report on a quarterly basis to the community the number and nature of helicopter landings at the Intramural Activities/Graves FIeld site. Please add: "and landings at the CHMC campus."

NEFRN Condition #9: Proposes that use of the CHMC campus helistop be limited solely to the transport of patients(and accompanying medical transport teams) and rules out other uses. This proposed condition is appropriate since the only landings that are necessary at CHMC campus are those where "medical interventions are delicate and cannot be disrupted by unnecessary additional transfers. These include endotracheal intubations and IV influsions," as Dr. Michael Copass,

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Medical Director, Harborview Emergency Room and Airlift Northwest, described to Dr. Nicola in a letter of 24 October 1985. No one has made a case for other reasons for landing so near the hospital. In fact, for years Harborview had their helipad on the edge of their campus requiring transfer to an ambulance to transport the patient to the hospital. Only a parking lot (for doctors) stood between the helipad and the hospital. If closer access to the hospital had been needed, to avoid transfer to an ambulance, there was nothing to prevent the helipad from being moved closer. So, limiting the landings at the CHMC campus solely to the transport of patients is an important way to limit the number of these flights which are far riskier than those at wide-open Graves' Field.

NEFRN Condition #10 proposes that more than 1 landing in violation of listed conditions in any given month shall be grounds for DCLU suspension of the helistop permit for CHMC campus. Dr.Nicola, on page 6 of his report, recommended that the permit be conditional, pending, among other things, a review that the helistop be used for appropriate medical need in 6 months and the permit revoked if the helistop were being used for purposes outside that expressly permitted. I seen no reason to limit the review to 6 months as Dr. Nicola suggested; the review should be a continuing process, as NEFRN proposes.

Although I have not discussed the remaining NEFRN conditions, they are obviously relevant and I urge you to adopt them.

Thank you for your consideration.

Sincerely,

Anita Francis

Anita M. Francis

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DAVIS WRIGHT TREMAINE

LAW OFFICES

2600 CENTURY SQUARE · 1501 FOURTH AVENUE · SEATTLE, WASHINGTON 98101-1688
(206) 622-3150

RECEIVED
JUN 18 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

JOHN E. KEEGAN
(206) 628-7688

June 16, 1992

Ms. Ruperta Alexis
Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Avenue
Seattle, WA 98104

Re: Council Conditional Use Permit
Project Nos. 8405870 & 9106441

Dear Ms. Alexis:

Our firm is counsel for Children's Hospital & Medical Center, the applicant for the above Council Conditional Use Permits

First, your office has confirmed that no appeal of the SEPA determination has been filed and that the hearing will be limited to consideration of the Council Conditional Use Permit applications for the helistops on the Children's campus and at the University of Washington intramural field.

Second, we understand that the morning of the hearing on June 23, 1992, has been scheduled for presentations by DCLU and Children's. This is fine, and we will be prepared to use our share of that three hours for presentations by Children's witnesses. Starting after the lunch break, the Examiner will take testimony from members of the public, probably for the remainder of the day.

In addition to the presentation which will be made the morning of June 23, Children's has approximately 12 additional witnesses to offer in support of the applications and to respond to questions raised by the public and the Examiner. The testimony of these witnesses will require approximately 4-5 hours. We will be prepared

F:\DOCS\17722\160\00008.D20
Seattle

FAX: (206) 628-7040 · TELEX: 328919 DWJ SEA
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to start with this testimony, beginning at 9:00 a.m. on the second day of the hearing, June 24, and continue until completed.

Please let me know what further information you need from me.

We look forward to the public hearing on these applications.

Very truly yours,

DAVIS WRIGHT TREMAINE

John E. Keegan

JEK:sjp
pc: Faith Lumsden
DCLU
Treuman Katz
Children's Hospital & Medical Center
Suzanne Petersen
Children's Hospital & Medical Center
Craig Gannett, Esq.
Davis Wright Tremaine

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Seattle

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[redacted]

LETTER OF TRANSMITTAL

DATE 1/30/92 JOB NO. 1305

TO: DCLU
CITY OF SEATTLE

ATTENTION FAITH LUMSDEN

RE: CHILDREN'S HOSPITAL & MEDICAL CENTER
HOLISTOP @ UW

☐ SENT via MAIL
☒ SENT via FAX (THIS IS PAGE 1 OF 6 TOTAL)
(FAX No.) 233-7901
☐ OTHER

WE ARE SENDING YOU: ☒ Attached ☐ Under Separate Cover

COPIES	DATE	NO.	DESCRIPTION
		#1	SITE SURVEY INFO. RECENTLY PROVIDED BY UW
		#2	
	1/15/92	#3	SITE PLAN REVISIONS RESPONDING TO ROBERTA BAKER'S COMMENTS
	1/15/92	#4	
	1/15/92	#5	

THESE ARE TRANSMITTED as checked below:

☐ For Approval ☒ For Your Use ☐ As Requested ☐ For Review and Comment
☐ Approved as Noted ☐ Returned for Corrections ☐

REMARKS PER OUR TELEPHONE CONVERSATION YESTERDAY, I AM FAXING TO YOU THE ATTACHED ITEMS (DCLU PROJ. #9106441)

THANKS FOR THE PROJECT UPDATE!

COPY TO

SIGNED: SIGMUND BRUDEVOLD

MILLS, JOHN & RIGDON ARCHITECTS AIA
754 Central Building, 810 Third Avenue - Seattle, Washington 98104 Phone (206) 624-0410
FAX (206) 624-1410

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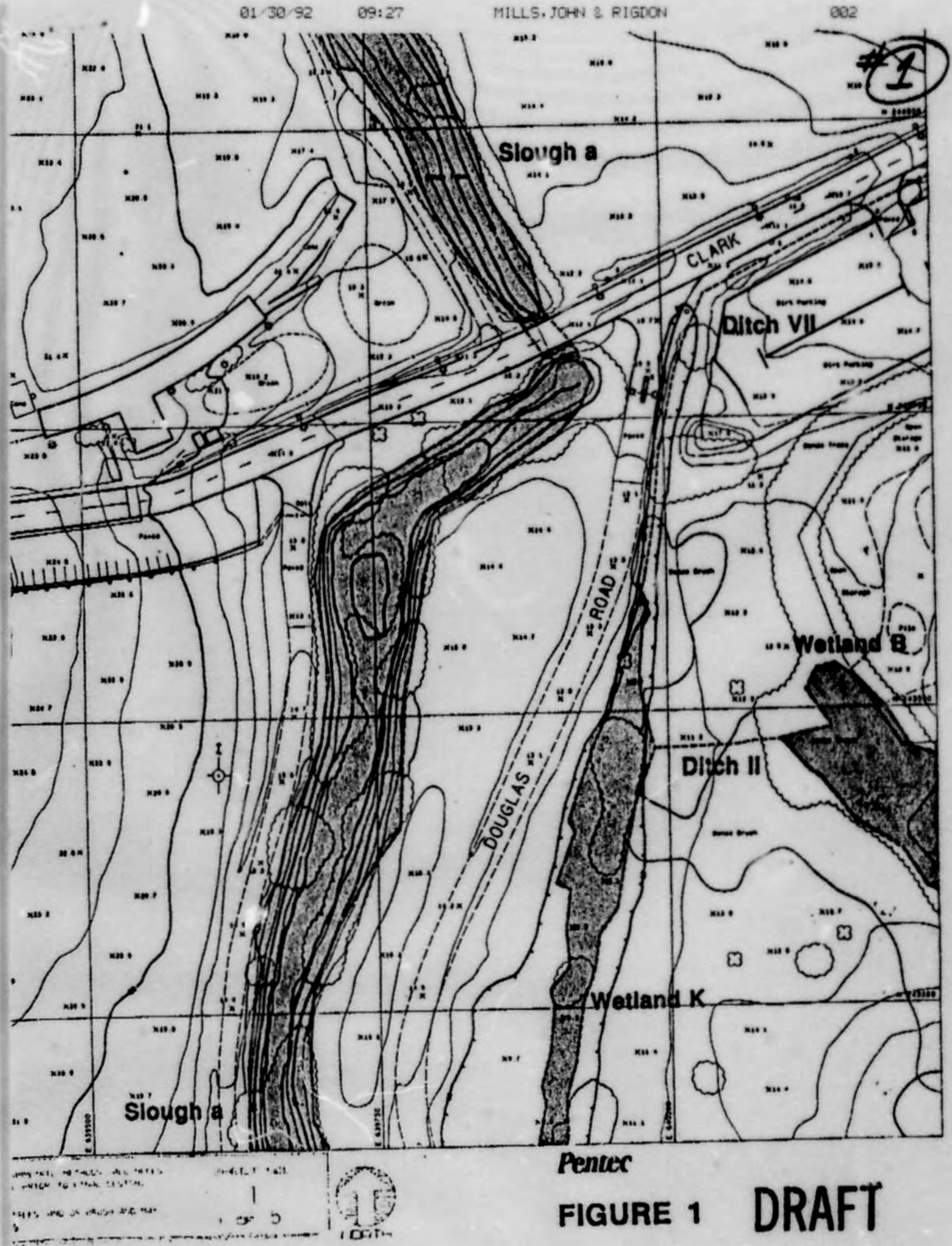

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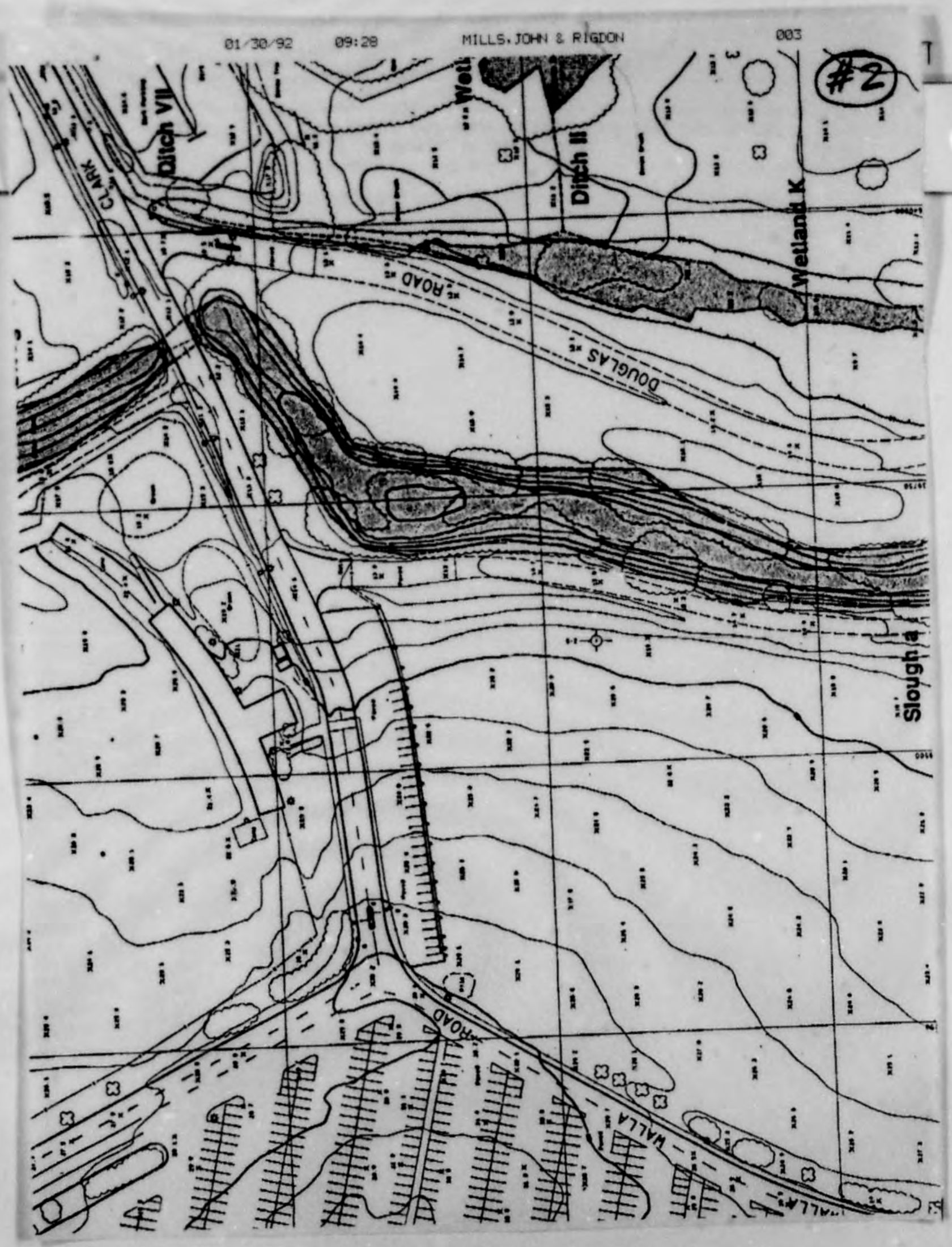
Pentec

FIGURE 1 DRAFT

#2


Ditch VII
Ditch II
Wetland K
CLARK
ROAD
DOUGLAS
ROAD
WALLA
WALLA
Slough

REV #4 1/15/92 PROVIDED PARKING SPACE SIZES & DIMENSIONS PER DCLU 1/10/92 CORR. SHEET.

REV #3 11/8/91 (NOTED LOCATION OF RIPARIAN CORRIDOR - APPROX. PER U.W. CAPITAL PROJECTS OFFICE

REV #2 10/18/91 (REVISIONS PER U.W. REQUEST)

REV. #1 7/25/91 (REVISIONS PER U.W. COMMENTS)

DRAWING NUMBER

DATE MAY 15 '91

BRUDEVOLD
PROJECT MANAGER

DRAWN

CHECKED

1305
PROJECT NUMBER

PROPOSED HELISTOP AT EAST CAMPUS
UNIVERSITY OF WASHINGTON

MILLS, JOHN & RIGDON ARCHITECTS AIA
810 THIRD AVE SEATTLE, WA 98104 [206] 624-0810

#3

01/30/92 09:28 MILLS, JOHN & RIGDON 004

PARKING SPACE SUMMARY

	LOSS	GAIN
PARKING LOT E-1	(66)	0
WALLA WALLA ROAD (EAST SIDE)	0	34
PARKING LOT E-14	(30)	62
TOTAL	(96)	96*
NET LOSS/GAIN	0 SPACES	

* 35% SMALL SPACES = 34 - REQUIRED
35% LARGE SPACES = 34 - REQUIRED
30% MEDIUM SPACES = 28
100% = 96

#4

01/30/92 09:29 MILLS, JOHN & RIGDON 005

GOLF RANGE

EXISTING DRIVES

EXISTING UW PARKING LOT E-14 WITH PROPOSED 16FT. EXPANSION FOR DOUBLE LOADING SHOWN

EXISTING ASPHALT CONCRETE

30 29 28 27

224'

28 MEDIUM SPACES @ 8' WI. X 16' LONG

2'

16'

289'

24'

34 LARGE SPACES @ 8.5' WI. X 19' LONG

25'

RIPARIAN CORRIDOR

15

AMBULANCE

NEW 20' ASPHALT CONCRETE

30'

25

27 26

NEW PLAYFIELD LINES

65' DIA. CONCRETE TOUCHDOWN PAD WITH ARC

OIL/WATER SEPARATOR

INLET

#5

01/30/92 09:30

MILLS, JOHN & RIGDON

JGL Acoustics, Inc.

1505D Bellevue Way N.E. • Bellevue, WA 98004 • (206) 454-4823 • FAX: 454-9973

February 27, 1992

RECEIVED
MAR 0 2 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

City of Seattle
Dept. of Construction and Land Use
710 Second Avenue Suite 200
Seattle, WA 98104

Attention: Mr. Dennis McCarthy
Subject: SGA Helistop
Environmental Noise Assessment

Gentlemen:

This report is a summary of my findings regarding the SGA Helistop Environmental Noise Assessment prepared by the Parry Company. I have restricted my comments to issues relating to the adequacy of this document (which includes the September 1991 addendum) in terms of disclosing potential noise impacts to the surrounding community.

In general, I found the report to be technically accurate (for the most part), complete, and easy to read. However, there are some misleading statements and conclusions which I would like to point out. In addition, I have some general comments concerning the general approach to the noise assessment process.

In the first section I have addressed the issue of the general approach to the noise assessment process. Following this section I have presented specific comments which are in error or are misleading in the environmental noise assessment. The last section deals with my recommendations for additional testing which should help to fill in the gaps that currently exist in the environmental assessment.

Overall Approach

The overall approach that was used in the environmental noise assessment can be summarized as follows:

1. Helicopter noise measurements were conducted at seven different measurement locations in the community surrounding the helistop using the proposed helicopter and the proposed flight patterns.

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2. Helicopter noise levels and contours were computed using the FAA's computer program HNM.

3. The calculated and measured A-weighted helicopter sound levels were compared with established community noise criteria.

4. Noise impacts were determined by comparing helicopter noise levels with these criteria as well as estimates of existing ambient noise levels.

5. Noise mitigation measures were identified.

This overall approach is appropriate, however there are several specific areas which are, in my opinion, lacking adequate foundation. The most significant of these is the assessment of the existing ambient noise in the residential community. The June 1991 report did not present any measure of the existing ambient noise over an extended period of time. The September 1991 addendum attempted to fill this void, but it failed to provide the necessary information because the noise monitoring location was improperly selected.

It is important to understand that the greatest potential noise related impact from this project will be in the residential community surrounding the proposed helistop. It is the people that live in these homes that are causing the greatest resistance to this development, and their concerns should be addressed.

In order to determine if there will be a noise impact as a result of this proposal, it is essential that the existing ambient noise characteristics of the community be known. It is not sufficient to simply "estimate" the ambient noise, nor is it sufficient to predict compliance with federal noise regulations. The measured noise levels associated with the proposed project should have been compared with the measured ambient noise levels in the community.

The ambient noise measurements presented in the September 1991 report should have been taken in the surrounding residential community, **not in the parking lot of the SGA office building while it was under construction.** The September 1991 ambient noise report indicated numerous noise events over 65 dBA including fork lifts as high as 87.7 dBA, trucks as high as 85.3 dBA, and cars as high as 73.7 dBA. These sound levels may be representative of the noise in the parking lot during construction, but they are not representative of what one would expect to measure outside of the typical residential bedroom window in this neighborhood.

Similarly, Table 3-4 in the June 1991 report shows ambient noise levels as high as 90 dBA from a passing school bus at Location #2. Although the report did not specify the exact location of the measurement microphone for these tests, levels this high would lead me to believe that the microphone was located too close to the street.

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The September 1991 report shows that ambient noise measurements were also taken at five locations in the residential community (Sites 1, 2, 3, 6 and 7). However, the measurement period at each location was much too short to provide any realistic estimate of the ambient noise level. It appears from the report that the duration of these measurements was less than 5 minutes at each location. Ambient noise measurements in a residential community should extend for a minimum period of 24 hours, and preferably several days at each location. In addition, the precise location of the measurement microphone was not revealed in the report. If the microphone was located close to the street (as it appears from looking at the results), the noise from passing traffic will overestimate the true ambient noise in the community. The proper microphone location is a location which would yield results equivalent to the sound level existing outside a typical bedroom window.

The second area lacking foundation is the noise criterion for sleep interference. The basis for this criterion is Figure A1 in the June 1991 report. This figure plots the percentage of people awakened from sleep as a function of the interior maximum A-weighted sound level. This graph is derived from a report submitted to the FAA discussing the noise effects of aviation. There is no mention in the June 1991 report that this data is applicable to helicopter noise. I suspect that it is applicable to airplane noise, but helicopter noise is substantially different in character from airplane noise. Helicopter noise typically is much more impulsive in nature, and it usually contains low frequency tonal components. Both of these factors tend to make helicopter noise more annoying than fixed-wing aircraft, even at the same sound level. I can find nothing in the noise assessment to account for these factors.

The third area lacking foundation is the assumption that A-weighted exterior sound levels are the only noise metric that is relevant to this project. Although exterior sound levels are important to the community, it is the interior noise that is expected to cause the greatest annoyance and disruption as a result of this project. When people are inside their homes, they generally want to be isolated from the exterior environment, and they do not want to have the exterior environment interfering with their normal indoor activities. Interior sound levels were estimated in the report by subtracting 10 dBA (for open windows) or 20 dBA (for closed windows) from the measured exterior helicopter noise levels. There was no supporting evidence provided to indicate that this is a reasonable assumption for the spectrum of noise generated by the Bell Jetranger helicopter. This should have been provided. In addition, the level of interior low frequency helicopter noise should have been determined and reported.

As a result of these factors it appears that the percentage of the population who will be awakened from sleep was underestimated. The report suggests that with windows open, 15% of the sleeping residents would be awakened by the helicopter activity. This is based upon the graph presented in Figure A1 and an assumed helicopter maximum sound level of 65 dBA. However, a review of the measured helicopter maximum (Lmax) sound pressure levels presented in Table 3-2 of the

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September 1991 report shows that there are numerous locations and events where the exterior helicopter noise level exceeds 70 dBA. In fact, some events measured as high as 78 dBA. This is more than twice as loud as the 65 dBA Lmax level that was assumed in the September 1991 report on page 4-2. Using a helicopter Lmax sound level of 65 dBA for the entire community is incorrect and obviously leads to the wrong conclusion regarding sleep interference.

The appropriate method of presenting the sleep interference information would be to divide the community into areas of near equal helicopter noise levels similar to the contours provided in Figures 3-6 and 3-7 from the June 1991 report. For example, the sleep interference impact would be considerably less in the area between the 60 and 65 dBA Lmax contours than it would inside the 70 dBA contour. If one assumes that Figure A1 is applicable to helicopters, and one also assumes a 10 dBA exterior to interior noise reduction with open windows, then approximately 20% to 25% of the residents trying to sleep will be awakened by the helicopter if they live inside the 70 dBA contour. In addition, 40% to 45% will have the quality of their sleep compromised (sleep stage changed). The percentage figures should be translated to actual numbers based on the existing population within each contour and the expected number of people trying to sleep.

Specific Comments on the Environmental Noise Assessment

1. Executive Summary, page 3

   The range of maximum helicopter noise levels was stated to be 65 to 75 dBA. In fact, there were several readings of helicopter noise as high as 78 dBA in the residential community. The report also claims that other noise sources including buses, dogs, private aircraft, and automobile traffic produced maximum levels equal to those produced by the helicopter. This was not substantiated by ambient noise measurements taken with the measurement microphone in the proper location.

2. Executive Summary, page 4

   Under Forecasted Sound Levels the report states that "the maximum hourly Leq from helicopter activity is roughly equal to that of the existing background noise when flights are to the north." The average daytime or nighttime hourly Leq was not measured at any of the sites, so this statement cannot be justified. Even if this statement were true, this would result in a 3 dB increase in the hourly Leq. Similarly, the report claims that the DNL would increase from 0 to 1 dB by the proposed 2-3 flights per day. Again, this cannot be verified because the DNL was never measured in the community.

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3. Executive Summary, page 5

The report correctly states that aircraft operations are exempt from the State and City noise ordinance requirements. However, it implies that the helicopter noise is quiet enough that it would be in compliance with these ordinances. This is definitely not the case. The allowable sound levels in these ordinances are based on a one hour measurement. The State and City ordinances allow noise levels up to 57 dBA during the day and 47 dBA during the night for steady noise sources. For noise sources that vary in sound level with time, somewhat higher levels are allowable for shorter periods of time. In no case is the noise level allowed to exceed 72 dBA during the day and 62 dBA during the night. It is obvious from the helicopter noise measurements presented in this study that the helicopter would not meet these ordinance restrictions.

4. Executive Summary, page 5

The report states that the FAA suggested single-event noise criteria for speech interference would be exceeded only when residents leave their windows open. This criteria level was not presented anywhere in the report. In addition, the sleep interference percentages are incorrect and misleading as described earlier in this report.

5. Executive Summary, page 5

The report suggests that sleep interference can be mitigated through limitation on the hours of operation. This is not realistic because many people must sleep during the day. These include infants, people who are sick, and people who have to work during the night (e.g. police officers, etc.). I suspect that sleep interference is an unavoidable adverse impact.

6. Executive Summary, page 5

The last sentence of this page states that the state and city noise ordinance criteria are not exceeded. This is inaccurate as previously noted.

7. Executive Summary, page 6

The report suggests that the proposed Bell 206B helicopter is the quietest in its class, according to the manufacturer. I suspect that most manufacturers would make this claim about their own machines. Perhaps it would be worthwhile to have an independent assessment made of this point.

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8. Executive Summary, page 6

Noise abatement flight procedures during approach and departure are listed as recommended noise mitigation measures. These include maintaining 1,000 ft. altitude, whenever possible. However, one of the conclusions of the noise testing was that altitude had no effect on the noise levels in the community (see page 2-2). This procedure cannot be listed as a noise mitigation measure since it provides no noise reduction. In addition, avoiding sharp maneuvers and using moderate approach and take-off angles is also suggested to eliminate blade slap noise. The report does not state what types of maneuvers the helicopter used during the tests (e.g. turns, approach and take-off angles, etc.), but I suspect that the maneuvers that are known to emphasize blade slap noise were not employed during the tests. Consequently, this should not be listed as a noise mitigation measure, but more accurately a measure which must be **required** to avoid <u>increased</u> impacts above and beyond those revealed in the environmental noise assessment.

9. Executive Summary, page 6

Nighttime flight operations are shown to be infrequent, 4% of all operations. If operations average 2.5 flights per day (based on 260 weekdays per year), then this would result in approximately 26 nighttime flights per year. This fact should be revealed.

10. Executive Summary, page 6

The conclusion of the executive summary is that noise mitigation measures are available. In fact, none of the proposed noise mitigation measures will have <u>any</u> effect in terms of reducing the expected helicopter noise level in the community compared to those measured during this study. If noise mitigation measures are shown in the environmental noise assessment, the net effect of each these measures should also be revealed.

11. Introduction, page 1-1

The report states that "the noise abatement flight procedures will virtually eliminate the noise impacts from the proposed operations." The report provides no substantial evidence to support this conclusion.

Proposed Additional Measurements

In my opinion it is imperative to conduct additional acoustical measurements if the noise impacts of this proposal are to be properly disclosed. These measurements should include the following:

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1. Ambient noise measurements in the community in at least four different locations. I would recommend two locations that fall inside the 70 dBA Lmax helicopter noise contour, and two other locations which fall between the 60 and 70 dBA Lmax contours. The measurement microphones should be located in the vicinity of an exterior second story window, and each measurement should extend for at least 48 hours. At a minimum, the measurement system should record the following hourly noise statistics: Leq, Lmax, Lmin, L(1), L(10), L(50), and L(90).

2. Helicopter noise measurements in the residential community surrounding the proposed helistop. Additional measurements are required in order to more accurately determine the interior maximum noise levels associated with the proposed project. Interior noise measurements with windows open and with windows closed are recommended. Preferably, these measurements would be taken in residences near the new ambient noise measurements. The helicopter noise measurements should include the following helicopter maneuvers:

   a) approach and departure at a steep and a moderate angle - no turns,

   b) approach and departure with a sharp turn,

   c) approach and departure with a high and low rate of ascent/descent.

   The acoustical data should be recorded on digital audio tape for post-measurement frequency analysis. In addition to measuring interior sound levels directly, this data will provide a means of determining whether or not excessive levels of low frequency noise will penetrate the exterior walls of the houses.

The helicopter noise tests could be conducted on a weekend, if desired. However, a weekend test is not essential. The ambient noise tests should be conducted primarily on weekdays, but over one weekend at one of the four locations.

I understand that some additional helicopter noise testing has been suggested for the Alki area to respond to the question regarding low visibility flying conditions. I do not believe that this testing would be very valuable considering the fact that the helicopter will always be 1/2 mile from the shoreline. The expected maximum sound level at this distance would be less than 60 dBA. Considering the expected frequency of low visibility flying conditions, it does not seem to me to be worthy of additional testing.

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Summary

In summary, the Environmental Noise Assessment prepared for this project is inadequate because it has failed to accurately assess the probable impact of the proposed project. Errors were made in the determination of the existing ambient noise level in the community, and several unsubstantiated assumptions were made in the determination of the impact of interior helicopter noise in the surrounding residential community.

The SEPA process generally requires that the worse case environmental impacts be revealed. The June 1991 Environmental Noise Assessment (supplemented by the September 1991 follow-up report) fails to provide the necessary information to ensure this disclosure.

If you have any questions or comments concerning these findings and recommendations, please do not hesitate to give me a call.

Very truly yours,
JGL Acoustics, Inc.

Jerry G. Lilly, P.E.
President
Member, INCE & NCAC

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FILE

Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Norman B. Rice, Mayor

1992

April 24, 1992

Re: 4800 Sand Point Way Northeast
MUPs #8405870 and #9106441

Suzanne Peterson, Director
Governmental Relations
Children's Hospital and Medical Center
4800 Sand Point Way Northeast
P. O. Box C-5371
Seattle, Washington 98105

Dear Ms. Peterson:

The Department of Construction and Land Use (DCLU) is preparing to publish its recommendation on the proposed helistop at Children's Hospital and Medical Center (CHMC). Prior to publication of the recommendation, CHMC must pay the fee for the time spent reviewing the project. On February 22, 1989, DCLU notified CHMC that $71.00 per hour would be charged for environmental review costs incurred after January 1, 1989. CHMC must also pay, at an hourly rate of $71.00, for all time spent on the original Council Conditional Use component.

To date, over 600 hours of land use review time have been spent on this project. Since January, 1989, approximately 84 of these hours have been charged to billable environmental review. Since January, 1985, approximately 170 hours have been charged to the Council Conditional Use component. The remaining hours were assigned to environmental review and, according to our letter of February 22, 1989, are not billable.

The majority of the billable hours for this project have been, and will continue to be, charged to the original project, #8405870. CHMC also has a second project, at the Intramural Activities Field site, #9106441. This project is an integral piece of the preferred alternative to the originally proposed CHMC helistop. Because of its more recent application date, it is subject to the current fee ordinance with an hourly charge of $110. The hourly fee for project #9106441 will be $1,798.50 for 16.35 hours. You have paid a deposit of $1,100 toward this fee, so only an additional $698.50 is owing.

In addition to the hourly fees incurred to date, we estimate a substantial number of additional billable hours will be

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spent in the upcoming public hearings. To cover these hours, as well as the time to finalize the recommendation, we are adding 50 hours to the current bill. Following a Council decision on the project, DCLU will total the billable hours. In the unlikely event that fewer than an additional 50 hours are accounted for, the overpayment will be credited to any other fees owing or will be refunded. If more than 50 hours are shown, a new bill will be generated.

The amount owing at this time accounts for hours spent through approximately April 20, 1992, plus an estimate of time needed to complete the project.

MUP #8405870

Council Conditional Use	170 hours	
Environmental Review	84 hours	
Additional Billable (estimate)	50 hours	
TOTAL	304 X $71.00 =	$21,584.00

MUP #9106441

Council Conditional Use (average hours)	16.35 X $110.00 =	1,798.50
	less deposit	<1,100.00>
TOTAL		$ 698.50
TOTAL AMOUNT DUE		$22,282.50

If you have questions concerning this bill, please call me at 233-3856. We hope to publish the recommendation in early May, but must receive payment prior to publication. We look forward to completing this project.

Sincerely,

Laura L. Gilbert
Acting Director

Faith L. Lumsden
by CTW

By
Faith L. Lumsden
Senior Land Use Specialist

FLL:mrr
wp1\petersn

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8405870

FILE

Mrs. Paula Douglas
4545 Sandpoint Way N. E. #802
Seattle, WA 98103

March 14, 1992

RECEIVED
MAR 17 1992
DEPT OF CONST... & LAND USE
LAND U...

Dear Ms. Tomsden,

I am writing to tell you I am against the helistop at CHMC. I feel that the noise, air activity over my top floor condo and all the surrounding Doctors offices, banks, etc would ruin the neighborhood of Laurelhurst area. I want the helistop put to remain at the University field such ambulance to CHMC.

Sincerely,

Paula Douglas

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FU

8405870

Mrs. Faith Sumoden
Dept. of Construction and Land Use
701 - 2nd Avenue, Suite 700
Seattle, WA 98104

RECEIVED
FEB 10 1992

Dear Ms. Sumoden:

I write regarding CHMC's Final EIS on the helistop. I do not advocate a total ban on landings there, but do feel that there should not be an increase from current levels, maintaining use of the UW fields at 45th and Union Bay for most landings. The safety record of these flights makes it statistically a quite high risk activity. You know there are homes, schools, and play fields very much at risk. I don't think the risk to benefit Ratio supports expanding helicopter service at the hospital.

Norma Ursulow
3926 - 47th Ave NE
Seattle WA 98105

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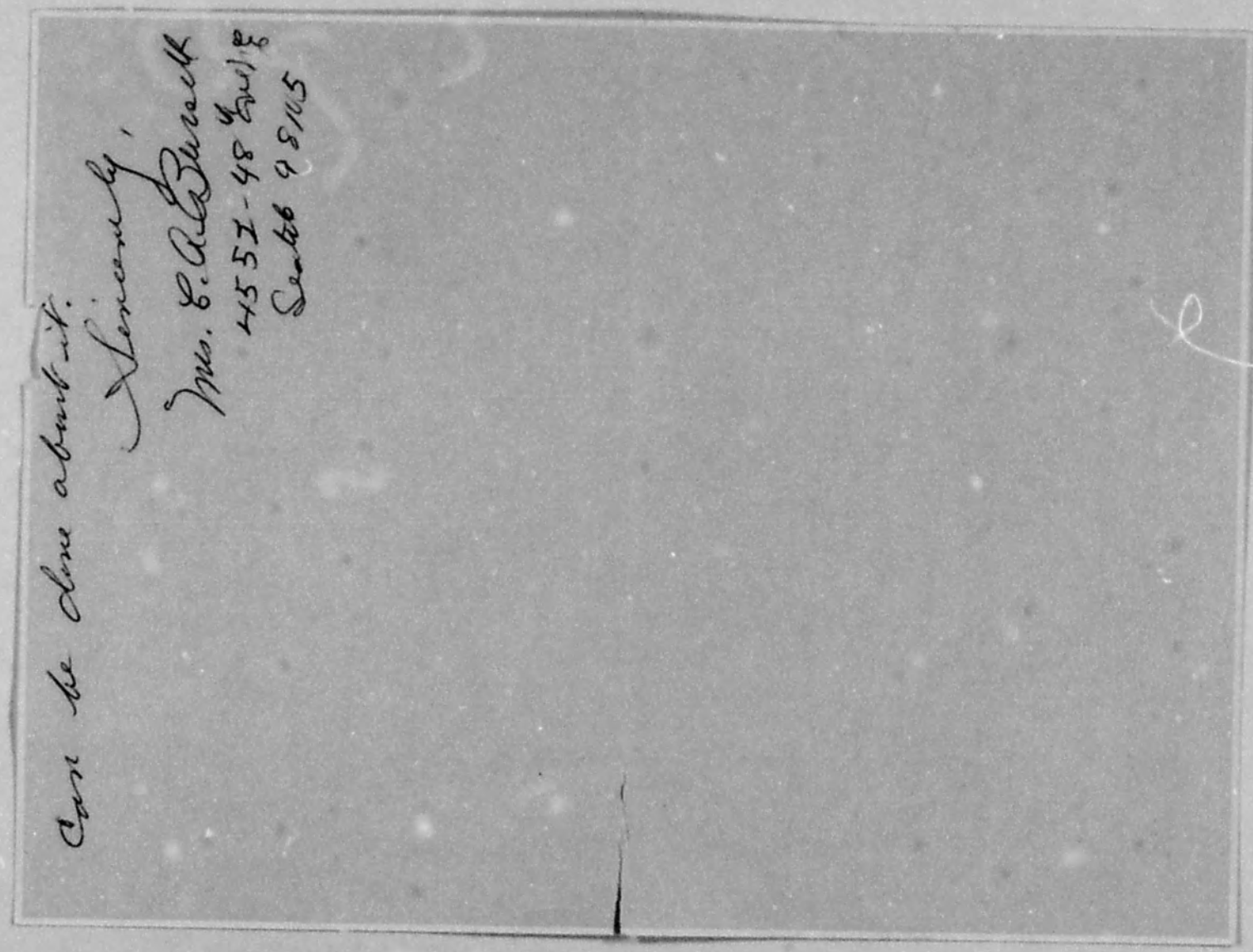

FH

8405870

Ms. Faith Sumoden
Dept. of Construction and Land Use
701 - 2nd Avenue, Suite 700
Seattle, WA 98104

RECEIVED
FEB 10 1992
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Sumoden:

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Thank you.

Norma Ormsbee
3926 - 47th Ave NE
Seattle WA 98105

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FILE

PHILIP S. PADELFORD
204 DENNY WAY
SEATTLE, WASHINGTON 98109

RECEIVED
FEB 13 1992
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Faith Lumsden
Dept of Construction & Land Use
710 - 2nd ave, Suite 700
Seattle 98104

Dear ms. Lumsden,

Mrs Padelford and I are both opposed to any plan to site a helistop at the Childrens Hospital in Laurelhurst. We live in Windermere, but feel this proposed activity is inappropriate for a family-home neighborhood

Very truly yours

Mr. and Mrs. Philip S. Padelford

[redacted]
8405870

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JAN 31 1992
DEPT OF CONSTRUCTION & LAND USE

Washington State Department of Transportation
District 1
15325 S.E. 30th Place
Bellevue, Washington 98007-6538
(206) 562-4000

Duane Berentson
Secretary of Transportation

DATE: January 24, 1992

TO: Mr. Cliff Portman
City of Seattle, Department of Construction & Land Use
710 Second Avenue
Seattle, WA 98104-1703

FROM: Mr. Gerald R. Mahlum
Acting Utilities/Developer Services Engineer
Washington State Department of Transportation, District 1
15325 Southeast 30th Place
Bellevue, WA 98007-6568

This letter is in response to the Land Use Information Service Bulletin that we received from the City of Seattle on January 16, 1992.

We have reviewed the subject document and have determined that the traffic generated by the following developments will not have a significant adverse impact upon any state highways.

Project Number	State Route	Project Number	State Route
9106551 AWW	5	9106441 FLL	513
9106393 JHH	99	9105352 MLP	99
9106526 DWM	99	9106524 DWM	99
9106525 DWM	99	9106588 MJA	5
9106205 DEB	5	9106368 OAE	509
9106625 OAE	509	9106503 MJF	509
9105409 NGT	522	9105155 OAE	
9106350 OAE	519	8907850 OAE	99
8907851 OAE	99	9105122 Deb	99
9006030 MMH	5		

If you have any questions, please feel free to call Don Hurter at 562-4274 or Doug Haight at 562-4298, both of my Developer Services Section.

DGH:dgh

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RECEIVED
JAN 2 9 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

January 24, 1992

DCLU
710 Second Avenue, Suite 200
Seattle, WA 98104-1703

Re: Project #9106441 - Children's Hospital

To Whom It May Concern:

Please place us on the mailing list to receive information regarding Children's Hospital Heliport as it becomes available to the public. Please send information to the following address:

Leslie Lloyd
The Ferris Company
10655 NE 4th Street, Suite 506
Bellevue, WA 98004

Thank you.

Jennifer Parker

JP:hd

Key Bank Building, Suite 506
10655 NE 4th Street
Bellevue, WA 98004
FAX 206/646-7875
206/462-7650

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FIL

4553- 49th Avenue N.E.
Seattle, Wa. 98105-3827
February 17, 1992

Ms. Faith Lumsden
Dept. of Construction and Land Use
710 2nd Ave., Suite 700
Seattle. Wa. 98104

RECEIVED
FEB 19 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Lumsden:

I am concerned about the proposed helistop at Children's Hospital Laurelhurst facility. I live five blocks away from the hospital and have a "center stage view" of helicopter landings and take-offs. I shudder inside each time I watch these maneuvers. It is unbelievable to me that my society can justify and condone putting so many people in peril for each landing and take-off. I would be happy to offer my home to you as a viewing site to watch and also hear the noise created by these landings.

Sincerely yours,
Lilla O'Grady
Lilla R. O'Grady

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RECEIVED
FEB 19 1992
DEPT OF CONS. INSPECT. & LAND USE
LAND USE DIVISION

4525 51st Ave., N.E.
Seattle, WA 98105-3830

February 13, 1992

Ms. Faith Lumsden
Dept. of Construction & Land Use
710 2nd Ave., Suite 700
Seattle, WA 98104

Dear Ms. Lumsden,

The continuing encroachment into the Laurelhurst community by the Children's Hospital and Medical Center has become a bone of contention for many in what was once a residential neighborhood. Many have remained silent as the aims of the original land owners are totally ignored; as the facility continues to pressure and overpower its neighbors.

The benefit of the hospital is without question as it is with low-income housing and other institutional facilities which surround us. It reaches a point, however, when one must try to call a halt to unnecessary (where alternatives are available) but especially to unsafe schemes as the helistop.

It is essential in my view that we do not permit this monolithic facility to "strong arm" us into submission on such a vital public safety issue. Please record my "No" vote on this matter.

Very truly yours,

Bruce Davis

Bruce Davis

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A/P INTERNATIONAL, INC.
3147 FAIRVIEW AVE. EAST
SEATTLE, WASHINGTON 98102
U.S.A.

(206) 323-3325
FAX (206) 726-9803

RECEIVED
FEB 19 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

February 13, 1992

Ms. Faith Lumsden
DCLU
710 2nd Ave. Suite 700
Seattle, Wa. 98104

Dear Ms. Lumsden,

I am writing today to ask that you deny the permit for COH to build a helistop in a residential neighborhood. The environmental impact statement that was issued by COH cover a variety of issues and highlights the reasons that major institutions would like the city to ignore the zoning in favor of disruptive and unnecessary expansion.

DISRUPTIVE quite simply due to the incredible noise that is created by the helicopter. The environmental impact statement would like one to simple rely on the measurable and statistically quantifiable impact of the noise. The EIS does not account for the prolonged impact of this noise. My entire family is disturbed every time the helicopter lands and continues while the unit is on the ground with the turbines running and is jolted again when the unit takes off from COH. We do not believe that the human impact that is felt by the families and the children in the area around COH is properly addressed in the ESI.

The ESI would like the DCLU to believe that this noise is not covered by the Seattle City Noise Ordinance because of it's emergency status. COH can only rely on this exception to the rule by breaking the established regulations and then asking that the DCLU legitimizes there abuse.

UNNECESSARY because COH has an alternative sight to use for landings and as the base for expansion. These sights are not in a residential area and are conducive to the landings and use that COH is trying to force Seattle neighborhoods to accept.

Please do not let the major institutions destroy the City's foundation, strong and positive neighborhoods.

The residential neighborhoods are the heart of every city.

Sincerely,

4715 47th Ave N.E.
Seattle, Wa. 98105

Dale E. Sherrow, Jr.

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RECEIVED
JAN 22 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

January 10, 1992

Faith Lumsden
DCLU
Fourth Avenue
Seattle, WA 98104

Dear Faith:

It is my understanding from speaking with Suzanne Petersen that you have inherited the Children's Helistop project.

For a substantial part of my professional life I was the project manager for the EIS on the helistop. In this capacity I was responsible for the many drafts of both the Draft and Final EIS documents. While at times these documents appeared to have lives of their own, their evolution was in response to changes in alternatives, in CHMC and Airlift Northwest programs and procedures, in the improvements in aeromedical safety records, and a few dozen other factors. In speaking with John Doan I am aware that not all of these changes are fully documented in the DCLU files.

As a result of my 5+ years of involvement in the EIS I see myself as something of a project historian. Since the publication of the Final EIS I have left Shapiro and Associates and embarked on something of a 'walkabout.' However, I also have committed to Suzanne that I would help to see the project through the Hearing Examiner/City Council hurdles and hearings.

Having been the consultant on the EIS, I see that my first responsibility is to DCLU and to be available to assist the Department, as needed, during the preparation of the Department's decision and recommendation to the Hearing Examiner as well as to assist in the actual hearing.

I'm available to answer any questions that you may have on the project and that may not be readily available or apparent from the DCLU files. Please don't hesitate to contact me, if I can be of any assistance. Getting in touch with me is possible by calling (310) 858-4994 and leaving a message -- I pick up messages at least as often as every couple of days.

Best wishes,

Glenn Bachman

Glenn Bachman, AICP
1509 Queen Anne Ave. North
Seattle, WA 98109

cc: Suzanne Petersen

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* 4 University of Washington ~~Library~~
Suzzallo Library
Attn: Carolyn Mateer
Reference Division
FM-25

* 5 University of Washington
Health Sciences Library
SB-55

Kelly -
p/s. make sure
these ~~Six~~ 5 Libraries are
on the mailing list
for CHMC helistop EIS.
They each get copy
of ~~EIS~~.
Recommendations. Thanks!
JDO

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U

25

KU w/ these changes — DTD

April 1991

Final Environmental Impact Statement
Master Use Permit No. 8405870
4800 Sand Point Way N.E.
Children's Hospital and Medical Center Helistop

This document has been prepared in compliance with the State Environmental Policy Act (RCW 43.21C) and the Seattle SEPA Ordinance, Chapter 25.05, SMC. Copies of this document are available for public review at the Master Use Information and Notification Center, 408 Seattle Municipal Building and the following branches of the Seattle Public Library:

1. Downtown Branch - 1000 4th Avenue, Seattle 98104
~~Governmental Research Assistance Library - 3rd Floor, Seattle Municipal Building, Seattle 98104~~
2. North East Branch - 6801 35th Avenue N.E., Seattle 98115
3. University Branch - 5009 Roosevelt Wy N.E., Seattle 98105
~~University of Washington Library~~

AA

A limited number of copies for public distribution are available at the Land Use Information Center, 684-8467.

BB

The Department of Construction and Land Use will issue a recommendation on whether to grant, condition, or deny the project described above no sooner than seven days after the date of this document. A public hearing for citizens to comment on the proposal and recommendation will be scheduled at that time. The final decision will be made by the Seattle City Council. Notice of the decision will be published either on a Monday or a Thursday in the Daily Journal of Commerce. Notice of the decision will also appear in the Department's twice weekly Land Use Information Service bulletin and will be mailed to those who request a copy of the decision.

Sincerely,

REBECCA HERZFELD
Director
Land Use Division

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RECEIVED
FEB 13 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

8405870 FCL

2/10/92

We are opposed to the plan to build a helistop at Children's Hospital and Medical Center. We feel this is unsafe air traffic in our residential neighborhood.

I am a consultant in aviation. I prepared the 20-yr. helicopter study (PSCAG) for the Puget Sound. "Swoop + scoop" marketing expansion using power-lift medevac aircraft is an understandable marketing technique in an ever more competitive environment for hospitals. However, Childrens is a conditional use in a single family zone. They plan to build a new trauma facility in the Bellevue area, and a helistop / heliport can be more adequately designed for emergency cases at that location.

Until that facility becomes operational, the joint UW/Childrens helipad should be adequate.

As an alternative, Harborview is the area's trauma center — and should provide an environment where critical cases can be stabilized. We encourage further documentation and research into this matter.

The safety record for medevac operations has been dramatically improved in the last few years, but remains below that of fixed wing and rotorcraft operations nationally.

Please consider: ① Harborview for stabilization, ② providing the regions helistop for children in Bellevue at the planned facility, and ③ the repercussions of an "event" if an Airlift Northwest Augusta 109 should crash in a residential neighborhood during "emergency conditions.

Sidney Haelsen

Dick Barnum, Aviation Specialist

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FEB 10 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Febry 6. 1992

Ms Faith Lumsden
Dept of Construction + Land Use
710 2nd Ave. Suite 700
Seattle, Wa 98104

8405870

Dear Ms Lumsden:

As a longtime resident of Lauelhurst I would like to voice my objection to a CH/H C building a helipat which would increase landings and take offs.

As a flight engineer flying in helicopters w the Coast Guard we always knew of the danger of unexplainable wind shifts, wind shear, mechanical failure due to undetected metal fatigue, and other failures that could cripple the aircraft even at take off and landing. Here we have a dense residential neighborhood to consider, unnecessary noise pollution, a diversion which could interrupt traffic, etc. The UW field is

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convenient and extremely close. The added less than 5 minutes of the emergency entrance by trained medical technicians give a extremely high level of medical services.

The risks of this heliport, I believe, outweigh the perceived benefits.

Sincerely -

Douglas B. Nichols
5126 NE 42 st
Seattle, wa
98105

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DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Richards L. Loesch
3326 43rd N. E.
Seattle, Wa 98105

Feb 6, 1992

8405870

Ms Faith Lumsden
Dept. of Construction & Land Use
710 2nd A ve., Suite 700
Seattle, Wa. 98104

Dear Ms Lumsden:

The construction of a helistop at CHMC Should be approved.

A s far as neighborhood safety is concerned, we are all much more liable to be injured or die in our bathrooms or cars than by a helicopter accident; and, of course, any increase in noise is so slight and so short in duration as against cars, lawn mowers, leaf blowers, edge trimmers, garbage trucks, etc., that it is of absolutely no consequence.

The important fact to remember is that these flights are going to be made anyway since nobody would deny a child who requires immediate medical attention, the lifesaving potential of the helicopter. The helispot will help make these flights safer and speedier during takeoff and landing.

Very truly yours,

R. L. Loesch

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alpha information management inc.

ATTENTION

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5807 4TH AVE. SO. P.O. BOX 24468 SEATTLE, WA 98124 206-763-6220

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FEB 10 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Febry 6 1992

Ms Faith Lumsden
Dept of Construction + Land Use
710 2nd Ave, Suite 700
Seattle, Wa 98104

8405370

Dear Ms Lumsden:

As a longtime resident of Laurelhurst I would like to voice my objection to a CHMC building a heliport which would include landing and take offs.

As a flight engineer flying in helicopters in the Coast Guard we always knew of the danger of unexplainable wind shifts, wind shear, mechanical failure due to undetected metal fatigue, and other failures that could cripple the aircraft even at take off and landing. Here we have a dense residential neighborhood to consider, unnecessary noise pollution, a diversion which could interrupt traffic, etc. The LZ field is

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Sincerely -

Douglas E. Nichols
5126 NE 42 st
Seattle, wa
98105

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FEB 10 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Richards L. Loesch
3326 43rd N. E.
Seattle, Wa 98105

Feb 6, 1992

8405870

Ms Faith Lumsden
Dept. of Construction & Land Use
710 2nd A ve., Suite 700
Seattle, Wa. 98104

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Very truly yours,

R. L. Loesch

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Pace Med INC.

KEEPING PACE WITH MEDICAL TECHNOLOGY

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FEB 10 1992
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

February 6, 1992

Ms. Faith Lumsden
Dept. of Construction and Land Use
710 2nd Avenue, Suite 700
Seattle, Washington 98104

8405870

RE: Helistop at Childrens Hospital & Medical Center

Dear Ms. Lumsden:

I am writing you to voice support for the endeavors of Children Hospital with regard to helicopter landings with sick children. If it were my child I would of course want to get the quickest and best medical care available, which I believe is at Children's Hospital.

My wife and I currently live at 3811 48th Avenue Northeast and I have been a Laurelhurst resident for over 35 years. When we had the Naval Air Base as a neighbor we enjoyed the disturbance because it was in the best interest of our country, as is the helicopter landings in the best interest of our children. I also believe that the helicopters should not be required to land at the University of Washington, as to delay emergency treatment of these children.

Please feel free to call me should you have any questions.

Very truly your

PACE MED, INC.

Paul N. Cahill
Vice President

cc: Treuman Katz, C.O.H.
Emily Wilson, Editorial Staff, Laurelhurst Letter

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FEB 21 1992
DEPT OF CONSTRUCTION & LAND USE

Ms. Faith Lumsden
Dept. of Construction & Land Use
710 2nd Ave, Suite 700
Seattle, WA 98104

Dear Ms. Lumsden:

I am writing to express my concern about the proposed plan for a helistop at Children's Hospital and Medical Center as contained in the Final Environmental Impact Statement.

While the vital service provided by this institution is widely appreciated, it should not be forgotten that it is located in a primarily residential neighborhood which greatly predated its beginnings. Indeed, when the hospital first began about forty years ago, it assured the local community that it would respect the residential character of the neighborhood and maintain a relatively small scale. While these assurances seem to have been forgotten, the residential nature of the community remains and deserves consideration. Helicopter flights arriving and departing over our rooftops threaten both the quality and, in the very real possibility of a crash, the safety of our lives.

I am pleased to learn that serious consideration is being given to a permanent helistop near the University Intramural Athletic Field. In all but the most critical cases this site will provide adequate access to the Hospital. Children's Hospital and DCLU are to be commended for developing this possibility. As a resident of the neighborhood, I ask that use of the University site be maximized and that flights over our residences be prohibited for all but those critical cases where delays of minutes could be life-threatening.

Thank you very much for your consideration.

Sincerely,

Michael D. Perlman 2/18/92

Michael D. Perlman
4500 NE 50th
Seattle, WA 98105
527-4537

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FLL

January 9, 1992

Faith Lumsden, Sr. Land Use Specialist
City Dept. of Construction and Land Use
Dexter Horton Building
210 2nd Ave., Suite 700
Seattle, Wa. 98104-1703

RECEIVED
JAN 13 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Re: Children's Hospital helistop application, File No. 8405870

Dear Ms. Lumsden:

I appreciated the opportunity to speak with you on January 7 about the forthcoming DCLU recommendation on the Children's Hospital helistop proposal. As I mentioned, the frequency of helicopter transports has noticeably increased in recent weeks. Records maintained by Suzanne Petersen of the hospital indicate a total of 14 cases from December 1, 1991, through January 8, 1992. Following each flight into the neighborhood is, of course, a take-off sometimes as much as a hour later, thus in fact doubling the number of separate flight impacts to 28.

These figures are significantly higher than the "...1990...average of 4.3...per month..." (page 72, April 1991 final EIS). They also cast doubt on the projected 3-5 transports per month in 1995, under the EIS preferred alternative.

I can appreciate your frustration at designing enforceable, meaningful mitigating measures as you prepare the DCLU recommendation to the City Council. It will be virtually impossible to enforce a restriction on monthly landings to a specific number. Thus I suggested restricting flights of the truly critical cases to certain hours, such as 7AM to 9 PM. All other cases would land at the UW intramural field. The advantages of this time-constrained recommendation include: easier monitoring and enforcement, less risk of helicopter accidents or crashes if landings are allowed only during daylight hours; less sleep disturbance among neighborhood residents; and reliance on surface transport from the UW intramural field during times of least traffic congestion.

As you explained at a meeting of the hospital Master Plan Committee, the helicopter issue is technically "off limits" in the MP process. I appreciated your comment in our recent conversation, however, that helicopter landings cannot be divorced completely from the overall picture of activity on the hospital site, and thus will continue to arise in discussions and deliberations of both the MP Committee and the City Council. And in fact, the MP Committee suggests that the DEIS investigate the possibility of confining helicopter landings to Harborview, where the regional trauma center is. You might confer with Nathan Torgelson of your department, who is drafting the Committee's DEIS scoping letter, for the exact wording of this request.

Again, I appreciated the opportunity to visit with you on this issue.

Sincerely,

Jane L. Johnson

Jane L. Johnson
4323 NE 45th St.
Seattle, Wa. 98105

cc: Members of Children's Hospital Master Plan Committee

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February 29, 1992

Ms. Faith Lumsden
Dept. of Construction & Land Use
Dexter Horton Bldg.
710 Second Ave.
Seattle, WA. 98104

RECEIVED
MAR 0 3 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Re: Proposed helipad at Children's Hospital & Medical Center (CHMC)

Dear Ms. Lumsden:

In addition to the fact that Harborview Hospital is in process of building a new trauma center and pediatric emergency department and already has in place a helipad, I note the following concerns related to my opposition to the proposed helipad at CHMC:

1. Overflights of helicopters (in and out) impact a populous residential area where hundreds of people's lives are endangered and reasonable use and environment of their property has been disregarded.

2. In an article in the P-I, January 21, 1992, it was reported "CHMC will spend $24 million on charity care this year ... but legal residents of Washington get first priority. Our policy here is we don't turn anyone away, but we have to put a proviso on that or else we would be overwhelmed by people from other states or countries." In this article we were told about a little girl who was rejected by CHMC and who had to go to Spokane for needed treatment. She was turned away by CHMC because she was not a legal resident of Washington, but was a charity case. Exactly how does CHMC pick and choose? How do they decide which Airlift Northwest flights will go to CHMC? CHMC has acknowledged they have no control over the landings--whether Airlift Northwest, Army or Navy. There is no standard criterion so far established.

3. Nuclear research and disposal of nuclear waste from it in a residential neighborhood is unacceptable; it is especially questionable and dangerous one block from an elementary school.

Please consider these concerns. Please do not allow a helipad built at CHMC.

Thank you.

Sincerely,

Helen Newman

Helen Newman
4252 N.E. 50th
Seattle, WA. 98105

cc:

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~~25870.~~ FLL

RECEIVED
MAR 10 1992

March 7, 1992

Ms. Faith Lumsden
Dept. of Construction & Land Use
Dexter Horton Bldg.
710 Second Ave.
Seattle, WA 98104

Re: Proposed helipad at Children's Hospital & Medical Center (CHMC)

Dear Ms. Lumsden:

Please, please recommend to deny the construction of the proposed helipad at CHMC. Safety is the prime issue.

This week three medical helicopters crashed. These were reported as follows in the Seattle Times:

Date	Place	Headline
3-5-92	Safford, Arizona	"Downed helicopter found: survivor rescued, 2 dead"
3-6-92	Detroit, Michigan	"Air ambulance crash kills all three aboard"
3-7-92	Juneau, Alaska	"Another helicopter crashes in Alaska"

No one wants this to happen here. The proposed site at CHMC is surrounded by a heavily populated residential neighborhood. A crash would be catastrophic.

As you know, a new neighborhood group has recently been formed--concerned and thoughtful citizens who clearly see the potential for such a catastrophe, who deserve to be heard and heeded in their sincere anti-helipad stand at CHMC.

I repeat what I have said in previous letters and conversations, we must stop a tragedy from occurring before it happens.

Thank you.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th St.
Seattle, WA 98105

cc:

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February 18, 1992

RECEIVED
FEB 19 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Faith Lumsden
Dept. of Construction & Land Use
710 2nd Ave., Suite 700
Seattle, Wa. 98104

Dear Ms. Lumsden,

I have never written a letter like this before, but for many reasons I feel now is the time to start. I was told this is the time to express my opinion about the helistop at Children's Hospital.

Our family lives in a home on the corner of 44th NE and 47th Ave. NE. It is the closest house to the Emergency Room at Children's and as such we see and hear each landing and take-off of the medical helicopters. We purchased the house 18 years ago when our oldest son was 3 years old and needed nightly medical treatment at the Emergency Room of Children's. Yes, we understand the fear and helplessness that parents feel who come to the Hospital with desperately ill children.

I also worked at Children's Hospital for ten years. I was their Accounting Manager. When Mr. Katz and his new administration came to the Hospital in the early part of the 1980's many things changed. The most significant change came to the financial statements. His focus was to make Children's a financial success. I am a CPA, I realize that is the focus of most corporations, but Children's was created with a different purpose. The purpose had been to provide excellent medical care to children regardless of their family's ability to pay. And there had been great community support generated to ensure that this promise could always be kept.

Mr. Katz's administration has changed the criteria in the determination of which families receive the benefit of the Free Care Program. The emphasis has been to make the review of the financial strengths of the family more complete. If the family has an asset such as a home that can be mortgaged then they are expected to do that to cover the cost of medical care. In the past that sort of review was not done. It was thought that a family would not benefit from the added burden of that liability when their other financial resources were very limited and they were already burdened with a severely ill child. The families were required to proved that they had no medical insurance and had no immediate ability to pay for their care.

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You must wonder what this has to do with helicopters. I use this as an illustration of the focus of the administration of Children's Hospital. With financial success their goal and growth their tool their is no hope that our neighborhood will survive the impacts that ever more service related visits to the Hospital by helicopter will produce.

In our home there are now three children who go to school, play baseball at the park, play basketball at the Laurelhurst School Gym, and ride their bike on the side walks next to the Hospital. How will we all be affected if the ever increasing landings are not monitored to determine <u>real</u> need versus the revenue that can be generated by the added billing to the insurance company? Who will be able to insure the safety of all the children who live, go to school and play in the three block radius of the Hospital? Who will be able to tell how the helicopters are being used and under what circumstances the decision is made to fly a child to Children's rather than another hospital which has a helistop? We are responsible parents and caring people who have seen too much to trust the judgment of the administration of Children's Hospital. The focus of the Hospital remains one of bottom line management. When a new administration returns the focus of Children's Hospital to families and children we will again become "neighbors" to Children's Hospital. But that is not the relationship we have at this time.

As you can tell we have a growing concern that when and if a legal permit is issued for the helicopter landings there will be an unbelievable growth in their use with no resource to stop a very well financed Hospital from expanding beyond the intent of the law. It will continue until there is an accident and then it will only be slowed temporarily.

My proposal is that very ill babies and children be air lifted to the trauma center at Harborview. When they are stabilized they can be transported to Children's Hospital by ambulance.

Thank you for your time and attention to this important matter.

If you have any further questions of me I can be reached at 524-8532 (home) or 546-4672 (work).

Sincerely,

Cheryl L. Kitchin

Cheryl L. Kitchin

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~~9405870~~ RECEIVED

FEB 13 1992

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

FU

✓

Feb. 10, 1992

Dear Ms. Lavender:

re: Childrens' Hospital -

I see no reason for a helistop - they are landing there without one!? They get an idea for another kind of construction - away they go & keep bothering until they get their own way. They have decreased the value of my property substantially by taking away every bit of my view of our beautiful Olympic & that has made me very angry. We have been very patient while they continue to be completely unfair!

Most sincerely,

Elizabeth Shmidt

4540-45th N.E.

98105

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RECEIVED
FEB 10 1992
DEPT OF CONST. & LAND USE
LAND USE DIVISION

February 6, 1992

8405870

Ms. Faith Lumsden
Dept. of Construction & Land Use
710 2nd Avenue, Suite 700
Seattle, WA 98104

Dear Ms. Lumsden,

I wish to express my concern over the proposed building of a helistop at Children's Hospital and Medical Center.

Since there is a very good alternative by using the playing field landing site just minutes from the hospital by ambulance or aid car it seems irresponsible to endanger the citizens who live in the vicinity, including homes, condominiums and schools.

Not all of the children who are brought in by helicopter survive, and not all the children brought by ambulance from the playing field landing site will survive, but I think their chances are equal. Therefore it seems prudent to use the safer site.

Helicopters have a high accident rate, and the landing space at the Hospital is quite limited. Why endanger the lives of the many who live in the direct path of flight when there is a very good alternative?

Sincerely,

Lillian J. Mills

524-0209

Lillian J. Mills #507
4545 Sand Point Way NE
Seattle, WA 98105

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3925 48th Ave. N.E.
Seattle, WA 98105-5228
1 Mar. 1992

RECEIVED
MAR 0 3 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Faith Lumsden
Dep't. of Construction & Land Use
710 2nd Ave, Suite 700
Seattle, WA 98104

Dear Ms Lumsden,

We are writing to you in regard to the Children's Hospital and Medical Center proposed plan to build an on-site helipad on their Campus at 4800 Sandpoint Way N.E. For many years we have been strong and active supporters of Children's Hospital, however, we do not feel we can continue to support their constant requests for on-site expansion and an on-site helipad.

Since the CHMC became affiliated with the University of Washington, they have continually requested more expansion, have become a political entity and a big business. It is no longer the organization we so strongly supported in the past. It is now impacting street traffic as well as air traffic and has become an emotional issue.

We feel it is extremely unsafe to have aircraft activity over thickly populated residential areas such as those surrounding CHMC. This area has many condos, apartment complexes, private homes, 2 schools, a community center as well as a hospital full of sick children.

We believe the CHMC facilities at Harborview Medical Center should be expanded to include a CHMC trauma unit in conjunction with the current Harborview trauma center for adults and children. This should eliminate the necessity of impacting so many neighborhoods in the city with requests for individual on-site helipads.

We feel the University and CHMC could successfully develop a helipad at the U of W Intermural Field where helicipters have been landing for years, for other than trauma center patients. This area can be reached over open space and is only minutes from CHMC.

Thank you for your consideration of this matter.

Yours very truly
Fred M Wright
Patricia O. Wright
Fred M. Wright
Patricia O. Wright

cc; Mr. Nathan Torgelson
Sue Donaldson

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840587O Feb. 13, 199-

Dept. of Construction & Land Use
710-5th Ave Suite 7[illegible]
Seattle, Wa. 98104

RECEIVED
FEB 26 1992
DEPT OF CONSTR... LAND US...

Dear Ms. Snowden,

This is a request to please deny Children's Hospital's Medical Center their proposal to construct a Helistop Pad on their site. This is a quiet, residential neighborhood of homes, condominiums, Churches & schools. The noise, sewage record and terrific expense of helicopters really concerns many of us and I/we feel it to be unnecessary with the exceptional treatment performed at Harborview. Thankyou.

Sincerely

(Mrs Dec'd.) Barbara H. Smith

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3925 48th Ave. N.E.
Seattle, WA 98105-5228
1 Mar. 1992

Ms. Faith Lumsden
Dep't. of Construction & Land Use
710 2nd Ave, Suite 700
Seattle, WA 98104

RECEIVED
MAR 0 3 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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Yours very truly
Fred M Wright
Patricia O. Wright

Fred M. Wright
Patricia O. Wright

cc; Mr. Nathan Torgelson
Sue Donaldson

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840570 Feb. 13, 1992

Dept. of Construction & Land Use
710-2nd Ave Suite 710
Seattle, Wa. 98104

RECEIVED
FEB 26 1992
DEPT OF CONST. LAND USE

Dear Ms. Saroseders

This is a request to please deny Childrens' Hospital & Medical Center their proposal to construct a Helistop pad on their site. This is a quiet, residential neighborhood of homes, condominiums, churches & schools. The noise, unsafe record and terrific expense of helicopters really concerns many of us and honestly feel it to be unnecessary with the exceptional treatment performed at Harborview. Thankyou

Sincerely

(Mrs Dec.) Barbara H. Smith

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April 11, 1992

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APR 13 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Faith Lumsden
Dept. of Construction
& Land Use
Dexter Horton Bldg.
710 Second Ave.
Seattle, WA 98104

Re: Helicopters at CHMC

Dear Ms. Lumsden:

Attached you will find the helicopter flights at Children's Hospital & Medical Center for the months of October, November, December 1991. I received this list today.

You will note the following:

October -	9 landings	= 18	overflights
November-	6 "	= 12	"
December-	10 "	= 20	"
TOTALS	25	50	

You will also note one omission: 12-26-91 which was recorded by neighbors, one of whom called you about this particular flight.

Further, you will note that this is a large increase of total overflights for this/a three-month period (compare with other data I have given to you in the past).

Once again I voice objections to this continued and unsafe situation in a residential neighborhood. Once again I request that permission not be granted for a helipad on the present campus of CHMC.

Thank you.

Sincerely,
Maryann E. Spangler
Mrs. Maryann E. Spangler
4013 N.E. 46th St.
Seattle, WA 98105

cc:

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APR 13 1992

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center October through December 1991

Date	Landing	Departure	Transported from	Age	Diagnosis	Receiving Unit	Outcome
OCTOBER							
5	9:50pm	11:00pm	Harrison Memorial Hospital, Bremerton	Toddler	Croup, pneumonia	Pediatric ICU	Hospitalized 5 days
7	2:45am	3:27am	Harrison Memorial Hospital, Bremerton	Adolescent	Status asthmaticus *	Pediatric ICU	Hospitalized 3 days
8	8:23pm	8:25pm	Skagit Valley Hospital, Mount Vernon	Infant	Septic shock	Emergency Room	Hospitalized 31 days
13	10:10pm	10:32pm	Valley General Hospital, Monroe	Teenager	Status asthmaticus *	Pediatric ICU	Hospitalized 5 days
15	2:05pm	2:50pm	Clinic, North Bend	Pre-school	Croup	Emergency room	Hospitalized 1 day
22	10:16am	11:[illegible]	Whidbey General Hospital, Coupeville	Newborn	Meconium aspiration syndrome *	Infant ICU	Hospitalized 20 days
29	4:08am	5:10am	Providence Hospital, Centralia	Infant	Pneumonia (patient with microcephaly and seizures)	Pediatric ICU	Hospitalized 8 days
29	5:35am	6:15am	Olympic Memorial Hospital, Port Angeles	Newborn	Respiratory distress syndrome	Infant ICU	Died
(9) 31	7:25pm	8:10pm	Providence Hospital, Centralia	Toddler	Drowning	Emergency Room	Died
NOVEMBER							
1	5:35pm	6:05pm	Valley General Hospital, Monroe	Toddler	Croup	Emergency Room	Hospitalized 1 day
12	11:20am	12:05pm	St. Francis Community Hospital, Federal Way	Adolescent	Asthma	Pediatric ICU	Hospitalized 4 days
14	2:05pm	3:00pm	Skagit Valley Hospital, Mount Vernon	Infant	Streptococcal sepsis and streptococcal meningitis *	Infant ICU	Died
18	10:10am	10:50am	Valley Medical Center, Renton	Pre-school	Seizures	Emergency Room	Hospitalized 2 days
21	10:13am	10:46am	Medic 8, Federal Way	Toddler	Near drowning	Emergency Room	Hospitalized 1 day
(6) 28	8:14am	8:50am	Medic 6, Pacific	Infant	Near drowning	Emergency Room	Hospitalized 25 days
DECEMBER							
1	1:26pm	2:00pm	Olympic Memorial Hospital, Port Angeles	Toddler	Viral encephalitis *	Pediatric ICU	Hospitalized 10 days
5	11:55am	12:30pm	Medic 6, Covington	Toddler	Tranquilizer ingestion	Emergency Room	Hospitalized 1 day
11	7:00pm	7:37pm	Medic 19, Redmond	Toddler	Hotdog aspiration with hypoxia *	Emergency Room	Hospitalized 15 days
19	3:40pm	4:45pm	Rescue One, Vashon Island	Toddler	Respiratory failure in patient with metabolism disorder	Pediatric ICU	Hospitalized 1 day
19	8:00pm	9:35pm	Children's Hospital, Seattle, to Emanuel Hospital, Portland	Infant	Meconium aspiration and pulmonary hypertension	ECMO Unit, Emanuel Hospital, Portland	Hospitalized in Portland 15 days; readmitted to Children's and hospitalized 18 days
24	1:15am	2:10am	St. Francis Hospital, Federal Way	Toddler	Grand mal seizure	Pediatric ICU	Hospitalized 2 days
24	6:15pm	6:35pm	Medic 71, Mill Creek	Toddler	Anti-depressant ingestion in patient with heart defect	Emergency Room	Hospitalized 1 day
(18) 25	5:30am	6:10am	Medic 5, Renton	Newborn	Premature birth at 24 weeks gestation	Infant ICU	Still in hospital
28	6:18pm	6:50pm	St. Francis Hospital, Federal Way	School-age	Acute tracheitis *	Emergency Room	Hospitalized 4 days
26	9:10am	11:06a.m.					

** Definition of diagnosis / treatment on back panel.*

Children's
Hospital & Medical Center

March 1992

To Our Neighbors,

In an ongoing effort to keep you informed about emergency medical helicopter activity at Children's Hospital, we are sending you quarterly reports about the number and types of cases of the children who required helicopter transport to Children's Emergency Room entrance.

In order to minimize the impacts on the community, only the most critically ill or injured patients are to land at the Children's Emergency Room entrance. Other patients determined able to withstand delay and movement are landed at the Intramural Field and are transported by ambulance to Children's. The decision about where to land is based on the condition of the patient. The majority of patients continue to arrive at the Emergency Room by ambulance.

Most requests for emergency helicopter transport of patients to Children's come from physicians in the Puget Sound area or Olympic Peninsula. Children's Hospital and Medical Center is a regional specialty hospital. Often, there are several pediatric specialists called to the case within minutes of arrival. Community hospitals do not have the resources to provide this highly specialized pediatric treatment and diagnosis.

This report is mailed to all households in the 98105 zip code and some in the 98112 zip code through a mailing service. We apologize for any address errors.

If you have questions about this report or about emergency medical helicopter landings at Children's, please contact Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write her at Children's Hospital and Medical Center, PO Box 5371, Seattle, WA 98105-0371.

Sincerely,

Treuman Katz

Treuman Katz
President and Chief Executive Officer

* Definition of Diagnosis / Treatment

Acute tracheitis: *Inflammation and swelling of the trachea (airway) that, if severe, will impair breathing.*

Hypoxia: *Lack of oxygen; in this case, because the hot dog was aspirated and was blocking the airway.*

Meconium aspiration syndrome: *Pneumonia-like illness of newborn due to inhalation at birth of fluids containing material from infant's bowel movement.*

Status asthmaticus: *Severe asthma attack during which the patient is not responsive to treatment.*

Streptococcal sepsis and streptococcal meningitis: *A bacterial bloodstream infection and a bacterial infection of the membranes covering the brain and spinal cord.*

Viral encephalitis: *A viral infection of the brain often associated with seizures, alterations of consciousness, fever, neurological dysfunction and mental changes. May be life-threatening, requiring intensive care and treatment.*

Printed on Recycled Paper

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center / A summary of flight activity **is published quarterly by the Communications Department at Children's Hospital and Medical Center, Seattle, WA. If you have comments or questions, please call Suzanne Petersen, Director of Government Affairs, at (206) 526-2530.**

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of flight activity, October through December 1991

Children's
Hospital & Medical Center

FLL

RECEIVED
JAN 29 1992
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

January 24, 1992

Ms. Faith Lumsden
Department of Construction
& Land Use
Dexter Horton Bldg.
710 Second Ave.
Seattle, WA. 98104

Dear Ms. Lumsden:

Thank you for taking the time and listening and talking with me on Friday, January 17. I appreciated this.

Here are the statistics which you requested related to helicopter landings at Children's Hospital & Medical Center for the one year, 1991:

Jan.	6
Feb.	7
Mar.	7
Apr.	8
May	3
June	6
July	4
Aug.	3
Sept.	10
Oct.	8
Nov.	5
Dec.	9
TOTAL	76 x 2 (in & out overflights) ='s
	152

Average per month: 6.33 x 2 ='s 12.66

As has been mentioned, at first CHMC did not count/include both the in and out flights: however, each flight is a part of the safety for residents. Invariably the departure, out-flight is lower and over Laurelon Terrace Condominiums.

Thank you again.

Sincerely,
Maryann E. Spangler
Mrs. Maryann E. Spangler
4013 N.E. 46th St.
Seattle, WA. 98105

(524-4151)

cc:

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8405870 library FL

Clark W. Sorensen
Northeast Families
For Residential Neighborhoods
4530 45th Ave. NE
Seattle, WA 98105
February 23, 1992

Ms. Faith Lumsden
Department of Construction and Land Use
Dexter Horton Building
710 Second Ave.
Seattle, WA 98104

Dear Ms. Lumsden:

I am writing on behalf of a dozen or so families who live in owner-occupied dwellings in the vicinity of Children's Orthopedic Hospital in Northeast Seattle. This group, known as Northeast Families for Residential Neighborhoods, has been organized in response to recent actions of Children's Hospital that we see as harming the safety and integrity of our neighborhood, and leading ultimately to an institution far beyond the scale appropriate to the site that Children's Hospital presently occupies on Sandpoint Way. They authorized me at a meeting on February 12th to convey our concerns to you.

Our particular concern at this time is the desire of Children's Hospital to get a Conditional Use Permit to regularize the landing of helicopters in emergencies at the hospital's present campus. We are deeply concerned and opposed to such landings. While we recognize that saving lives may occasionally require helicopter transport of patients, we believe Children's Hospital's present campus is an inappropriate place for such landings, and that Children's Hospital could easily build emergency care facilities for children at other, more appropriate, sites such as Harborview Hospital--the only authorized helipad in the city, and already the site of a certain amount of emergency care for children--or the Issaquah campus that Children's Hospital is presently planning.

Let me explain why we feel that helicopter landings are inappropriate at the present campus of Children's Hospital.

(1) Helicopter landings in a residential neighborhood are dangerous.

As helicopters must land within 100 feet of family homes, we feel that accidents leading to injury of residents are a real danger. The COH campus is surrounded by residences--condominiums on the west and north that are largely occupied by senior citizens, and single family homes on the east and south mostly occupied by families with children. Laurelhurst School is one block from the campus and within 200 yards of the proposed landing site.

Crashes of medical, and other, helicopters are not unusual. In

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typical cases such crashes happen when helicopters hit hazards such as telephone wires, trees, or other aircraft. These hazards can be minimized where visibility is good. Emergency helicopters have to fly when the patients are sick, however. This means they often must fly at night and in bad weather when visibility is poor and even seemingly minor hazards can be major problems. When the weather is good there is still the hazard of other small aircraft. Apparently because the Laurelhurst neighborhood and COH are on the direct flying route between Lake Union and the Lake Washington seaplane landing area, we get an amazing amount of small aircraft traffic in our area. I can stand in my yard across the street from COH for hours on many days and never once be unable to sight small aircraft in Laurelhurst airspace. This, of course, is in addition to the large aircraft heading at an altitude of a couple of thousand feet for Seatac Airport whose flight path goes directly over the University of Washington half a mile from COH.

We feel these hazards are real, and that residents near COH or the children at Laurelhurst School---who, as you known, come from all over the city, not just Laurelhurst--should not be exposed to such dangers. At present, the helicopters come into COH from all directions. This means that they sometimes directly fly over Laurelhurst School, but at other times fly over the residents nearest the heliport.

(2) Helicopters are noisy and disturb residents both day and night.

Residents close to COH are already being regularly woken up at night by shaking windows and vibration noise as helicopters come overhead. If helicopters come in very high and then descend vertically at the landing site, such noise can be reduced to a degree, but it has been our experience that pilots vary greatly in the direction from which they come, the altitude they overfly the neighborhood, and the closeness they come to trees, wires and other hazards. The size of the helicopter also makes a big difference in the amount of noise involved. Large military-type helicopters shake and rattle everybody's windows no matter how they come in. We do not believe that instruments set up to measure helicopter noise accurately measure real-life noise levels because whenever such instruments are set up, pilots are on their 'good behavior.' Our experience has been that when such devices are removed, some pilots remain on their good behavior, while others come in buzzing local houses in very frightening ways. This is not simply a distraction at night. Several residents do a significant amount of their work at home, and find frightening overflights during the day as distressing as those done at night.

Noise levels that might be tolerable in a commercial district with heavy noise already brought in by traffic, or that might be tolerable to the employees of COH, are intolerable in a residential neighborhood. After all, one can leave the commercial district or hospital after one's job or business are done. One's home is one's refuge from the noise and dirt of everyday life. If this refuge is disturbed, where can we go? Residential zoning ordinances are

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designed to preserve the safety and peace of people living in their refuges, their homes, and we believe helicopter landings are incompatible with this residential use.

(3) It will be impossible, in the long run, to limit the number of neighborhood overflights

Unless COH is forced to develop another site dedicated primarily to emergency care where unlimited helicopter landings are appropriate, flights into the COH campus--with their attendant danger and noise--will inevitably increase, and effective control of them will be impossible. Even now, when overflights are supposedly limited to 7-8 a month, there have been months when this number has been exceeded. In December of 1991, for example, neighbors logged twenty-four flyovers of helicopters that landed at COH. If COH continues to use its Laurelhurst campus for this kind of emergency treatment, overflights will inevitably increase. Neither the neighbors of COH or the public at large would willingly sacrifice the life of a child, if the COH campus is the only place in town where that life can be saved. For this reason, the number of overflights will inevitably grow with growth of patient populations and more advanced life-saving technology. This illustrates the fact that the only real solution to helicopter overflights in a residential neighborhood is forcing COH to build a separate, more appropriately located facility with patient-care facilties to receive such flights.

(4) The danger and noise of helicopter overflights combined with other COH impacts have already affected the salability of houses bordering COH.

Even in today's real estate market, property has sold well in Laurelhurst, yet on the streets that border COH no houses that have come on the market in the past year have sold (one house has been on the market for almost two years). This is during a time when, one block away, three houses were all sold in fewer than three months.

(5) COH's recent proposed expansion raises serious issues about the helicopter landing pad.

The presently proposed helipad site is precisely in the middle of an area of COH's property for which a zoning change is being proposed. This site is on a part of COH's campus which, though still within 100 feet of a house, is as distant as possible from most other residences. The proposed zoning change, however, makes us wonder whether COH, once they get a conditional use permit, may change the location of the helipad to one that has a much more severe impact on neighbors than the presently proposed location.

Although we are opposed to helicopter landings at COH's Laurelhurst campus at all, there are certain measures that would mitigate the nuisance of a heliport.

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(1) A paved helipad must not be built. For the number of flights COH has been talking about, a grassy helipad will be adequate, present fewer environmental problems, and be less unsightly. There is no need to build something creating drainage and run-off problems unless COH has bigger plans for the heliport than they have let on. Given the history of COH expansion in the past few years, we feel this latter point is a very real possibility regardless of what COH says publicly.

(2) The size of helicopters must be limited. No matter how they come in, large military-type helicopters are frightening and shake up houses and residences.

(3) The number of flights must be limited, and there must be a mechanism by which they are monitored by neighbors. Those of us who have lived near COH for a long time do not believe that COH will deal with neighborhood concerns in good faith. Though individual employees of COH are often helpful, we have found by experience that COH will only abide by agreements with the city if they are forced to. Already the Doctor's Pavilion, which COH promised would be used only for doctor's offices at the time of its zoning hearing, is being used for a variety of other purposes, and we see no reason COH will not behave similarly with the heliport. We are concerned that COH is in the process of creating a regional trauma center that will require many more flights per month than they are presently discussing.

(4) The routes and altitudes by which helicopters approach the hospital must be limited. Presently some pilots approach COH via Sandpoint Way and the hospital lower campus--a route that minimizes noise and danger to residents and avoids Laurelhurst School. Other pilots, however, come by any route they feel like--directly over houses, over Laurelhurst School, over Laurelhurst playfield, et cetera. We do not feel the extra danger presented by these flight routes is justified.

(5) The precise location of the heliport must be designated and new hearings be held if the location of the heliport is to be changed. In light of COH's expansion plans and their desire for a zoning change that bisects the proposed sight of the helipad we have serious concerns about its location. We especially are concerned that COH will eventually locate such a helipad on the edge of their campus where it will endanger and disturb residents even more than at present. COH's present zoning requires them to set even buildings well in from the street so as to minimize their impact on the neighborhood. These zoning requirements would be made a mockery if COH somehow managed to put a helipad on the edge of their campus, or atop a high building where noise will radiate throughout the community.

Although the above five points would help mitigate neighborhood

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concerns, we feel that even if they were enacted, they would be incapable of effective enforcement. The city does not have the resources to enforce zoning requirements. This means that the burden will be on neighborhood residents. We are willing to bear that burden if nothing else can be done, but it is a real burden on local residents in this harried age of two working parents to ask them to do this. In any case, neighborhood citizens will never be in a position to question doctors' judgement. As mentioned above, then, we do not believe that the number of flights into COH could ever effectively be limited. If doctors were to say 50 emergencies a month required helicopter transport, no citizen would be in a position to say no. It may be, in addition, that the City of Seattle does not have the jurisdiction to require flight paths that minimize danger and impact on the neighborhood.

For all these reasons, we neighbors of Children's Orthopedic Hospital feel that it is effectively impossible for a Conditional Use Permit to be done that will ensure use of a helipad in such a way that it will not significantly, and seriously endanger local residents, harass them with inappropriate noise, and reduce the quality of life and value of homes around Children's Orthopedic Hospital. We thus oppose granting a conditional use permit at all.

We, like all residents of Seattle, want emergency care to be available for those children that need it. Our concern is solely with the inappropriate location of a helipad in a quiet, low-density, residential neighborhood. We believe the only solution to the problem of emergency care for children is that COH be required to build a separate facility in a more appropriate location where unlimited helicopter landings can be permitted. We do not believe that COH has made a good faith effort to examine alternatives to centralizing care at their Laurelhurst campus. Until such explorations are done in good faith, we feel a Conditional Use Permit should be denied.

Sincerely,

Clark W. Sorensen

Clark W. Sorensen
President,
Northeast Families for Residential Neighborhoods

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Seattle
Department of Construction and Land Use

1991

W01305

January 30, 1991

Re: Helistop at

Tallman Trask II
Executive Vice President
University of Washington
306 Administration Bldg., AH-05
Seattle, Washington 98195

Truman Katz
President and Chief Executive Officer
Children's Hospital and Medical Center
P.O. Box C5371
Seattle, Washington 98105

Dear Mr. Trask and Mr. Katz:

In an effort to resolve the outstanding issues regarding the possibility of permitting use of an existing helistop at Graves Field for both the University of Washington (UW) and Children's Hospital Medical Center (CHMC) helicopter landings, I have met with my staff several times and have consulted with the City's Law Department. We have developed a proposed solution which I hope will be satisfactory to all parties.

As you know, we are faced with a code issue which has hindered our ability to move forward on a permit decision for CHMC's proposed helistop. The preferred alternative now proposed by CHMC would have the majority of flights landing at Graves Field, which is within the UW's campus. The site has historically been used periodically by the University as a landing site for helicopters transporting injured persons. Although the new Major Institution Code does not require CHMC to include CHMC's use of Graves Field helistop in the CHMC master plan because the site is more than 1/2 mile from the hospital campus, the Major Institutions code does not explicitly provide that one institution may apply for such a new facility on another institution's campus. We understand that the UW does not want to apply for the CHMC facility because of the controversy which has been associated with the hospital's on-site proposal.

Regarding the UW's concerns that its helicopter flights not be subject to the permitting process, I believe that the UW use of the site should be considered grandfathered since this site has been used for many years as a helistop. No

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additional permitting of the UW's existing use at this location would be necessary. The Final GPDP and EIS includes discussion of the helistop, its continuous use by the UW and its intended future use by CHMC, referring to the pending parallel review process for CHMC's use of the site.

If the helistop at Graves Field is an existing use for the University of Washington, the Children's flights may be added in much the same way as other medical facilities at the University are available to Children's patients. Because the number of flights will increase substantially beyond the UW's historic use, we will require that the Children's use of the helistop be allowed only through the Conditional Use process. In the event the Council Conditional Use for Children's destined flights at Graves Field is not approved, no Children's landings would be allowed, but the grandfathered UW usage would not be affected. Prior to publishing a decision on the Children's flights, Children's must apply for a permit at Graves Field.

This solution relies on the cooperation of both institutions in arriving at a mutually beneficial result. CHMC would be able to apply for what it has identified as the preferred site for the majority of its proposed helicopter landings, and the UW use of the site would be recognized and grandfathered without formally going through the permit process. I trust that you will agree with this approach and work together with us to resolve this complex issue. I would like to move as quickly as possible for a decision on the Children's helicopter flights as the issue has lingered unresolved for an embarrassingly extended period.

I hope this proposed solution addresses the concerns of Children's Hospital and the University of Washington. If there are any questions, please contact me at 684-8899 or Senior Land Use Specialist John Doan at 684-8875.

Sincerely,

Dennis J. McLerran

DENNIS J. McLERRAN
Director

DJM:jdr

wp1\helistop

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JTD

RECEIVED
JUL 16 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

CUCAC

City of Seattle/University of Washington/Community Advisory Committee

July 9, 1991

Tallman Trask, Executive Vice President
University of Washington
Mail St[illegible] AH - 30
Seattle, WA 98195

RE: REQUEST FOR ENVIRONMENTAL IMPACT STATEMENT
ON USE OF HELISTOP FOR CHILDREN'S HOSPITAL
ON U.W. INTRAMURAL RECREATION FIELD

Dear Mr. Trask:

The City - University - Community - Advisory Committee (CUCAC) is concerned that the University of Washington, as the responsible agency for SEPA compliance on its campus, has failed to provide an EIS for the potential permanent development of the Intramural Field Helistop and the U.W. agreement with Children's Hospital for expanded use as the primary landing site for helicopters delivering patients to Children's Hospital.

Children's Hospital and Medical Center is a private institution using state owned University of Washington property for helicopter landings. What are the total costs of the development of the helistop and the personnel to secure it for landings and takeoffs on a 24 hour basis? What is the source of funding?

CUCAC has long opposed non-University uses on the Unive[illegible]y campus because of the land-use pressures for state higher education [illegible]eds.

The students will lose a recreation site for which there is no replacement. Recreation equipment installed nearby may be classified as a hazard to helicopter activities.

The Children's Hospital EIS contained little concerning impacts on the U.W. campus or affected U.W. neighboring communities in the flight path. The EIS was not circulated to students (ASUW and GPSS). Student awareness of recreational losses and issues involved is likely negligible.

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Some of the CUCAC concerns are:

(1) What will be the increase of helicopter landings and takeoffs?

(2) Will the helistop be developed with fencing, lighting, and paving?

(3) Although University Hospital is not considering a roof-top helistop at this time, is one to be planned in the future, making two helistops on the U.W. campus?

(4) Is it possible to implement a flight pattern that will diminish the adverse impacts of night and day helicopter flights over residential neighborhoods adjacent to the University?

Will the University provide an EIS process with scoping to determine the extent of concerns, to inform the University students and public about intended action and enviromental impacts related to helicopter landings on campus?

CUCAC would appreciate information on the status of the U.W. helistop, the agreement with Children's Hospital and the City process. Please cite any SEPA regulations which would exempt the U.W. from preparation of its own EIS as lead agency for actions on the U.W. campus.

Sincerely yours,

Ruth Moore

Ruth Moore, CUCAC Co-Chair
4303 4th Avenue N.E.
Seattle, WA 98105

cc: Dennis McLerran, Director
Dept. of Construction and Land Use

Dept. of Ecology
Environmental Review Section

Seattle City Council

Ann Skutt, Facilities Management
University of Washington

Jan Kumasaka
Dept. of Community Developement

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Children's
Hospital & Medical Center

4800 Sand Point Way N.E.
P.O. Box C5371
Seattle, Washington 98105
(206) 526-2001

Treuman Katz
President and
Chief Executive Officer

December 13, 1991

Dennis J. McLerran
Director
Department of Construction & Land Use
City of Seattle
400 Municipal Building
600 Fourth Avenue
Seattle, WA 98104

Re: Council Conditional Use Application (Helistop at Graves Field)

Dear Mr. McLerran:

In response to your January 30, 1991, letter to me and Tallman Trask III, Children's Hospital and Medical Center is submitting an application for a Council Conditional Use Permit for a helistop at Graves Field.

We are submitting this application as a way to implement the "preferred alternative" now proposed by CHMC. This alternative would provide for the majority of emergency helicopter flights to land at Graves Field and the remainder to land on Children's campus at the site proposed in our current Conditional Use application with the City. We believe that the preferred alternative will accomplish Children's objectives and mitigate adverse impacts on the community.

This application is submitted for a helistop at Graves Field to be operated in conjunction with the helistop on the main campus. The improved helistop at Graves Field is not intended to serve all emergency flights for patients destined to Children's.

I noted in your letter that you determined that the University of Washington's use of Graves Field as a helistop is considered grandfathered since this site has been used for many years by the UW. As you know, this site has also been used for many years for the landing of helicopters with patients destined for Children's Hospital. We also believe that use of the Graves Field site by helicopters with Children's patients is grandfathered. By submitting this application for Graves Field, Children's or patients bound for Children's do not intend to waive whatever rights we would have to continue landing at Graves Field (and the main campus) without any additional permits.

DEPARTMENT OF CONSTRUCTION AND LAND USE
DEC 13 1991

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We look forward to working with the City in the review of this application. We understand from your staff that the existing EIS for this project issued in April, 1991, will be used to support the review of this Council Conditional Use Permit application. We have, therefore, not submitted a new environmental checklist.

This proposal for a helistop at Graves Field has also been reviewed by the University of Washington and we have their permission to apply for a helistop at this location. We submit this application with the understanding that our application does not waive the University's right to use the existing helistop for its patients.

The helistop has been designed by the firm of Mills, John & Rigdon Architects; Mr. Sigmund A. Brudevold is the project manager. Suzanne Petersen, Director of Government Affairs, is the Children's Hospital contact person for this application (526-2530).

Thank you for your consideration of this request.

Sincerely yours,

Treuman Katz
President and CEO

phc

cc: Tallman Trask III, University of Washington
Suzanne Petersen, CHMC
Sigmund A. Brudevold, Mills, John & Rigdon Architects
John E. Keegan, Davis, Wright Tremaine

DEC 13 1991

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Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center October through December 1991

Date	Landing	Departure	Transported from	Age	Diagnosis	Receiving Unit	Outcome
OCTOBER							
5	9:50pm	11:00pm	Harrison Memorial Hospital, Bremerton	Toddler	Croup, pneumonia	Pediatric ICU	Hospitalized 5 days
7	2:45am	3:27am	Harrison Memorial Hospital, Bremerton	Adolescent	Status asthmaticus *	Pediatric ICU	Hospitalized 3 days
8	8:23pm	8:25pm	Skagit Valley Hospital, Mount Vernon	Infant	Septic shock	Emergency Room	Hospitalized 31 days
13	10:10pm	10:32pm	Valley General Hospital, Monroe	Teenager	Status asthmaticus *	Pediatric ICU	Hospitalized 5 days
15	2:05pm	2:50pm	Clinic, North Bend	Pre-school	Croup	Emergency room	Hospitalized 1 day
22	10:16am	11:35am	Whidbey General Hospital, Coupeville	Newborn	Meconium aspiration syndrome *	Infant ICU	Hospitalized 20 days
29	4:08am	5:10am	Providence Hospital, Centralia	Infant	Pneumonia (patient with microcephaly and seizures)	Pediatric ICU	Hospitalized 8 days
29	5:35am	6:15am	Olympic Memorial Hospital, Port Angeles	Newborn	Respiratory distress syndrome	Infant ICU	Died
31	7:25pm	8:10pm	Providence Hospital, Centralia	Toddler	Drowning	Emergency Room	Died
NOVEMBER							
1	5:35pm	6:05pm	Valley General Hospital, Monroe	Toddler	Croup	Emergency Room	Hospitalized 1 day
12	11:20am	12:05pm	St. Francis Community Hospital, Federal Way	Adolescent	Asthma	Pediatric ICU	Hospitalized 4 days
14	2:05pm	3:00pm	Skagit Valley Hospital, Mount Vernon	Infant	Streptococcal sepsis and streptococcal meningitis *	Infant ICU	Died
18	10:10am	10:50am	Valley Medical Center, Renton	Pre-school	Seizures	Emergency Room	Hospitalized 2 days
21	10:13am	10:46am	Medic 8, Federal Way	Toddler	Near drowning	Emergency Room	Hospitalized 1 day
28	8:14am	8:50am	Medic 6, Pacific	Infant	Near drowning	Emergency Room	Hospitalized 25 days
DECEMBER							
1	1:26pm	2:00pm	Olympic Memorial Hospital, Port Angeles	Toddler	Viral encephalitis *	Pediatric ICU	Hospitalized 10 days
5	11:55am	12:30pm	Medic 6, Covington	Toddler	Tranquilizer ingestion	Emergency Room	Hospitalized 1 day
11	7:00pm	7:37pm	Medic 19, Redmond	Toddler	Hotdog aspiration with hypoxia *	Emergency Room	Hospitalized 15 days
19	3:40pm	4:45pm	Rescue One, Vashon Island	Toddler	Respiratory failure in patient with metabolism disorder	Pediatric ICU	Hospitalized 1 day
19	8:00pm	9:35pm	Children's Hospital, Seattle, to Emanuel Hospital, Portland	Infant	Meconium aspiration and pulmonary hypertension	ECMO Unit, Emanuel Hospital, Portland	Hospitalized in Portland 15 days; readmitted to Children's and hospitalized 18 days
24	1:15am	2:10am	St. Francis Hospital, Federal Way	Toddler	Grand mal seizure	Pediatric ICU	Hospitalized 2 days
24	6:15pm	6:35pm	Medic 71, Mill Creek	Toddler	Anti-depressant ingestion in patient with heart defect	Emergency Room	Hospitalized 1 day
25	5:30am	6:10am	Medic 5, Renton	Newborn	Premature birth at 24 weeks gestation	Infant ICU	Still in hospital
28	6:18pm	6:50pm	St. Francis Hospital, Federal Way	School-age	Acute tracheitis *	Emergency Room	Hospitalized 4 days

Definition of diagnosis / treatment on back panel.

Children's
Hospital & Medical Center

March 1992

To Our Neighbors,

In an ongoing effort to keep you informed about emergency medical helicopter activity at Children's Hospital, we are sending you quarterly reports about the number and types of cases of the children who required helicopter transport to Children's Emergency Room entrance.

In order to minimize the impacts on the community, only the most critically ill or injured patients are to land at the Children's Emergency Room entrance. Other patients determined able to withstand delay and movement are landed at the Intramural Field and are transported by ambulance to Children's. The decision about where to land is based on the condition of the patient. The majority of patients continue to arrive at the Emergency Room by ambulance.

Most requests for emergency helicopter transport of patients to Children's come from physicians in the Puget Sound area or Olympic Peninsula. Children's Hospital and Medical Center is a regional specialty hospital. Often, there are several pediatric specialists called to the case within minutes of arrival. Community hospitals do not have the resources to provide this highly specialized pediatric treatment and diagnosis.

This report is mailed to all households in the 98105 zip code and some in the 98112 zip code through a mailing service. We apologize for any address errors.

If you have questions about this report or about emergency medical helicopter landings at Children's, please contact Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write her at Children's Hospital and Medical Center, PO Box 5371, Seattle, WA 98105-0371.

Sincerely,

Treuman Katz

Treuman Katz
President and Chief Executive Officer

* Definition of Diagnosis / Treatment

Acute tracheitis: *Inflammation and swelling of the trachea (airway) that, if severe, will impair breathing.*

Hypoxia: *Lack of oxygen; in this case, because the hot dog was aspirated and was blocking the airway.*

Meconium aspiration syndrome: *Pneumonia-like illness of newborn due to inhalation at birth of fluids containing material from infant's bowel movement.*

Status asthmaticus: *Severe asthma attack during which the patient is not responsive to treatment.*

Streptococcal sepsis and streptococcal meningitis: *A bacterial bloodstream infection and a bacterial infection of the membranes covering the brain and spinal cord.*

Viral encephalitis: *A viral infection of the brain often associated with seizures, alterations of consciousness, fever, neurological dysfunction and mental changes. May be life-threatening, requiring intensive care and treatment.*

Printed on Recycled Paper

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center / A summary of flight activity **is published quarterly by the Communications Department at Children's Hospital and Medical Center, Seattle, WA. If you have comments or questions, please call Suzanne Petersen, Director of Government Affairs, at (206) 526-2530.**

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of flight activity, October through December 1991

Children's
Hospital & Medical Center

RECEIVED BY
92 JUN 22 AM 11:27
OFFICE OF
HEARING EXAMINER

3652 50th Ave. N.E.
Seattle, Wa. 98105
June 20, 1991

Office of Hearing Examiner
City of Seattle
1320 Alaska Building
618 Second Ave.
Seattle, Wa. 98104

Hello:

As a resident of Laurelhurst, I am writing my support of the helistop for Children's Hospital which we are pleased to have within our neighborhood. I feel the adequate and safe delivery of emergency medical services to children in the region is vital and we are very luckly to have people at the hospital with the vision to look into the future. Personally, it would be a comfort to know if my children became ill or seriously injured while on an outing in the Northwest that they could be airlifted to Children's.

Please do not be swayed by the objectioners in the neighborhood. There is a powerful group of people that support no change, no progress, no future, and lobby against Children's, University of Washington, Batelle Northwest, Retirement Homes, new houses, and remodels. They do not believe in the future and are very narrow minded.

I look forward to the long range plans Children's Hospital has made to provide our community with top medical care for our children.

Thank you.

Sincerely
Phyllis K. Odell

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JTP

NBBJ

Architecture Design Planning

RECEIVED
APR 12 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

April 11, 1991

Ms. Gwen Ford
Permits and Plans Division
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Re: **8904062**
4800 Sand Point Way NE
Children's Hospital and Medical Center
Helistop

Dear Ms. Ford:

Regarding your letter dated March 21, 1991 "Notice of Intent to Cancel", the plans which are currently in for review were corrected and returned to DCLU in March 1990. The project is currently awaiting final environmental review before further action can be taken by DCLU.

I understand that you have spoken with John Doan in the Land Use Division and he has clarified for you the status of the environmental review. John told me that you will take appropriate action to keep the permit application active.

This letter serves as our response to you.

If you have any concerns or wish to discuss this matter further, please contact me at 223-5167.

Thank you for your time.

Sincerely,

Mike Miller

Mike Miller

cc: Mr. John Doan, DCLU
Ms. Suzanne Peterson, CHMC
Mr. Vince Vergel de Dios, NBBJ

23881.14/mm078

Arizona California New York North Carolina Ohio South Carolina Washington
111 South Jackson Street Seattle, Washington 98104 (206) 223-5555 Fax (206) 621-2300

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JTD

Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Norman B. Rice, Mayor

January 30, 1991

Re: Helistop at Graves Field

Tallman Trask III
Executive Vice President
University of Washington
306 Administration Bldg., AH-05
Seattle, Washington 98195

Truman Katz
President and Chief Executive Officer
Children's Hospital and Medical Center
P.O. Box C5371
Seattle, Washington 98105

Dear Mr. Trask and Mr. Katz:

In an effort to resolve the outstanding issues regarding the possibility of permitting use of an existing helistop at Graves Field for both the University of Washington (UW) and Children's Hospital Medical Center (CHMC) helicopter landings, I have met with my staff several times and have consulted with the City's Law Department. We have developed a proposed solution which I hope will be satisfactory to all parties.

As you know, we are faced with a code issue which has hindered our ability to move forward on a permit decision for CHMC's proposed helistop. The preferred alternative now proposed by CHMC would have the majority of flights landing at Graves Field, which is within the UW's campus. The site has historically been used periodically by the University as a landing site for helicopters transporting injured persons. Although the new Major Institution Code does not require CHMC to include CHMC's use of Graves Field helistop in the CHMC master plan because the site is more than 1/2 mile from the hospital campus, the Major Institutions code does not explicitly provide that one institution may apply for such a new facility on another institution's campus. We understand that the UW does not want to apply for the CHMC facility because of the controversy which has been associated with the hospital's on-site proposal.

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additional permitting of the UW's existing use at this location would be necessary. The Final GPDP and EIS includes discussion of the helistop, its continuous use by the UW and its intended future use by CHMC, referring to the pending parallel review process for CHMC's use of the site.

If the helistop at Graves Field is an existing use for the University of Washington, the Children's flights may be added in much the same way as other medical facilities at the University are available to Children's patients. Because the number of flights will increase substantially beyond the UW's historic use, we will require that the Children's use of the helistop be allowed only through the Conditional Use process. In the event the Council Conditional Use for Children's destined flights at Graves Field is not approved, no Children's landings would be allowed, but the grandfathered UW usage would not be affected. Prior to publishing a decision on the Children's flights, Children's must apply for a permit at Graves Field.

This solution relies on the cooperation of both institutions in arriving at a mutually beneficial result. CHMC would be able to apply for what it has identified as the preferred site for the majority of its proposed helicopter landings, and the UW use of the site would be recognized and grandfathered without formally going through the permit process. I trust that you will agree with this approach and work together with us to resolve this complex issue. I would like to move as quickly as possible for a decision on the Children's helicopter flights as the issue has lingered unresolved for an embarrassingly extended period.

I hope this proposed solution addresses the concerns of Children's Hospital and the University of Washington. If there are any questions, please contact me at 684-8899 or Senior Land Use Specialist John Doan at 684-8875.

Sincerely,

Dennis J. McLerran

DENNIS J. McLERRAN
Director

DJM:jdr

wp1\helistop

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JTD

Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Norman B. Rice, Mayor

August 29, 1991

Re: Children's Hospital and Medical Center Helistop

Ruth Moore, Member
CUCAC
4030 - 4th Avenue Northeast
Seattle, Washington 98105

Dear Ms. Moore:

I have received a copy of the letter you sent to Tallman Trask at the University of Washington regarding the Children's Hospital and Medical Center helistop. Because the Seattle Department of Construction and Land Use (DCLU) is the lead agency for the Environmental Impact Statement (EIS), I am responding to some of your comments.

Children's Hospital applied for approval in 1985 to allow all Children's destined patients to land on the Hospital campus. The Draft EIS for the helistop provided several alternatives to landing on campus, including landing all patients at the existing University of Washington Intramural Field helistop and on the University Hospital roof. That Draft EIS was widely circulated and commented upon.

Based on the comments, another alternative was developed for the Final EIS. It attempts to reduce impacts in the vicinity of Children's Hospital while allowing their medical service goals to be met. We feel consideration of Children's landings at the University of Washington is appropriate given the long-standing affiliation between the two institutions and the Major Institution policies discouraging duplication of activities. The EIS looks at flight paths which would reduce impacts to residential areas for the original and preferred alternatives.

Children's and the University have worked hard developing this alternative. With its completion, we have a continuum of options for consideration by ourselves, the Hearing Examiner, and ultimately the City Council; ranging from all landings at Children's to all landings at the University or Harborview. The ultimate decision must consider which option best satisfies the Conditional Use and SEPA criteria.

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With regard to the loss of recreation space, we do not believe this is a significant impact. Although any alternative with Children's landings at the University will increase use of the helistop, the University has been using that site for about 20 years, and we consider it to be an established use. Formalizing the landing area will not significantly change the University's recreation uses.

The EIS provides information for estimating the number of Airlift Northwest and other vendor flights to Children's and University facilities. These are estimates and it is impossible to provide a single definitive monthly estimate given uncertainties about population, medical technology, disease patterns, and other factors influencing medical referral rates.

Children's is currently working with the University to design the details of a permanent helistop location which will provide a safe and secure place for the helicopters to land. When complete, public notice will be provided so people may comment on the design.

Regarding the University rooftop helistop, the University has made it clear to us through the EIS consultant that they are not considering a rooftop helistop at this time. No rooftop helistop is included in the University's Physical Development Plan (GPDP). However, the rooftop location is included in the DEIS for the University's GPDP to discuss potential impacts in the event the University pursues a rooftop helistop in the future.

We believe the Children's EIS adequately addresses the project's impacts, including impacts on the University campus. Additional environmental review by the University is not necessary.

Thank you for commenting on behalf of CUCAC. If you have any questions, please do not hesitate to call Senior Land Use Specialist John Doan at 684-8875.

Sincerely,

DENNIS J. McLERRAN
Director

DJM:jdh

wp1\moore

cc: Tallman Trask, University of Washington
Treuman Katz,Children's Hospital

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CUCAC

RECEIVED
JUL 29 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

CITY of SEATTLE/UNIVERSITY of WASHINGTON/COMMUNITY ADVISORY COMMITTEE

July 9, 1991

RECEIVED
JUL 16 19[illegible]
DEPT. OF CONST. & L[illegible]

Tallman Trask, Executive Vice President
University of Washington
Mail Stop AH - 30
Seattle, WA 98195

RE: REQUEST FOR ENVIRONMENTAL IMPACT STATEMENT
ON USE OF HELISTOP FOR CHILDREN'S HOSPITAL
ON U.W. INTRAMURAL RECREATION FIELD

Dear Mr. Trask:

The City - University - Community - Advisory Committee (CUCAC) is concerned that the University of Washington, as the responsible agency for SEPA compliance on its campus, has failed to provide an EIS for the potential permanent development of the Intramural Field Helistop and the U.W. agreement with Children's Hospital for expanded use as the primary landing site for helicopters delivering patients to Children's Hospital.

Children's Hospital and Medical Center is a private institution using state owned University of Washington property for helicopter landings. What are the total costs of the development of the helistop and the personnel to secure it for landings and takeoffs on a 24 hour basis? What is the source of funding?

CUCAC has long opposed non-University uses on the University campus because of the land-use pressures for state higher education needs.

The students will lose a recreation site for which there is no replacement. Recreation equipment installed nearby may be classified as a hazard to helicopter activities.

The Children's Hospital EIS contained little concerning impacts on the U.W. campus or affected U.W. neighboring communities in the flight path. The EIS was not circulated to students (ASUW and GPSS). Student awareness of recreational losses and issues involved is likely negligible.

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Some of the CUCAC concerns are:

(1) What will be the increase of helicopter landings and takeoffs?

(2) Will the helistop be developed with fencing, lighting, and paving?

(3) Although University Hospital is not considering a roof-top helistop at this time, is one to be planned in the future, making two helistops on the U.W. campus?

(4) Is it possible to implement a flight pattern that will diminish the adverse impacts of night and day helicopter flights over residential neighborhoods adjacent to the University?

Will the University provide an EIS process with scoping to determine the extent of concerns, to inform the University students and public about intended action and enviromental impacts related to helicopter landings on campus?

CUCAC would appreciate information on the status of the U.W. helistop, the agreement with Children's Hospital and the City process. Please cite any SEPA regulations which would exempt the U.W. from preparation of its own EIS as lead agency for actions on the U.W. campus.

Sincerely yours,

Ruth Moore

Ruth Moore, CUCAC Co-Chair
4303 4th Avenue N.E.
Seattle, WA 98105

cc: Dennis McLerran, Director
Dept. of Construction and Land Use

Dept. of Ecology
Environmental Review Section

Seattle City Council

Ann Skutt, Facilities Management
University of Washington

Jan Kumasaka
Dept. of Community Developement

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UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

Office of the President

July 22, 1991

RECEIVED
JUL 24 1991
DEPT. OF CONST. & LAND USE

Ruth Moore, Co-Chair
CUCAC
4030 4th Avenue N.E.
Seattle, Washington 98105

Dear Ms. Moore:

I respond to your letter of July 9, regarding the use of the University's existing helistop by Children's Hospital and Medical Center. The City of Seattle is the Lead Agency with respect to SEPA compliance per WAC 197-11-924-944. As the Lead Agency, the City has prepared a Draft and Final Environmental Impact Statement on Children's helistop proposal and alternatives. Use of the University's existing helistop was identified by the City as an alternative in the Final EIS. In addition, the project has gone through an extensive and lengthy public review process.

The University has reviewed both the Draft and Final Environmental Impact Statements for the helistop. The concerns and questions you raise in your letter are all addressed in the Final EIS, but may be further considered by the City during the review process.

As you know, the University and Children's have a very close continuing affiliation. Given this relationship, the University believes that it is appropriate for Children's to be allowed to use our existing helistop.

Regarding the suggested loss of recreational facilities, this area has been utilized as a helistop for more than 20 years. Continued use by the University and Children's will not adversely impact student recreational uses.

Children's will be applying for a City Council Conditional Use Permit. We have forwarded your letter to DCLU for their information and consideration.

Sincerely,

Tallman Trask III
Executive Vice President

cc: Al Tarr
Christine Knowles
[redacted] Treuman Katz, CHMC
Dennis McLerran, DCLU

306 Administration Building, AH–05 / Telephone: (206) 543–6410

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OFFICE OF THE CITY COUNCIL • CITY OF SEATTLE

RECEIVED
JUN 25 1991
DEPT. OF CONST. & LAND USE

TOM WEEKS
Chair
Housing, Human Services
and Education Committee

June 24, 1991

Lillian J. Mills
4545 Sand Point Way NE, #507
Seattle, WA 98105

Dear Ms. Mills:

Thank you for your letter to Tom Weeks regarding the proposed heliptop at Children's Hospital.

Because the City Council functions like a judge rather than a legislative body on many land use issues, Tom cannot read letters, respond to phone calls or be lobbied on individual land use projects. If he does, he risks prejudicing himself before all relevant facts of the case are determined and losing the right to vote on the project if it comes before the Council.

Since you cannot appeal directly to Tom on this issue, I have forwarded your letter to the staff members at the Department of Construction and Land Use who will be dealing with the project. You can reach DCLU at 684-8875. DCLU will add your name to the project mailing list, and you will be notified about all public hearings conducted on the project.

Your comments are extremely important as the Department of Construction and Land Use and the Hearing Examiner evaluate this project. I urge you to contact them directly, either in writing or by attending public hearings, and make your views known.

Tom cannot become involved in this process unless the Hearing Examiner's decision on this project is appealed to the City Council. If that happens, he will be permitted to review only the information contained in

1115 Municipal Building Seattle, Washington 98104
(206) 684-8805
Printed on recycled paper

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the Hearing Examiner's record. He will not be permitted to consider new information or to meet with any interested persons except at a public hearing. That is why it is so important for you to work with DCLU from the beginning.

I am sorry that Tom cannot be of more help to you on this issue. I appreciate your frustration and hope you understand the importance of his efforts to remain impartial. If you have any additional questions about the procedure by which this project will be reviewed, please feel free to call me at 684-8805. Again, thank you for taking the time to write.

Sincerely,

Mary Bourguignon
Council Assistant to Tom Weeks

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June 18, 1991

Seattle City Council Members
Eleventh Floor
600 Fourth Ave.
Seattle WA 98104

JUN 21 1991

Dear Members,

From my windows on the 5th floor of my condominium building I hear and see the helicopters come slowly in and circle and circle Childrens Hospital trying to squeeze into the landing space.

I always think if they had just made a quick landing over in the playing field area, with an aid car or ambulance standing by that could speed to the hospital it would be better for all concerned.

Of course we want to save as many children as possible, but the helicopters endanger the lives of many residents when they circle over the area. Not all the children brought in by helicopter direct to the hospital survive, and not every child brought by helicopter and ambulance will survive, but most of them will. The potential for disaster is too great to risk a helistop at the hospital!

The hospital has far overbuilt their area which should never have been placed in a residential area in the first place, and it is becoming a real problem for the neighborhood. It is making it difficult to keep a good family residential area in the city and the tax-payers who live there have rights that should be considered.

Since there is a good alternative, please do not place a helistop at the hospital. Thank you -

Sincerely,

Lillian J. Mills

4545 Sand Point Way N.E. #507
Seattle, WA 98105
524 0209

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RECEIVED
JUN 25 1991
DEPT. OF CONST. & LAND USE

TOM WEEKS
Chair
Housing, Human Services
and Education Committee

June 24, 1991

Philip S. Padelford
204 Denny Way
Seattle, WA 98109

Dear Mr. Padelford:

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Sincerely,

Mary Bourguignon
Council Assistant to Tom Weeks

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PHILIP S. PADELFORD
204 DENNY WAY
SEATTLE, WASHINGTON 98109

JUN 21 1991

6/20/91

Seattle City Council
600 Fourth Ave. att'n Tom Weeks
Eleventh Floor
Seattle, WA., 98104

Dear Tom and all Council members:

The use of the Childrens Hospital and medical center as a heliport is a matter mrs Padelford and I are strongly opposed to, however much we do and always supported that fine Hospital. From an unimpeachable source information was given to me that very little use was justified, and in those cases where the Emergency Medical Facility was not used any child saved by such time difference in most cases should not have been saved. The above came to me, unfortunately, in confidence.. Two heliports would be clearly idiotic.

Very truly yours
Philip Padelford

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June 18, 1991

Mr. Dennis McLerran, Director
Dept. of Construction & Land Use
400 Municipal Bldg.
Seattle, WA 98104

RECEIVED
JUN 21 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. McLerren,

From my windows on the 5th floor of my condominium building I hear and see the helicopters come slowly in and circle and circle Children Hospital trying to squeeze into the landing space.

I always think if they had just made a quick landing over in the playing field area, with an aid car or ambulance standing by that could speed to the hospital it would be better for all concerned.

Of course we want to save as many children as possible, but the helicopters endanger the lives of many residents when they circle over the area. Not all the children brought in by helicopter direct to the hospital survive, and not every child brought by helicopter and ambulance will survive, but most of them will. The potential for disaster is too great to risk a helistop at the hospital!

The hospital has far over-built their area which should never have been placed in a residential area in the first place, and it is becoming a real problem for the neighborhood. It is making it difficult to keep a good family residential area in the city and the tax-payers who live there have rights that should be considered.

Since there is a good alternative, please do not place a helistop at the hospital. Thank you -

Sincerely,

Lillian J. Mills

4545 Sand Point Way N.E. #507
Seattle, WA 98105

524 0209

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4416 - 54th Ave N.E.
Seattle Wa 98105

RECEIVED
JUN 24 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Deagia McTeman
Director
Dept of Construction & Land Use
400 Municipal Bldg
Seattle Wa 98104

Dear Ms. McTeman:

I am writing to voice my concerns about the helistop planned for the Childrens Hospital in the Laurelhurst neighborhood.

What concerns me is the myopic stance of the group (if there is one) who oppose the site on the basis of noise pollution, etc. As far as I am concerned, the noise couldn't be more than the jet skis or the float planes which fly the waterfront daily. As for as safety, it seems there are plenty of news & traffic-copters that fly into tight places & land hourly downtown with much less clearance and far more frequently than a life saving medical helicopter ever would.

I am a bit embarrassed by the priorities of some of my neighbors. There are hospitals (U. Wash and VA) which serve a Y state area. They [redacted] (my neighbors) need a 8 X 10 glossy of the big picture.

Sincerely Linda S. Carson

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LAURELHURST LETTER

Published by the Laurelhurst Comunity Club ... serving 2200 households

MAY 1991



HELICOPTER UPDATE

On April 25, the Final Environmental Impact Statement (FEIS) was issued on the proposed helistop at Children's Hospital & Medical Center (CHMC). A decision is usually rendered within seven days, followed by a 15-day period for response. An appeal and public hearing can follow.

On May 3, however, the Director of the Dept. of Construction & Land Use (DCLU) announced that an alternative plan needed to be studied further and that a decision would not be given for at least another 60 days.

The alternative plan being studied is: *two* helistops, to be used jointly by the UW Hospital and CHMC - one at the UW Intramural Field, the other at CHMC. This would mean two helistops within half a mile of each other.

The approach and site of the helistop at the Intramural Field is in an open area. Helicopters have landed here for years with ambulance transfer to CHMC with no loss of lives.

The approach and site at CHMC is in an extremely limited space with approach over dense residential neighborhood (single family homes, condominiums, an elementary school). Planned building expansion at CHMC would further limit helicopter maneuverability.

In Vol. I (of III) of the FEIS, it is estimated an average of 15 to 21 patients could be transported each month to CHMC. This would be 30 to 42 overflights (in and out flights per patient). Also, "...addition of competing helicopter service ... the number of patients ... could exceed the 15 to 21 per month average."

Further stated in the FEIS is that CHMC cannot refuse any helicopter landings, even the Army MAST planes, such as occurred March 24, 1991 – the "worst yet scenario." This landing was especially hazardous due to the extremely low flying altitude, size and age of the plane. It circled over residences and the hospital three times. The pilot had never flown to CHMC, did not know where to land, could not find a landing site, and was finally directed by hand signals from CHMC security personnel on the ground. There was no radio communication between plane and hospital.

Safety is the prime issue. Each landing and take-off poses endangerment to hundreds of lives of innocent citizens who live within the residential neighborhood surrounding CHMC. Since helicopter accidents occur most frequently during landing and take-off, the potential for a tragedy is real. Noise pollution and vibration affect the quality of life for these residents, too.

To voice your concerns about these safety factors and location of a helistop at CHMC, and to save our neighborhood from institutional encroachment, call or write:

Mr. Dennis McLerran, Director
Dept. of Construction & Land Use
400 Municipal Bldg; Seattle, WA 98104; phone: 684-8875.

Seattle City Council members
600 Fourth Ave., Eleventh Floor; Seattle, WA 98104;
phone: 684-888

–Maryann Spangler

MEETING DATES

Laurelhurst Community Club Board of Trustees
regular meeting. St. Stephens church, Monday,
June 10, 7:30 p.m.

VOLUNTEER EDITOR SEARCH

The board of trustees of the Laurelhurst Community Club is seeking an individual who will serve as the newsletter editor for a period of an agreed term, renewable.

The volunteer position is a vital part of the Community Club's effectiveness. The newsletter is the primary source of neighborhood information and announcements. Through the newsletter, we receive information about the community, the environment, and our own future.

The editor will attend the monthly Laurelhurst Community Club board meeting where newsletter subject matter is discussed. He/she may be a board member. The position requires: collecting the assigned articles, copy editing, coordinating with the newsletter's graphic artist, coordinating with the printer for delivery and distribution, and determining newsworthy subjects for following issues.

Requisite skills include writing, editing and organizing, and could include word processing, computer layout and previous newsletter involvement.

The Editor position is an excellent opportunity for someone to continue his/her interest and skill in writing and editing while serving as an important active member of this community.

Continued on page 2

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WELCOME VOLUNTEERS! - Other volunteers are also being sought for two vacancies now open on the board of trustees for the Community Club.

Interested persons may have a particular issue or project which they want to tackle. As an active board member, you will be able to get to the heart of the problem and affect the results. You will have the support of the board who can back you up and provide experience in managing successful community projects. Interested candidates, please call Rick Hess, 525-1361.

-Rick Hess

CRIME WATCH WORKS IF YOU DO!

Approximately 40 present and new Block Captains attended the Block Watch Captains meeting on April 18 at Laurelhurst school.

They were introduced to some successful new programs of the Seattle Police Dept. Officer Dennis Brown, School Emphasis Patrol, spoke about his experiences working with middle school and high school students in the North End. Officer David Severence, the Community Police Team, talked about the help his division gives in solving neighborhood problems.

Kathy Jean Kolarsick, the Northeast District representative from the Seattle Police Dept.'s Crime Prevention Division, gave an informative talk about personal safety.

NOTE: Kathy Kolarsick is available to meet with neighbors of blocks who would like to get together for an educational Crime Prevention session. Call 684-7555.

CRIME PREVENTION THOUGHTS: GOING ON VACATION

Everyone looks forward to taking a vacation. Unfortunately this can be an opportune time for a burglar to strike, especially if there are telltale signs of your home being unoccupied. Make your home appear to be occupied whether you are gone for a day or a couple of weeks.

• Check all doors and windows to make certain they are securely locked. If any locks need replacement or reinforcement, make these improvements before you leave.

• Use automatic electric sockets and timers to turn outside and inside lights on at dusk and off at dawn.

• If you plan to be gone for an extended period, arrange to have your lawn mowed, have a neighbor park a car in the driveway and use your garbage container.

• Make sure all items such as tools, ladders, furniture and children's toys are inside.

• Tell a trusted neighbor, relative or Block Captain about your vacation plans: when you are leaving, where you can be reached in an emergency, and your expected return date.

• Leave a key to your house with the trusted neighbor so that the position of drapes and curtains can be changed, newspapers, mail, etc. can be placed in the house.

• Inform your neighbors on all four sides of your plans, so that a complete lookout is maintained. Be selective, however, in announcing your plans to anyone else.

• Perform a thorough security inspection of your house, lock up, set your alarm system if you have one, and enjoy your vacation.

-Pat Wright

COMMUNITY PROJECTS SUPPORTED BY YOUR DUES

Your Community Club dues are vitally important to the Laurelhurst neighborhood. Through these voluntary funds, we are able - with matching neighborhood funding - to improve our playgrounds, boulevards and schools.

PLAYFIELD PLAYAREA - Special neighborhood projects, such as the children's play area will undergo more development this year. After the landscaping and picnic tables are installed, a specially-designed arbor area will be constructed to further enhance this already superb playfield.

BOULEVARD PROJECT - The boulevard project is an ongoing neighborhood labor of love that your dues helped fund in the beginning and continue to maintain now.

NEIGHBORHOOD CONCERNS - Many community issues are being tackled this year, such as land use, transportation, and environmental projects. These matters are pursued with diligent and knowledgeable effort by members of this community and especially by members of your board.

LAURELHURST LETTER - Your dues help publish this newsletter, which brings newsworthy information to each of us on a monthly basis and helps us be informed about the ongoing activities of the board.

All residents who have not paid their regular annual dues are requested to do so at this time. If you wish to see more community-based neighborhood projects such as the children's play area, the Laser portable facility or the boulevard project, your voluntary contribution is requested also at this time.

Annual dues are $20 per household. Checks can be made out to Laurelhurst Community Club and mailed in care of Luanne Johnson, treasurer; 4102 37th Avenue NE; Seattle, WA 98105. Annual dues statements and remittance envelopes were mailed out in January. If you need another one, call Luanne.

-Thank you, Rick Hess

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JTD

6/14/91

MR. Dennis McLerran, Director
Dept of Construction + Land Use
400 Municipal Bldg
Seattle 98104

5126 NE 42 st
Seattle, 98105

RECEIVED
JUN 20 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. McLerran -

I very much oppose the use of helicopters at CHMC - Not only does this impact the safety and density question, but the quality of life in the Laurelhurst neighborhood.

While it may seem that there is little safety question, according to studies made available to you and your department, my experience at S.F. Int'l Airport Coast Guard rescue station was just the opposite - there were frequent accidents with the helicopters, and that was a specialty of the base.

In addition, we have seasonal weather fronts that come up quickly. Last Tuesday nite a capsized in LK Washington - a fluke wind came up. Had a helicopter been landing / taking off - it could have been very dangerous.

Please contain the copter, & the intermural field at UW - Mag room and safer.

Sincerely -
D.B. Nichols

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DEPARTMENT OF CONSTRUCTION & LAND USE

NO. _____

DATE 6·25·91

TO Rebecca Hoefeld

FROM Dennis McLerran

For your information _____

Prepare reply _____ to be signed by _____

Response due _____

Review/Comment _____

Please see me _____

Please handle ✓

Copy(ies) for _____

File _____

Pls. make sure these folks are on list to be notified of all actions on this project. Thank you!

If this routing slip is numbered, please attach it to copy of your response and return to the Director's secretary for the reading file.

S.225

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JTD

ROBERT B. HEILMAN
4554 45TH AVENUE NE
SEATTLE, WASHINGTON 98105

17 June 1991

RECEIVED
JUN 20 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. Dennis McLerran, Director
Department of Construction and Land Use
400 Municipal Building
Seattle WA 98104

Dear Mr. McLerran:

I would like to express the hope, in the strongest terms possible, that your department will not permit any extension of helicopter landing rights at Childrens Hospital. There is no earthly medical reason for helicopters landing in this residential district when they can land on open ground at the University of Washington, and the patients be quickly transported by ambulance to the hospital. Given this solution, it is impossible to understand why the hospital, in constant defiance of the good of the whole neighborhood, insists on trying to have a heliport here. I live right across the street from Childrens Hospital (and I have made many gifts to it), and I can testify to the perfectly horrible noise made by helicopters looking for the spot, hovering, landing, and taking off again. It can spoil a whole half day for us residents in the neighborhood. And this says nothing of the danger from a kind of craft which, according to regularly news stories, tends to be constantly in trouble. Please do not allow the hospital to extend their heliport landings. There should be none of these at all.

Sincerely yours,

Robert B. Heilman

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NT

PHILIP S. PADELFORD
204 DENNY WAY
SEATTLE, WASHINGTON 98109

6/26/91

RECEIVED
JUN 28 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Department of Construct'n & Land Use
att'n Nathan Torgelson

Room 404
600 - 4th ave,
Seattle 98104-1800

Dear Mr. Torgelson:

I incorrectly addressed the attached letter to The City Council and Mr. Weeks. A letter from the latter's office leads to re-directing it to you. We would be interested in mailings dealing with this subject.

Cordially,

Philip S. Padelford

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Annual Docket File

PHILIP S. PADELFORD
204 DENNY WAY
SEATTLE, WASHINGTON 98109

6/20/91

Seattle City Council
600 Fourth Ave. att'n Tom Weeks
Eleventh Floor
Seattle, WA., 98104

Dear Tom and all Council members:

The use of the Childrens Hospital and medical center as a heliport is a matter mrs Padelford and I are strongly opposed to, however much we do and have supported that fine Hospital. From an unimpeachable source information was given to me that very little use was justified, and in those cases where the Instrumental Flight was not used any child saved by such time difference in most cases should not have been saved. The above came to me, unfortunately, in confidence.. Two heliports would be clearly idiotic.

Very truly yours,

Philip Padelford

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JODY CARONA
Health Facilities Planning & Development
83 South King Street, Suite 607
Seattle, Washington 98104
(206) 292-8714

MEMORANDUM

TO: John Doan

FROM: Jody Carona

DATE: May 6, 1991

SUBJECT: Children's Hospital and Medical Center

Glenn Bachman of Sharpiro and Associates asked that I forward a copy of this analysis to you. Please feel free to contact me with any questions.

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JODY CARONA
Health Facilities Planning & Development
83 South King Street, Suite 607
Seattle, Washington 98104
(206) 292-8714

April 25, 1991

Treuman Katz,
President and Chief Executive Officer
Children Hospital and Medical Center
4800 Sand Point Way NE
Seattle, WA 98105

Dear Mr. Katz:

Enclosed please find an analysis of projected pediatric rotary wing landings for the years 1991-1995. This analysis was developed after a comprehensive review of Airlift Northwest's historical pediatric landing experience. The projections are based on County-specific population growth trends and historical County-specific use rates.

Please let me know if you require any additional information.

Sincerely,

Jody Carona

JC:jch

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JODY CARONA
Health Facilities Planning & Development
83 South King Street, Suite 607
Seattle, Washington 98104
(206) 292-8714

ANALYSIS OF PROJECTED

ROTARY WING LANDINGS

AT

CHILDREN'S HOSPITAL MEDICAL CENTER

1991 - 1995

FINAL REPORT
APRIL 25, 1991

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EXECUTIVE SUMMARY

As part of the planning effort for the Environmental Impact Statement (EIS) required for construction of a helistop at Children's Hospital and Medical Center (CHMC), this study was commissioned by CHMC to: 1) review Airlift Northwest's current pediatric rotary-wing experience, and 2) project future pediatric rotary-wing volumes.

The Final Environmental Impact Statement (FEIS) contains a *Proposed Action* as well as a *Preferred Alternative*. The *Proposed Action* involves landing all CHMC destined patients at the CHMC campus. The *Preferred Alternative*, developed as a compromise proposal in the FEIS, allows only the most critical patients to land at a paved, secured helistop at the CHMC. All other critical pediatric patients would land either at Harborview, Intramural Field or Boeing Field and be transferred via ground ambulance to CHMC. The designation of patients who are most critically ill and require transport directly to CHMC's campus is currently, and will continue to be, determined on a case by case basis by the Airlift Northwest medical team on board the helicopter.

Specifically, this study defines and identifies three factors:

1) The geographic service area of Airlift Northwest's existing pediatric program;

2) The percentage of pediatric flights ultimately destined for CHMC (regardless of where they land) as well as the pediatric flights that actually land at CHMC; and

3) A projection of future Airlift Northwest pediatric flight volumes and a calculation of the number of flights likely to land at CHMC through the year 1995 under both the *Proposed Action* and the *Preferred Alternative*.

All data used in the review and analysis of current and projected CHMC landings were provided by Airlift Northwest.

A population/use-rate based projection method was applied to the two scenarios, the *Proposed Action* and the *Preferred Alternative*, to develop estimates of likely utilization. Only one element in the methodology differentiates the two scenarios. In the scenario assuming the *Preferred Alternative* one additional step was required to define the number of patients actually landing at CHMC. This step involved the

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determination of the average percentage of pediatric flights actually landing at CHMC during the 1987-1990 period. A review of the combined, four year data identified the following:

1987-1990 Airlift Northwest Rotary Wing Landings
Ultimately Destined for CHMC
by Landing Site[1]

CHMC landings	24.5%
Intramural landings	70.2%
Harborview landings	4.7%
Boeing Field landings	.5%
Other (Weather related)	.1%
Total	100.0%

1 Includes patient pick-ups at CHMC in 1989 and 1990

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The calculation of projected pediatric Airlift Northwest landings at CHMC in the years 1991 through 1995 is premised on several assumptions. These assumptions assume four constants: a constant use rate, a constant percentage of missed flights, a constant percentage of Airlift Northwest pediatric flights landing at CHMC, and a constant out-of-area utilization through 1995. The projected utilization under each scenario is as follows:

Year	***Proposed Action***	***Preferred Alternative***
1991	201 landings	49 landings
1992	204 landings	50 landings
1993	207 landings	51 landings
1994	210 landings	51 landings
1995	212 landings	52 landings

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Airlift Northwest is a non-profit emergency air ambulance service established in 1982 by an inter-hospital agreement among four member hospitals. The member hospitals are: Children's Hospital and Medical Center, Harborview Medical Center, Providence Medical Center and University Hospital. The service was established as a fixed wing service in response to a demonstrated need to serve rural hospitals in Eastern Washington, Southeast Alaska, Idaho and Montana and to provide advanced medical care to those communities in the greater Western Washington area that did not have tertiary level capabilities. In early 1985, in response to increasing requests for transport from Western Washington hospitals and emergency response programs, Airlift Northwest inaugurated a rotary wing service. The first helicopter landing by Airlift Northwest at CHMC occurred in August, 1985.

The first emergency landings by helicopter at CHMC occurred in the 1970's. By the early 1980's a need for a permanent helistop at the Hospital was becoming evident. In 1984, CHMC applied for a Master Use Permit to allow construction of a helistop at the hospital. As part of the application process the Department of Construction and Land Use determined that an Environmental Impact Statement would have to be prepared. The Draft EIS contains a *"Proposed Action"* to land all critically ill and injured pediatric patients directly at CHMC. A *"Preferred Alternative"*, to land at the CHMC helistop only with the most critically ill patients-- less critical patients would be unloaded at Harborview or Intramural Field and then transported by ground ambulance to CHMC, was developed as a compromise proposal and presented in the FEIS. As part of the EIS planning process, this study was commissioned by Children's Hospital and Medical Center to define and identify three (3) factors:

1) The geographic service area of Airlift Northwest's existing pediatric program;

2) The percentage of pediatric flights ultimately destined for CHMC (regardless of where they land) and the nature of pediatric flights that actually land at CHMC; and

3) A projection of future Airlift Northwest pediatric flight volumes and a calculation of the number of flights likely to land at CHMC through the year 1995 under both the *Recommended Action* and the *Preferred Alternative*.

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This study is divided into three main sections. The first section, ***Description of Methodology and Assumptions***, describes the sources and types of data used in this study. This section also details the specific methodology supporting the utilization estimates. The second section, ***Projections of Future Utilization***, calculates the likely pediatric utilization of Airlift Northwest's rotary-wing program in the years 1991 through 1995 under both the *Proposed Action* and the *Preferred Alternative.* ***Findings and Conclusions***, the final section provides an overview and analysis of the air-ambulance utilization projections.

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DESCRIPTION OF METHODOLOGY AND ASSUMPTIONS

All data used in the review and analysis of current and projected CHMC landings were provided by Airlift Northwest.

A review of Airlift Northwest's 1987 through 1990 patient flight origin[2] was undertaken to identify the primary geographic area from which all rotary wing flights, and specifically pediatric flights were generated. Patient origins were originally defined by local community but reconciled for this study into County boundaries.[3] Reconciliation into County boundaries was needed to allow for future projections of pediatric rotary-wing air ambulance use.

The data analysis identified the primary geographic area for Airlift Northwest's rotary program as: bounded on the west by the Pacific Ocean; bounded on the north by the Canadian border; bounded on the south by Lewis County, and bounded on the east by the Cascade Mountains.

Once the primary geographic area was identified, a further review of actual 1987 through 1990 utilization was undertaken by applying a widely accepted use-rate based projection method.[4] The specific steps in the methodology include the following:

---

2 After review of flight data for the years 1985-1990, and after discussions with Airlift Northwest administration it was concluded that the years 1985 and 1986 represented "start-up" years for the rotary wing program. In contrast the 1987 through 1990 experience was relatively constant between months and likely reflected the experience of a mature operation. Consequently, because the averaging of 1987 through 1990 data represents the most comprehensive and best available information on rotary wing use, it was used in this evaluation. This analysis assumes that the actual 1987-1990 transport experience remains relatively constant through the year 1995.

3 In review of the flight data, it became apparent that not all areas of King County equally request the services of Airlift Northwest. As such, King County was divided into four distinct planning areas. These planning areas are Central King, North King, East King and South King.

4 The 1987 Washington State Health Plan adopts use-rate based methods for projection of most hospital and acute medical services.

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1) Review and accounting of all 1987 through 1990 missed flights.[5]

2) The actual number of flights missed, due to inclement weather was subtracted from "total missed flights" to ascertain the actual number of flights missed due to factors other than weather.

3) A calculation of missed flights as a percentage of total flights. It was assumed that the percentage of flights missed was consistent between the adult and pediatric populations.

4) Adding the percentage of missed flights by primary geographic area to the average 1987 through 1990 pediatric flight volumes to arrive at a total potential pediatric flight number.

5) Dividing the average 1987 through 1990 potential pediatric population (by primary geographic area region) by the average 1987 through 1990 pediatric population in each region to calculate the 1987 through 1990 "use rate" of each region.[6]

Appendix 1 details the missed flight, total potential pediatric flights and county-specific use rate projections.

---

5 Missed flights are defined as those flights that are not responded due to either inclement weather or the non availability of transport equipment. The number of flights missed due to the non-availability of transport equipment decreased considerably after Airlift Northwest's initiation of a second rotary-wing helicopter in August 1988.

6 The use rate is defined as the average number of transport the pediatric population generates during a given calendar year. The statistic is presented as transports per 1,000 pediatric population (ages 0-14). While specific age data are not kept, according to Airlift Northwest staff, the majority of pediatric flights are for patients aged 0-14.

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PROJECTIONS OF FUTURE UTILIZATION

To project pediatric rotary-wing flight utilization in the years 1991 through 1995, the projected pediatric population for each planning area was identified. The source of the population data is the Office of Financial Management.[7] Applying the projected population to the previously developed use rate provides an estimate of the projected population in each County likely to require pediatric air ambulance transport in the years 1991 through 1995. These projections are depicted in Appendix 2.

The FEIS contains a *Proposed Action* as well as a *Preferred Alternative*. The *Proposed Action* calls for landing all CHMC destined patients at the CHMC Campus. The *Preferred Alternative* is characterized by the most critical patients landing at a paved, secured helistop on CHMC's campus. All other critical pediatric patients transported by helicopter to CHMC would land either at Harborview or Intramural Field. The *Preferred Alternative* represents a continuation of the actual 1987-1990 CHMC landing experience.

A population/use-rate based projection method was applied to the two scenarios, the *Proposed Action* scenario and the *Preferred Alternative* scenario, to develop estimates of likely utilization. Only one methodology element differentiates the two scenarios. In the scenario assuming the *Preferred Alternative* one additional step was required to define the number of patients actually landing at CHMC. This step

---

7 Since OFM data are county wide and do not sub-divide the information into sub-areas, the following method was utilized to develop the population projections for the sub-areas of King County. A Puget Sound Health Systems Agency report entitled "Projections of the Population by Age, Northwest Washington Health Service Area, By Planning Area: 1990" identified the percentage of individuals age 0-14 within each sub-area of King County. These percentages were assumed to remain constant and applied to the King County population estimates published by the Office of Financial Management. The percentage of population 0-14 within each King County planning area was held constant as follows:

Central	11.0%
East	33.9%
North	13.4%
South	41.7%

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involved the calculation of the percentage of pediatric flights actually landing at CHMC. This was done by averaging the actual 1987-1990 experience. The specific formula for each scenario is described below.

Proposed Action

The formula for projecting the number of pediatric landings at CHMC, under the Proposed Action in the years 1991-1995 incorporates the number of projected landings and adds a factor for out-of-area use.

The out- of-area use factor was based on the actual average 1987-1990 pediatric Airlift Northwest experience. In the four year period under review, 2.49% of all pediatric flights destined for CHMC were generated from areas other than those defined in the primary geographic area analysis. This actual experience was assumed to remain constant. The formula for projecting landings at CHMC is as follows:

Total Airlift Northwest rotary wing patients destined for CHMC

+

out-of-area factor

=

Total rotary wing landings at CHMC

Using the above methodology, the projection of landings at CHMC under the Proposed Action is as follows:

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1991: 201

1992: 204

1993: 207

1994: 210

1995: 212

Preferred Alternative

One additional step is required to define the number of pediatric patients directly landing at CHMC under the Preferred Alternative. This step involves the calculation of the percentage of pediatric flights actually landing at CHMC during the 1987-1990 period. A review of the actual data identifies the following:

CHMC landings	24.5%
Intramural landings	70.2%
Harborview landings	4.7%
Boeing Field landings	.5%
Other (Weather related)	.1%
Total	100.0%

For projection purposes,the 1987-1990 pediatric landing experience, by site was assumed to remain constant.

The formula for projecting the number of pediatric landings at CHMC, assuming the preferred alternative in the years 1991 through 1995 is as follows:

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Total Airlift Northwest rotary wing patients destined for CHMC

x

CHMC Average 1987-1990 landing percentage

+

out-of-area factor

=

Total rotary wing landings at CHMC

Incorporating the above assumptions and formula, projections of pediatric rotary wing landings at CHMC are as follows:

1991	49 landings
1992	50 landings
1993	51 landings
1994	51 landings
1995	52 landings

Specific detail on the projected CHMC landings in the years 1991 through 1995, under both scenarios is included as Appendix 2.

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FINDINGS AND CONCLUSIONS

The calculation of projected pediatric Airlift Northwest landings at CHMC in the years 1991 through 1995 is premised on several assumptions. The major assumptions assume four constants: a constant use rate, a constant percentage of missed flights, a constant percentage of Airlift Northwest pediatric flights landing at CHMC and a constant percentage of flights from out-of- area through the year 1995.

These projections make no assumptions regarding unknown variables which may increase or decrease demand for air ambulance services. For example, in March of 1990, CHMC initiated an Extracorporeal Membrane Oxygenation (ECMO) program. ECMO is a technology which serves as a lung-bypass for neonates; thereby allowing their lungs to recover from damage incurred from sepsis, meconium or other similar problems. It should be noted that ECMO is not a primary treatment, but rather a treatment of last recourse. In 1989 and early 1990, prior to the technology being available at CHMC, approximately 14 Airlift landings occurred at CHMC to pick-up CHMC patients in need of the technology and to transport them to Emanuel Hospital in Portland, the closest ECMO technology site. For the period of April 1990 - February 1991 no out-flights have been recorded. In addition, no in-flights specifically for ECMO have been recorded. This is due to the fact that ECMO is an end treatment, and that neonates in need of tertiary treatment have been transferred earlier in the course of their illness to CHMC. Most of this transport is via ground ambulance.

Accordingly, in this case it appears that ECMO is a technology which will ultimately result in decreased demand (in terms of out flights) for air ambulance services. However, and in an attempt to be conservative, no decrease in demand was actually forecasted. Other examples of variables which may increase or decrease demand include, the reconfiguration of health care services, changes in technology, or changes in the health status of the population could have the impact of either increasing or decreasing utilization over time.

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After conducting a literature search and reviewing all applicable studies, no generally accepted standards were identified that would allow for the incorporation, with confidence, of such variables into the calculation of use rates and subsequent landings. Therefore, it was concluded that the combined 1987-1990 actual experience is the best indicator of future utilization and that any attempt to quantify the above unknown variables would reduce the reliability and validity of the projections.

cohanalysis

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APPENDIX 1

AREA	AREA	ACTUAL RW PEDIATRIC LANDINGS (1) 1987	1988	1989	1990	CUMULATIVE LANDINGS	TOTAL(2) POTENTIAL LANDINGS	PEDIATRIC POPULATION (3) 1987	1988	1989	1990	TOTAL PEDIATRIC POP 1987-90	RW PEDIATRIC 1987-90 USE RATE
Clallam	Clallam	19	12	17	18	66	67	11,538	11,717	11,904	12,057	47,216	1.43
Grays Harbor	Grays Harbor	3	5	3	1	12	12	14,390	14,483	14,310	14,385	57,568	0.21
Island	Island	15	14	24	23	76	78	11,654	12,055	12,487	12,986	49,182	1.58
Jefferson	Jefferson	9	6	12	11	38	39	3,418	3,461	3,716	3,820	14,415	2.69
King	King												
Central King	Central King	0	0	0	0	0	0	28,374	28,798	30,037	30,753	117,962	0.00
East King	East King	8	9	5	5	27	28	87,442	88,798	92,568	94,775	363,583	0.08
North King	North King	0	0	0	2	2	2	34,564	35,081	36,590	37,463	143,698	0.01
South King	South King	33	41	49	45	168	171	107,562	109,171	113,867	116,583	447,183	0.38
Kitsap	Kitsap	38	32	28	29	127	130	38,779	39,308	41,463	41,977	161,527	0.80
Lewis	Lewis	8	4	1	7	20	20	13,182	13,244	13,537	13,676	53,639	0.38
Mason	Mason	2	0	0	1	3	3	7,449	7,607	7,808	8,120	30,984	0.10
Pacific	Pacific	0	0	1	0	1	1	3,367	3,360	3,474	3,500	13,701	0.07
Pierce	Pierce	2	0	2	1	5	5	119,369	121,010	126,207	128,702	495,288	0.01
Skagit	Skagit	6	4	12	13	35	36	14,782	14,982	15,466	15 789	61,019	0.59
Snohomish	Snohomish	13	17	18	19	67	68	90,150	92,523	100,031	103,o81	386,385	0.18
Thurston	Thurston	5	3	3	3	14	14	33,211	33,948	35,816	37,122	140,097	0.10
Whatcom	Whatcom	15	11	31	10	67	68	24,997	25,420	26,002	26,459	102,878	0.66
		176	158	206	188	728	743	644,228	654,966	685,283	701,348	2,685 325	0.28
		4	4	6	5	19	19						
		180	162	212	193	747	763						

(1) Excludes flights for pick-up at CHMC
(2) Based on actual experience & adjusted for establishment of second RW helicopter in 1988. Assumes that 2.04% of all flights are missed due to factors other than weather.
(3) Office of Financial Management, Washington State.

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APPENDIX 2

AREA	(1) EST. POP 1991	EST. PEDIATRIC 1991 LANDINGS	EST. CHMC RW 1991 LANDINGS	(1) EST. POP 1992	EST. PEDIATRIC 1992 FLIGHTS	EST. CHMC RW 1992 LANDINGS	(1) EST. POP 1993	EST. PEDIATRIC 1993 FLIGHTS	EST. CHMC RW 1993 LANDINGS	(1) EST. POP 1994	EST. PEDIATRIC 1994 FLIGHTS	EST. CHMC RW 1994 LANDINGS	(1) EST. POP 1995	EST. PEDIATRIC 1995 FLIGHTS	EST. RW 1 LAND
Clallam	12,111	17	4	12,164	17	4	12,219	17	4	12,273	18	4	12,325	18	4
Grays Harbor	14,347	3	1	14,309	3	1	14,272	3	1	14,234	3	1	14,196	3	1
Island	13,292	21	5	13,606	21	5	13,926	22	5	14,255	22	6	14,517	23	6
Jefferson	3,882	10	3	3,944	11	3	4,008	11	3	4,072	11	3	4,128	11	3
King															
Central King	31,143	0	0	31,538	0	0	31,937	0	0	32,342	0	0	32,702	0	0
East King	95,977	7	2	97,193	7	2	98,426	7	2	99,674	8	2	100,783	8	2
North King	37,938	1	0	38,419	1	0	38,906	1	0	39,399	1	0	39,838	1	0
Scuth King	118,061	45	11	119,557	46	11	121,073	46	11	122,608	47	12	123,972	48	12
Kitsap	42,560	34	8	43,151	35	8	43,750	35	9	44,357	36	9	44,891	36	9
Lewis	13,679	5	1	13,682	5	1	13,684	5	1	13,687	5	1	13,690	5	1
Mason	8,249	1	0	8,379	1	0	8,512	1	0	8,647	1	0	8,763	1	0
Pacific	3,492	0	0	3,485	0	0	3,477	0	0	3,470	0	0	3,462	0	0
Pierce	130,312	1	0	131,943	1	0	133,593	1	0	135,265	1	0	136,753	1	0
Skagit	15,929	9	2	16,071	9	2	16,213	9	2	16,357	10	2	16,490	10	2
Snohomish	106,168	19	5	108,715	19	5	111,323	20	5	113,994	20	5	116,117	21	5
Thurston	37,884	4	1	38,662	4	1	39,455	4	1	40,265	4	1	40,932	4	1
Whatcom	26,714	18	4	26,971	18	4	27,231	18	4	27,493	18	4	27,733	18	5
	711,737	196	48	721,788	199	49	732,006	202	49	742,392	205	50	751,292	207	51
Est. out of Area Landings (2)		5	1		5	1		5	1		5	1		5	1
Total Landings		201	49		204	50		207	51		210	51		212	52

(1) Office of Financial Management

(2) Assumed to be 2.49% based on actual 1987 - 1990 experience.

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Washington State Health Plan, State Health Coordinating Council, volumes 1 and 2, 1987.

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October 23, 1991

Department of Construction and Land Use
710 Second Avenue, Suite 200
Seattle, Washington 98104-1703

RECEIVED
OCT 25 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Re: Project No. ~~9100626~~
Address: 4800 Sand Point Way, NE

Attention: Mr. Nathan Torgelson

Dear Mr. Torgelson:

As an owner/resident of the Laurelon condominium, which is next door to Children's Hospital, I can say the helicopters that are already landing at the temporary heliport next door are noisy and a danger to the residents of Laurelon, over which they come in at a low altitude to land.

It has been estimated that only six or seven emergency cases would be brought in to Children's Hospital a month. If that is true, it seems an expensive investment to build a heliport for only a half-dozen patients a month, especially when they could be taken by helicopter to University Hospital, where the planes do not have to come in at such low altitudes over a densely populated area. However, I think we residents of Laurelon are being misinformed and that once the heliport is put in, there will be many more than seven emergency cases a month coming in over our heads.

I am against a heliport at the Children's Hospital. Thank you.

Yours truly,

Marjorie Kresge

Marjorie Kresge
4014 NE 46th Street
Seattle, WA 98105

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July 2, 1991

RECEIVED
JUL - 8 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dennis McLerran, Director
Dept. of Construction & Land Use
400 Municipal Bldg.
Seattle, WA 91104

Dear Mr. McLerran:

We are writing IN SUPPORT of the helistops for use by medical helicopters at Children's Hosptial & Medical Center and the University of Washington Intramural Field.

We live at the Laurelon Terrace Condominium, whose eastern boundry abuts on the hospital's grounds. The noise from the overflights, which are brief, are NOT bothersome. We believe the potential hazard from the medical helicopters is NO greater than that of all the other helicopters and airplanes that fly over our area.

The fast transportation for the critically ill patients should be the overriding factor.

Because we understand that considerable criticism of the medical flights has come from senior citizens, we wish to point out that all of us are over 65 years of age.

Sincerely,

Mr. & Mrs. O. L. Almquist, Jr.

Mr. and Mrs. O. L. Almquist, Jr.
4604 41st Ave. N. E. Seattle, WA 98105

Franklin B. Brown

Franklin B. Brown
4011 N. E. 46th St. Seattle, WA 98105

Edna Mae Fisk
4028 N. E. 45th St. Seattle, WA 98105

Edna Mae Fisk

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June 28, 1991

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JUL - 3 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dept. of Construction and Land Use
400 Municipal Bldg.
Seattle, Wa. 98104
Mr. Dennis Mc Lerran, Director

Dear Sir,

Having lived in Laurelhurst for the past 50 years, we are voicing our deep concern over Childrens' Hospital and Medical Centers' plan to build a helistop. We feel it is absolutely unnecessary for many reasons-- a few of which are, possible accident, noise pollution and vibration and the extreme cost to the patient or the hospital. The helicopter must land to pick up a medical crew, Take off to get patient, land again with patient and take off again. Helicopters have landed for years at the Intramural Field with ambulance transfer to the hospital with no loss of lives.

The extremely limited space over residential area, schools, churches and planned building expansion at Childrens Hospital would further limit helicopter maneuverability. CHMC has been extending construction of various buildings for years against their original promise of land use.

Please save our neighborhood from further institutional encroachment.

Sincerely,

Barbara H. Smith

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DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

JTD

July 10, 1991

Dennis McLerran, Diector
Dept. of Construction & Land Use
400 Municipal Bldg.
Seattle, WA 98104

Dear Mr. McLerran:

We are writing IN SUPPORT of the helistops for use by medical helicopters at Children's Hosptial & Medical Center and the University of Washington Intramural Field.

One of us lives at the Laurelon Terrace Condominium, whose eastern boundry abuts the hospital's grounds; two of us live to the east of CHMC. The noise from the overflights, which are brief, are NOT bothersome. We believe the potential hazard from the medical helicopters is NO greater than that of all the other helicopters and airplanes that fly over our area.

Fast transportation for the critically ill patients should be the overriding factor.

Sincerely,

Lura Mae Kirby
4034 N. E. 45th St. Seattle, WA 98105
Lura mae Kirby

Mr. and Mrs. W. M. Schubert
5809 N. E. 57th St. Seattle, WA 98105
Carolyn Schubert

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JTD

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

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FMD

Office of the President

July 22, 1991

RECEIVED
JUL 25 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ruth Moore, Co-Chair
CUCAC
4030 4th Avenue N.E.
Seattle, Washington 98105

Dear Ms. Moore:

I respond to your letter of July 9, regarding the use of the University's existing helistop by Children's Hospital and Medical Center. The City of Seattle is the Lead Agency with respect to SEPA compliance per WAC 197-11-924-944. As the Lead Agency, the City has prepared a Draft and Final Environmental Impact Statement on Children's helistop proposal and alternatives. Use of the University's existing helistop was identified by the City as an alternative in the Final EIS. In addition, the project has gone through an extensive and lengthy public review process.

The University has reviewed both the Draft and Final Environmental Impact Statements for the helistop. The concerns and questions you raise in your letter are all addressed in the Final EIS, but may be further considered by the City during the review process.

As you know, the University and Children's have a very close continuing affiliation. Given this relationship, the University believes that it is appropriate for Children's to be allowed to use our existing helistop.

Regarding the suggested loss of recreational facilities, this area has been utilized as a helistop for more than 20 years. Continued use by the University and Children's will not adversely impact student recreational uses.

Children's will be applying for a City Council Conditional Use Permit. We have forwarded your letter to DCLU for their information and consideration.

Sincerely,

Tallman Trask III
Executive Vice President

cc: Al Tarr
Christine Knowles
Dr. Treuman Katz, CHMC
Dennis McLerran, DCLU

306 *Administration Building, AH–05 / Telephone: (206) 543–6410*

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JTD

Children's
Hospital & Medical Center

RECEIVED
JUL 26 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

July 24, 1991

Doris Baxter Burns
2511 West Montlake Place East
Seattle, WA 98112

Dear Doris:

Helen Shawcroft asked me to send you the enclosed information on projected/forecasted emergency medical helicopter transports to the University of Washington Medical Center and to Children's Hospital and Medical Center. Please contact me at 526-2530 if you have questions about the Children's Hospital transport projections.

Sincerely,

Suzanne Petersen
Director of Government Affairs

phs

Enclosures

cc: Helen Shawcroft
John Doan

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UNIVERSITY OF WASHINGTON
MEDICAL CENTER

ADMINISTRATION

July 5, 1991

Suzanne Peterson
Director of Government Affairs
Children's Hospital and Medical Center
4800 Sand Point Way N.E.
Seattle, Washington 98105

Dear Suzanne:

As we discussed, enclosed are the forecasts of the number of University of Washington Medical Center destined helicopter flights that will land at the East Campus site during the period 1991-92 through 1995-96. I have also included data regarding the historical number of flights which have landed in the East Campus area.

Sincerely,

Helen M. Shawcroft
Director
Planning

cc: Christine Knowles

HMS/speters

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1959 N.E. PACIFIC STREET, RC-74
SEATTLE, WASHINGTON 98195 (206) 545-6300

UWMC-DESTINED HELICOPTER FLIGHTS LANDING AT THE UNIVERSITY OF WASHINGTON EAST CAMPUS SITE

YEAR	NUMBER OF FLIGHTS
Historical	
1970-71	13
1971-72	19
1972-73	49
1973-74	49
1974-75	42
1975-76	64
1976-77	21
1977-78	16
1978-79	14
1979-80	9
1985-86	47*
1986-87	53*
1987-88	83*
1988-89	82**
1989-90	53*
1990-91	72*
Forecasted	
1991-92	72-84
1992-93	72-84
1993-94	78-90
1994-95	78-90
1995-96	84-96

* These data include only Airlift Northwest flights.

** Includes 1 flight that landed in Husky Stadium parking lot.

7/91

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JODY CARONA
Health Facilities Planning & Development
83 South King Street, Suite 607
Seattle, Washington 98104
(206) 292-8714

MEMORANDUM

TO: John Doan

FROM: Jody Carona

DATE: May 6, 1991

SUBJECT: Children's Hospital and Medical Center

Glenn Bachman of Sharpiro and Associates asked that I forward a copy of this analysis to you. Please feel free to contact me with any questions.

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JODY CARONA
Health Facilities Planning & Development
83 South King Street, Suite 607
Seattle, Washington 98104
206 292-8714

April 25, 1991

Treuman Katz,
President and Chief Executive Officer
Children Hospital and Medical Center
4800 Sand Point Way NE
Seattle, WA 98105

Dear Mr. Katz:

Enclosed please find an analysis of projected pediatric rotary wing landings for the years 1991-1995. This analysis was developed after a comprehensive review of Airlift Northwest's historical pediatric landing experience. The projections are based on County-specific population growth trends and historical County-specific use rates.

Please let me know if you require any additional information.

Sincerely,

Jody Carona

Jody Carona

JC:jch

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EXECUTIVE SUMMARY

As part of the planning effort for the Environmental Impact Statement (EIS) required for construction of a helistop at Children's Hospital and Medical Center (CHMC), this study was commissioned by CHMC to: 1) review Airlift Northwest's current pediatric rotary-wing experience, and 2) project future pediatric rotary-wing volumes.

The Final Environmental Impact Statement (FEIS) contains a *Proposed Action* as well as a *Preferred Alternative*. The *Proposed Action* involves landing all CHMC destined patients at the CHMC campus. The *Preferred Alternative*, developed as a compromise proposal in the FEIS, allows only the most critical patients to land at a paved, secured helistop at the CHMC. All other critical pediatric patients would land either at Harborview, Intramural Field or Boeing Field and be transferred via ground ambulance to CHMC. The designation of patients who are most critically ill and require transport directly to CHMC's campus is currently, and will continue to be, determined on a case by case basis by the Airlift Northwest medical team on board the helicopter.

Specifically, this study defines and identifies three factors:

1) The geographic service area of Airlift Northwest's existing pediatric program;

2) The percentage of pediatric flights ultimately destined for CHMC (regardless of where they land) as well as the pediatric flights that actually land at CHMC; and

3) A projection of future Airlift Northwest pediatric flight volumes and a calculation of the number of flights likely to land at CHMC through the year 1995 under both the *Proposed Action* and the *Preferred Alternative*.

All data used in the review and analysis of current and projected CHMC landings were prov ded by Airlift Northwest.

A population/use-rate based projection method was applied to the two scenarios, the *Proposed Action* and the *Preferred Alternative*, to develop estimates of likely utilization. Only one element in the methodology differentiates the two scenarios. In the scenario assuming the *Preferred Alternative* one additional step was required to define the number of patients actually landing at CHMC. This step involved the

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determination of the average percentage of pediatric flights actually landing at CHMC during the 1987-1990 period. A review of the combined, four year data identified the following:

1987-1990 Airlift Northwest Rotary Wing Landings
Ultimately Destined for CHMC
by Landing Site[1]

CHMC landings	24.5%
Intramural landings	70.2%
Harborview landings	4.7%
Boeing Field landings	.5%
Other (Weather related)	.1%
Total	100.0%

1 Includes patient pick-ups at CHMC in 1989 and 1990

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The calculation of projected pediatric Airlift Northwest landings at CHMC in the years 1991 through 1995 is premised on several assumptions. These assumptions assume four constants: a constant use rate, a constant percentage of missed flights, a constant percentage of Airlift Northwest pediatric flights landing at CHMC, and a constant out-of-area utilization through 1995. The projected utilization under each scenario is as follows:

Year	*Proposed Action*	*Preferred Alternative*
1991	201 landings	49 landings
1992	204 landings	50 landings
1993	207 landings	51 landings
1994	210 landings	51 landings
1995	212 landings	52 landings

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Airlift Northwest is a non-profit emergency air ambulance service established in 1982 by an inter-hospital agreement among four member hospitals. The member hospitals are: Children's Hospital and Medical Center, Harborview Medical Center, Providence Medical Center and University Hospital. The service was established as a fixed wing service in response to a demonstrated need to serve rural hospitals in Eastern Washington, Southeast Alaska, Idaho and Montana and to provide advanced medical care to those communities in the greater Western Washington area that did not have tertiary level capabilities. In early 1985, in response to increasing requests for transport from Western Washington hospitals and emergency response programs, Airlift Northwest inaugurated a rotary wing service. The first helicopter landing by Airlift Northwest at CHMC occurred in August, 1985.

The first emergency landings by helicopter at CHMC occurred in the 1970's. By the early 1980's a need for a permanent helistop at the Hospital was becoming evident. In 1984, CHMC applied for a Master Use Permit to allow construction of a helistop at the hospital. As part of the application process the Department of Construction and Land Use determined that an Environmental Impact Statement would have to be prepared. The Draft EIS contains a *"Proposed Action"* to land all critically ill and injured pediatric patients directly at CHMC. A *"Preferred Alternative"*, to land at the CHMC helistop only with the most critically ill patients-- less critical patients would be unloaded at Harborview or Intramural Field and then transported by ground ambulance to CHMC, was developed as a compromise proposal and presented in the FEIS. As part of the EIS planning process, this study was commissioned by Children's Hospital and Medical Center to define and identify three (3) factors:

1) The geographic service area of Airlift Northwest's existing pediatric program;

2) The percentage of pediatric flights ultimately destined for CHMC (regardless of where they land) and the nature of pediatric flights that actually land at CHMC; and

3) A projection of future Airlift Northwest pediatric flight volumes and a calculation of the number of flights likely to land at CHMC through the year 1995 under both the *Recommended Action* and the *Preferred Alternative.*

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This study is divided into three main sections. The first section, ***Description of Methodology and Assumptions***, describes the sources and types of data used in this study. This section also details the specific methodology supporting the utilization estimates. The second section, ***Projections of Future Utilization***, calculates the likely pediatric utilization of Airlift Northwest's rotary-wing program in the years 1991 through 1995 under both the *Proposed Action* and the *Preferred Alternative*. ***Findings and Conclusions***, the final section provides an overview and analysis of the air-ambulance utilization projections.

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DESCRIPTION OF METHODOLOGY AND ASSUMPTIONS

All data used in the review and analysis of current and projected CHMC landings were provided by Airlift Northwest.

A review of Airlift Northwest's 1987 through 1990 patient flight origin[2] was undertaken to identify the primary geographic area from which all rotary wing flights, and specifically pediatric flights were generated. Patient origins were originally defined by local community but reconciled for this study into County boundaries.[3] Reconciliation into County boundaries was needed to allow for future projections of pediatric rotary-wing air ambulance use.

The data analysis identified the primary geographic area for Airlift Northwest's rotary program as: bounded on the west by the Pacific Ocean; bounded on the north by the Canadian border; bounded on the south by Lewis County, and bounded on the east by the Cascade Mountains.

Once the primary geographic area was identified, a further review of actual 1987 through 1990 utilization was undertaken by applying a widely accepted use-rate based projection method.[4] The specific steps in the methodology include the following:

---

2 After review of flight data for the years 1985-1990, and after discussions with Airlift Northwest administration it was concluded that the years 1985 and 1986 represented "start-up" years for the rotary wing program. In contrast, the 1987 through 1990 experience was relatively constant between months and likely reflected the experience of a mature operation. Consequently, because the averaging of 1987 through 1990 data represents the most comprehensive and best available information on rotary wing use, it was used in this evaluation. This analysis assumes that the actual 1987-1990 transport experience remains relatively constant through the year 1995.

3 In review of the flight data, it became apparent that not all areas of King County equally request the services of Airlift Northwest. As such, King County was divided into four distinct planning areas. These planning areas are Central King, North King, East King and South King.

4 The 1987 Washington State Health Plan adopts use-rate based methods for projection of most hospital and acute medical services.

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1) Review and accounting of all 1987 through 1990 missed flights.[5]

2) The actual number of flights missed. due to inclement weather was subtracted from "total missed flights" to ascertain the actual number of flights missed due to factors other than weather.

3) A calculation of missed flights as a percentage of total flights. It was assumed that the percentage of flights missed was consistent between the adult and pediatric populations.

4) Adding the percentage of missed flights by primary geographic area to the average 1987 through 1990 pediatric flight volumes to arrive at a total potential pediatric flight numbe..

5) Dividing the average 1987 through 1990 potential pediatric population (by primary geographic area region) by the average 1987 through 1990 pediatric population in each region to calculate the 1987 through 1990 "use rate" of each region.[6]

Appendix 1 details the missed flight, total potential pediatric flights and county-specific use rate projections.

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5 Missed flights are defined as those flights that are not responded due to either inclement weather or the non availability of transport equipment. The number of flights missed due to the non-availability of transport equipment decreased considerably after Airlift Northwest's initiation of a second rotary-wing helicopter in August 1988.

6 The use rate is defined as the average number of transport the pediatric population generates during a given calendar year. The statistic is presented as transports per 1,000 pediatric population (ages 0-14). While specific age data are not kept, according to Airlift Northwest staff, the majority of pediatric flights are for patients aged 0-14.

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PROJECTIONS OF FUTURE UTILIZATION

involved the calculation of the percentage of pediatric flights actually landing at CHMC. This was done by averaging the actual 1987-1990 experience. The specific formula for each scenario is described below.

Proposed Action

The formula for projecting the number of pediatric landings at CHMC, under the Proposed Action in the years 1991-1995 incorporates the number of projected landings and adds a factor for out-of-area use.

The out- of-area use factor was based on the actual average 1987-1990 pediatric Airlift Northwest experience. In the four year period under review, 2.49% of all pediatric flights destined for CHMC were generated from areas other than those defined in the primary geographic area analysis. This actual experience was assumed to remain constant. The formula for projecting landings at CHMC is as follows:

Total Airlift Northwest rotary wing patients destined for CHMC

+

out-of-area factor

=

Total rotary wing landings at CHMC

Using the above methodology, the projection of landings at CHMC under the Proposed Action is as follows:

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To project pediatric rotary-wing flight utilization in the years 1991 through 1995, the projected pediatric population for each planning area was identified. The source of the population data is the Office of Financial Management.[7] Applying the projected population to the previously developed use rate provides an estimate of the projected population in each County likely to require pediatric air ambulance transport in the years 1991 through 1995. These projections are depicted in Appendix 2.

The FEIS contains a *Proposed Action* as well as a *Preferred Alternative*. The *Proposed Action* calls for landing all CHMC destined patients at the CHMC Campus. The *Preferred Alternative* is characterized by the most critical patients landing at a paved, secured helistop on CHMC's campus. All other critical pediatric patients transported by helicopter to CHMC would land either at Harborview or Intramural Field. The *Preferred Alternative* represents a continuation of the actual 1987-1990 CHMC landing experience.

A population/use-rate based projection method was applied to the two scenarios, the *Proposed Action* scenario and the *Preferred Alternative* scenario, to develop estimates of likely utilization. Only one methodology element differentiates the two scenarios. In the scenario assuming the *Preferred Alternative* one additional step was required to define the number of patients actually landing at CHMC. This step

---

7 Since OFM data are county wide and do not sub-divide the information into sub-areas, the following method was utilized to develop the population projections for the sub-areas of King County. A Puget Sound Health Systems Agency report entitled "Projections of the Population by Age, Northwest Washington Health Service Area, By Planning Area: 1990" identified the percentage of individuals age 0-14 within each sub-area of King County. These percentages were assumed to remain constant and applied to the King County population estimates published by the Office of Financial Management. The percentage of population 0-14 within each King County planning area was held constant as follows:

Central	11.0%
East	33.9%
North	13.4%
South	41.7%

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1991: 201

1992: 204

1993: 207

1994: 210

1995: 212

Preferred Alternative

One additional step is required to define the number of pediatric patients directly landing at CHMC under the Preferred Alternative. This step involves the caiculation of the percentage of pediatric flights actually landing at CHMC during the 1987-1990 period. A review of the actual data identifies the following:

CHMC landings	24.5%
Intramural landings	70.2%
Harborview landings	4.7%
Boeing Field landings	.5%
Other (Weather related)	.1%
Total	100.0%

For projection purposes,the 1987-1990 pediatric landing experience, by site was assumed to remain constant.

The formula for projecting the number of pediatric landings at CHMC, assuming the preferred alternative in the years 1991 through 1995 is as follows:

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Total Airlift Northwest rotary wing patients destined for CHMC

x

CHMC Average 1987-1990 landing percentage

+

out-of-area factor

=

Total rotary wing landings at CHMC

Incorporating the above assumptions and formula, projections of pediatric rotary wing landings at CHMC are as follows:

1991	49 landings
1992	50 landings
1993	51 landings
1994	51 landings
1995	52 landings

Specific detail on the projected CHMC landings in the years 1991 through 1995, under both scenarios is included as Appendix 2.

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FINDINGS AND CONCLUSIONS

The calculation of projected pediatric Airlift Northwest landings at CHMC in the years 1991 through 1995 is premised on several assumptions. The major assumptions assume four constants: a constant use rate, a constant percentage of missed flights. a constant percentage of Airlift Northwest pediatric flights landing at CHMC and a constant percentage of flights from out-of- area through the year 1995.

These projections make no assumptions regarding unknown variables which may increase or decrease demand for air ambulance services. For example, in March of 1990, CHMC initiated an Extracorporeal Membrane Oxygenation (ECMO) program. ECMO is a technology which serves as a lung-bypass for neonates; thereby allowing their lungs to recover from damage incurred from sepsis, meconium or other similar problems. It should be noted that ECMO is not a primary treatment, but rather a treatment of last recourse. In 1989 and early 1990, prior to the technology being available at CHMC, approximately 14 Airlift landings occurred at CHMC to pick-up CHMC patients in need of the technology and to transport them to Emanuel Hospital in Portland, the closest ECMO technology site. For the period of April 1990 - February 1991 no out-flights have been recorded. In addition, no in-flights specifically for ECMO have been recorded. This is due to the fact that ECMO is an end treatment, and that neonates in need of tertiary treatment have been transferred earlier in the course of their illness to CHMC. Most of this transport is via ground ambulance.

Accordingly, in this case it appears that ECMO is a technology which will ultimately result in decreased demand (in terms of out flights) for air ambulance services. However, and in an attempt to be conservative, no decrease in demand was actually forecasted. Other examples of variables which may increase or decrease demand include, the reconfiguration of health care services, changes in technology, or changes in the health status of the population could have the impact of either increasing or decreasing utilization over time.

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After conducting a literature search and reviewing all applicable studies, no generally accepted standards were identified that would allow for the incorporation, with confidence, of such variables into the calculation of use rates and subsequent landings. Therefore, it was concluded that the combined 1987-1990 actual experience is the best indicator of future utilization and that any attempt to quantify the above unknown variables would reduce the reliability and validity of the projections.

cohanalysis

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APPENDIX

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APPENDIX 2

Bibliography

Airlift Northwest, flight data: 1985-1990.

"Forecasts of the State and County Population by Year for Selected Age Groups: 1980-2000", Office of Financial Management, September 1986.

"1989 Population Trends for Washington State", Office of Financial Management, August 1989.

"Predicting the Utilization of Helicopter Emergency Medical Services: An Approach Based on Need", Annals of Emergency Medicine, 13,10, October, 1984.

"Projections of the Population by Age, Northwest Washington Health Service Area, By Planning Area: 1990", Puget Sound Health Systems Agency, June 1988.

St Lukes Hospital (Bellingham), Certificate of Need for Air Ambulance Service, July 1986

Washington State Health Plan, State Health Coordinating Council, volumes 1 and 2, 1987.

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JTD

July 8, 1991

RECEIVED
JUL 10 1991
DEPT OF CONS
LAND USE

Mr. Dennis McLerran, Director
Dept. of Construction & Land Use
400 Municipal Building
Seattle, WA 98104

Dear Sir:

On a recent Saturday on television, Chanel 7, I listened to a report on the frequency of helicopter accidents compared with airplane accidents and was shocked at the frequency with which helicopter accidents occur.

I live near Childrens Hospital and shudder every time I see one of the helicopters circling over a congested populous area trying to squeeze into a too small landing area. How much safer for all if the helicopter would land in the large University playfield area available to them with an aid car standing by to rush the patient to the hospital.

I also understand a group of doctors have invested in the hospital landing site. Is this not a "conflict of interests"?

Please consider these factors and decide against a helipad at Childrens Hospital, since there is an available alternativewhich makes better sense.

Sincerely,

Lillian J. Mills

4545 Sand Point Way NE #507
Seattle, WA 98105

524 0209

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RECEIVED
JUL 11 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

July 8, 1991

Director
Department of Construction and Land Use
408 Municipal Building
Seattle, WA 98104

Re: Project No. 9100626 Children's Hospital and Medical Center

To the Director, DCLU:

Last week I received notice from your department of public meeting to be held in August re the above project and inviting my comments.

I am an owner/resident of the Laurelon condominium next door to Children's Hospital. Whenever the helicopters bringing in emergency cases come in for a landing at the hospital's temporary helipad, not only are they noisy but the vibration is definitely felt.

I sometimes hear news on television that a child who has been critically injured is brought in by helicopter to Harborview or University hospitals. Why, now, must Children's Hospital join these two hospitals in having helicopter ambulance service? I've heard estimates that only six or seven emergency cases in a month would be brought in by helicopter. Could not Harborview and University hospitals handle these cases as well? I'm not familiar with the helipad at Harborview but the helipad at University Hospital, once it is finished, will provide landing for helicopters that come in over the University playfields. In the case of Children's Hospital, the helicopters must come in over a thickly populated neighborhood.

Thank you for inviting my comment.

Sincerely,

Marjorie Kresge

Marjorie Kresge
4014 NE 46th Street
Seattle, WA 98105

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LAURELHURST LETTER

Published by the Laurelhurst Comunity Club ... serving 2200 households

MAY 1991



HELICOPTER UPDATE

On April 25, the Final Environmental Impact Statement (FEIS) was issued on the proposed helistop at Children's Hospital & Medical Center (CHMC). A decision is usually rendered within seven days, followed by a 15-day period for response. An appeal and public hearing can follow.

On May 3, however, the Director of the Dept. of Construction & Land Use (DCLU) announced that an alternative plan needed to be studied further and that a decision would not be given for at least another 60 days.

The alternative plan being studied is: *two* helistops, to be used jointly by the UW Hospital and CHMC - one at the UW Intramural Field, the other at CHMC. This would mean two helistops within half a mile of each other.

The approach and site of the helistop at the Intramural Field is in an open area. Helicopters have landed here for years with ambulance transfer to CHMC with no loss of lives.

The approach and site at CHMC is in an extremely limited space with approach over dense residential neighborhood (single family homes, condominiums, an elementary school). Planned building expansion at CHMC would further limit helicopter maneuverability.

In Vol. I (of III) of the FEIS, it is estimated an average of 15 to 21 patients could be transported each month to CHMC. This would be 30 to 42 overflights (in and out flights per patient). Also, "...addition of competing helicopter service ... the number of patients ... could exceed the 15 to 21 per month average."

Further stated in the FEIS is that CHMC cannot refuse any helicopter landings, even the Army MAST planes, such as occurred March 24, 1991 -- the "worst yet scenario." This landing was especially hazardous due to the extremely low flying altitude, size and age of the plane. It circled over residences and the hospital three times. The pilot had never flown to CHMC, did not know where to land, could not find a landing site, and was finally directed by hand signals from CHMC security personnel on the ground. There was no radio communication between plane and hospital.

Safety is the prime issue. Each landing and take-off poses endangerment to hundreds of lives of innocent citizens who live within the residential neighborhood surrounding CHMC. Since helicopter accidents occur most frequently during landing and take-off, the potential for a tragedy is real. Noise pollution and vibration affect the quality of life for these residents, too.

To voice your concerns about these safety factors and location of a helistop at CHMC, and to save our neighborhood from institutional encroachment, call or write:

Mr. Dennis McLerran, Director
Dept. of Construction & Land Use
400 Municipal Bldg; Seattle, WA 98104; phone: 684-8875.

Seattle City Council members
600 Fourth Ave., Eleventh Floor; Seattle, WA 98104;
phone: 684-888

–Maryann Spangler

•

VOLUNTEER EDITOR SEARCH

The board of trustees of the Laurelhurst Community Club is seeking an individual who will serve as the newsletter editor for a period of an agreed term, renewable.

The volunteer position is a vital part of the Community Club's effectiveness. The newsletter is the primary source of neighborhood information and announcements. Through the newsletter, we receive information about the community, the environment, and our own future.

The editor will attend the monthly Laurelhurst Community Club board meeting where newsletter subject matter is discussed. He/she may be a board member. The position requires: collecting the assigned articles, copy editing, coordinating with the newsletter's graphic artist, coordinating with the printer for delivery and distribution, and determining newsworthy subjects for following issues.

Requisite skills include writing, editing and organizing, and could include word processing, computer layout and previous newsletter involvement.

The Editor position is an excellent opportunity for someone to continue his/her interest and skill in writing and editing while serving as an important active member of this community.

Continued on page 2

MEETING DATES

Laurelhurst Community Club Board of Trustees
regular meeting, St. Stephens church, Monday,
June 10, 7:30 p.m.

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6-21-91

Stop Helistops in Residential Neighborhoods

Dear Editor & Readers:

A recent article appeared in the Seattle Times regarding proposed helistops. Additional, pertinent facts need to be published. I respond to the proposed helistop at Children's Hospital & Medical Center (CHMC).

CHMC is located in a residential neighborhood where I have lived since 1953. This is a family-oriented neighborhood. We love children. Recently we added new equipment and redesigned the play area for the children at the Laurelhurst Playfield. This playfield is located a block and a half from CHMC. The Laurelhurst Elementary School is one block from CHMC where classes and activities are held almost year round.

Single-family homes are adjacent to CHMC on the North, East, and South; a condominium complex of 135 units is contiguous to CHMC property on the West. Within two blocks are two other condominium complexes.

Over many, many years helicopters with CHMC patients landed at the UW Intramural Field with ambulance transport to CHMC. Records show no loss of life occurred with this method of transport. The Intramural Field is 2½ minutes from CHMC with open approach and landing area.

In 1985 helicopters began to land at CHMC in a small area called "The Kitchen Garden." The approach and landing space are extremely limited. The approach is over dense residential neighborhood. Planned building expansion at CHMC will further limit helicopter maneuverability.

After issuance of the final EIS on April 25, 1991, an alternative plan is being studied by the Dept. of Construction & Land USE (DCLU). This plan calls for two helistops to be used jointly by the UW Hospital and CHMC -- one at the Intramural Field with open approach and landing space, the other at CHMC with extremely limited approach and space. This would mean two helistops within half a mile of each other.

Harborview Hospital has a helistop. It also has an excellent department of pediatrics and trauma center. UW Hospital is well known as a leading preemie center in the area. According to a monthly newspaper from CHMC, entitled Focus, which is mailed to the entire neighborhood, increasingly specialization and research seem to be of prime focus at CHMC. In the quarterly brochure of helicopter transport mailed to the neighbors by CHMC, notable is the high number of inter-hospital transfers to CHMC versus accident origin emergencies.

The number of flights per month varies from 12 to 4. Each landing, of course, is 2 overflights (in and out). Each endangers the lives of hundreds of innocent citizens. Statistics tell that the majority of helicopter crashes occurs during take off and landing. Potential for crash and/or conflagration at CHMC is a hideous possibility to the neighbors, school, and CHMC. I implore the City of Seattle to stop such a tragedy from occurring before it happens.

In the final EIS, it is estimated an average of 15 to 21 patients could be transported each month to CHMC. This would be 30 to 42 overflights. Also, "...addition of competing helicopter service...the number of patients... could exceed the 15 to 21 per month average."

Further stated in the EIS is that CHMC cannot refuse any helicopter landings, even the Army MAST planes, such as occurred March 24, 1991--the "worst yet scenario." This landing was especially hazardous due to the extremely low

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flying altitude, size and age of the plane. It circled over residences and CHMC three times. The pilot had never flown to CHMC, did not know where to land, could not find a marked landing site, was finally directed by hand signals from CHMC security personnel on the ground. There was no radio communication between plane and hospital.

A helistop at CHMC is totally inadvisable. Safety is the prime issue. Noise pollution and vibration affect the quality of life for the nearby residents, too -- all of which occur any time of the day or night. A helistop on the campus of CHMC is an ill-conceived idea and poses a distinct danger to the residential neighborhood in which CHMC is located.

Sincerely,

Maryann E. Spangler

Maryann E. Spangler
Seattle, WA
(524-4151)*

cc:

(You can contact me at my address: 4013 N.E. 46th St., Seattle 98105. Under no circumstance do I give permission for my address/to appear in print. Thank you.) MES or phone

* I hope you will phone me to verify my written word prior to vacation departure on 6-30-91. Thank you. MES

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JRRH - EVI
To: John D.

RECEIVED
JUL 16 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

CUCAC

City of Seattle/University of Washington/Community Advisory Committee

July 9, 1991

Tallman Trask, Executive Vice President
University of Washington
Mail Stop AH - 30
Seattle, WA 98195

RE: REQUEST FOR ENVIRONMENTAL IMPACT STATEMENT
ON USE OF HELISTOP FOR CHILDREN'S HOSPITAL
ON U.W. INTRAMURAL RECREATION FIELD

Dear Mr. Trask:

The City - University - Community - Advisory Committee (CUCAC) is concerned that the University of Washington, as the responsible agency for SEPA compliance on its campus, has failed to provide an EIS for the potential permanent development of the Intramural Field Helistop and the U.W. agreement with Children's Hospital for expanded use as the primary landing site for helicopters delivering patients to Children's Hospital.

Children's Hospital and Medical Center is a private institution using state owned University of Washington property for helicopter landings. What are the total costs of the development of the helistop and the personnel to secure it for landings and takeoffs on a 24 hour basis? What is the source of funding?

CUCAC has long opposed non-University uses on the University campus because of the land-use pressures for state higher education needs.

The students will lose a recreation site for which there is no replacement. Recreation equipment installed nearby may be classified as a hazard to helicopter activities.

The Children's Hospital EIS contained little concerning impacts on the U.W. campus or affected U.W. neighboring communities in the flight path. The EIS was not circulated to students (ASUW and GPSS). Student awareness of recreational losses and issues involved is likely negligible.

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Some of the CUCAC concerns are:

(1) What will be the increase of helicopter landings and takeoffs?

(2) Will the helistop be developed with fencing, lighting, and paving?

(3) Although University Hospital is not considering a roof-top helistop at this time, is one to be planned in the future, making two helistops on the U.W. campus?

(4) Is it possible to implement a flight pattern that will diminish the adverse impacts of night and day helicopter flights over residential neighborhoods adjacent to the University?

Will the University provide an EIS process with scoping to determine the extent of concerns, to inform the University students and public about intended action and enviromental impacts related to helicopter landings on campus?

CUCAC would appreciate information on the status of the U.W. helistop, the agreement with Children's Hospital and the City process. Please cite any SEPA regulations which would exempt the U.W. from preparation of its own EIS as lead agency for actions on the U.W. campus.

Sincerely yours,

Ruth Moore

Ruth Moore, CUCAC Co-Chair
4303 4th Avenue N.E.
Seattle, WA 98105

cc: Dennis McLerran, Director
Dept. of Construction and Land Use

Dept. of Ecology
Environmental Review Section

Seattle City Council

Ann Skutt, Facilities Management
University of Washington

Jan Kumasaka
Dept. of Community Developement

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JTD

Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Norman B. Rice, Mayor

April 17, 1991

Re: Children's Hospital Helistop
(MUP #8405870)

Maryann E. Spangler
4013 Northeast 46th Street
Seattle, Washington 98105

Dear Mrs. Spangler:

In response to your March 25, 1991 letter regarding the landing of a large military helicopter on the Children's Hospital campus, members of my staff and I have talked to several residents of the Laurelhurst community about this landing. I assure you we share your concern about the landings of these large helicopters at the Children's site. It is our understanding that the hospital had arranged for an ambulance to meet the helicopter at the University of Washington Intramural Field. Unfortunately, because of difficulties communicating between the helicopter and the hospital, the hospital was not aware of changes in the medical condition of the patient which the flight crew felt dictated changes in the landing location. The Hospital has expressed to us several times their dislike for landings of the military helicopters on the Children's campus. If you have additional questions about this landing and the particular circumstances, I encourage you to call Suzanne Petersen, the Director of Government Relations at Children's Hospital, at 526-2530.

We are working with the Hospital to ensure future campus landings are limited to the smaller civilian aircraft until a final decision is made on the pending permit. Our recommendation on the permit will also address the landings by larger military helicopters. We plan to publish the Final Environmental Impact Statement (EIS) for this project this month. We will be publishing our recommendation shortly after that time.

Thank you for your interest and the chronology of events associated with this landing which you provided with your

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letter. If you have any questions or need additional information, please continue to work with Senior Land Use Specialist John Doan. He is available by phone at 684-8875.

Sincerely,

DENNIS J. McLERRAN
Director

DJM:jdh

cc: Suzanne Petersen, CHMC

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March 25, 1991

RECEIVED
MAR 29 1991
DEPT. OF CONST. & LAND USE

Mr. Dennis McLerran
Department of Construction
and Land Use
400 Municipal Building
Seattle, WA. 98104

Re: Helicopter overflights and landings at Children's Hospital and Medical Center (CHMC)

Dear Mr. McLerran:

On March 24, 1991 neighbors experienced the "worst yet" helicopter overflight at Children's Hospital and Medical Center. Overflights have been numerous, dangerous, continuous over the past four years.

This one was especially hazardous due to extremely low flying altitude, size and age of plane, repeated circling over residences. It was extremely upsetting and posed a potential endangerment to hundreds of lives in Laurelon Terrace Condominiums--contiguous to CHMC property on the west--other nearby homes, and even to the patients and staff at CHMC.

The attached sheet documents data related to this situation. All data can be substantiated.

These overflights must be stopped in this high-density, residential neighborhood. They must be stopped before a tragedy occurs (crash and/or conflagration). Statistics show that most medical helicopter accidents occur during landing or take off.

Please take appropriate action via power vested in you to ban all helicopter landings at CHMC. Thank you.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

Enc: Documentation of overflight
cc: John Doan
City Council members
Representative John Miller
Representative Ken Jacobsen
Mr. Jerry Marcott
Mr. William Baldwin, FAA
Laurelhurst Community Club Board
Laurelon Terrace Homeowners' Association
Laurel Crest Condominium Board

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Helicopter Overflight and Landing at Children's Hospital & Medical Center
March 24, 1991

1. At 4:08 p.m. a helicopter was heard approaching the area.
2. The helicopter soon appeared over residential area surrounding CHMC.
3. It was a large Army MAST helicopter with a red cross on each side and underneath. It was approximately 20 years old. Aboard were 6 people, including the head maintenance man from Madigan General Hospital from which the four-year-old patient was being transferred.
4. The pilot had never been to CHMC. He looked for but could not find a marked landing site. There is none.
5. The helicopter circled over the hospital and nearby residences 3 times. It flew very, very low just a few feet above roof tops of Laurelon Terrace Condominiums--136 units located contiguous to CHMC property to its west side, home of approximately 200 people.
6. Noise was loud, and vibration strong.
7. Hazardous, unsafe conditions existed endangering hundreds of innocent lives. True of each overflight throughout the years, this was the worst due to: extremely low altitude of flight, size and age of carrier, and repeated circling over residential area and the hospital.
8. Finally security men from the hospital directed the pilot by hand signals to the minuscule landing space. There was no communication from plane to hospital. Who ordered the plane to land is unclear. On site no one took responsibility for the order.
9. The potential for crash and/or conflagration was very real.
10. Many neighbors went outside to view and commiserate. They were deeply alarmed and angry. Was it going to land in the parking area behind our condo units? Was it going to crash? Was it out of control?
11. Mr. Jerry Marcott, resident manager of Laurelon Terrace, went to the landing site. He talked with the pilot, others aboard, and security personnel from CHMC.
12. Mrs. Maryann E. Spangler and other concerned neighbors called the FAA hotline, left a message on the recording machine. Also called was CHMC. The CHMC person said: The landing was out of their hands; they had no communication and no control over its landing; the large army planes usually land at Graves Field, then bring patient by ambulance to hospital; conceded that several other army helicopters had landed at CHMC over years.
13. The helicopter left at 5:32 p.m. diagonally across Laurelon Terrace.
14. (One neighbor reported he saw the helicopter fly upwards from Graves Field then come on out to CHMC. I have only this one person's word on this. I asked (later, see item below) for verification from CHMC but have not received return call.
15. On March 25th, FAA returned my call. I talked with Candy Carrara. She promised to relay my detailed data to her supervisor, Jack Highfill and will call me back. She also said she would talk with Madigan Hospital and with the pilot.
16. Others from the immediate neighborhood promised to call the above at FAA. Several neighbors called to inquire whom to contact, how to register their objections.
17. On March 25th I called John Doan, leaving a message for him to call me.
18. I called Suzanne Petersen, CHMC who returned my call after a meeting. She said: CHMC apologized for the landing. The pilot had made the decision. CHMC was called by phone from Madigan. There was no radio aboard the plane. MAST planes were supposed to land at Graves Field though have landed at CHMC previously, too. She said she did not know all the details yet (her call was at 3:45 p.m.--almost twenty-four hours after the landing). She promised to check re the plane's reported landing at Graves Field first. To date she has not called back.
19. Records in the DCLU Office as well as City Council provide proof of neighborhood concerns over the past four years. No action has been taken on the final EIS for almost two years.

continued

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21. Further, the above groups have stated: Since no deaths have occurred as a result of landings at Graves Field, with transfer by ambulance to CHMC, this practice ought to be followed. Graves Field is located in an area with wide open space surrounding, is a two/three minute distance to the hospital. Transfer from ambulance to emergency requires one move for patient; transfer from helicopter requires two moves. In addition, University Hospital,with its excellent facilities, is close to Graves Field, perhaps just a one-minute drive.
22. On March 25, 1991, Mr. Jerry Marcott called and talked with Mr. Jack Highfill. Details of the MAST overflight and landing were given.

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March 25, 1991

RECEIVED
MAR 2 8 1991
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. Dennis McLerran
Department of Construction
and Land Use
400 Municipal Building
Seattle, WA. 98104

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Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

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"B"

The Meadowbrook
Nursing and Convalescent Center
3540 N.E. 110th Street
Seattle, Washington 98125
(206) 363-7733

March 23, 1991

Dear Neighbor:

The Meadowbrook Nursing and Convalescent Center has been approved to add beds to its facility. The Meadowbrook is a skilled nursing care center with round-the-clock nursing care. It is located at 3540 N.E. 110th (site map attached.)

The present capacity of the Meadowbrook is 47 beds. It has been in continuous operation for over 25 years. In 1971 it was given approval to expand to its present 47 bed capacity. It has almost always been filled and has a waiting list of people to be served. Recently the state Department of Social and Health Services, the licensing agent for nursing care facilities, found that the need for skilled nursing care at the Meadowbrook was so great, they approved an expansion from 47 to 81 beds. Since the facility has the adjoining land to complete the project, there is expected to be little or no negative impact to the community (see attached). On the contrary, the additional beds will provide the elderly in our community with the long-term care that has become scarce.

The owners, Mr. and Mrs. Louis (Virginia) Sternberg, are both licensed nursing home administrators and will be happy to answer any questions you might have. They can be reached by calling 363-7733.

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Children's
Hospital & Medical Center

July 18, 1988

Mr. Glenn C. Bachman
Shapiro and Associates, Inc.
The Smith Tower, Suite 1812
506 Second Avenue
Seattle, Washington 98104

RECEIVED
JUL 21 1988
SHAPIRO AND ASSOCIATES, INC.

Dear Mr. Bachman:

In response to your inquiry, a brief statement describing distinctions between Mary Bridge and Children's Hospital is provided:

There are many similarities between Mary Bridge and Children's Hospital. Both are are specialty pediactric centers and both have excellent staff. Children's Hospital and Medical Center in Seattle, however, is a larger and more comprehensive facility. There are more full-time children's specialists at CHMC than at Mary Bridge. There also are some groups of critical surgical illnesses that are treated at Children's but not at Mary Bridge because Children's has teams of pediatric surgical specialists, anesthesiologists, intensivists and other pediatric specialists who cover the services 24 hours per day. These illnesses include most complicated congenital heart disease and children born with complicated newborn surgical problems. These include omphalocele and gastroschisis (children born with intestines extruding from the abdominal cavity), diaphragmatic hernia (children born with intestines in the chest) and tracheo-esophageal fistula (children born with a hole between esophagus and trachea and obstruction of esophagus). These are unusual situations that require specialty care of physicians who have treated enough of these problems to maintain their skills. Although infrequent, these children come from hospitals all over the state. These illnesses are emergency, life-threatening conditions. Children's Hospital is the only hospital in the Puget Sound area that provides surgery for these conditions on a regular basis.

Please let me know if I can be of further assistance. Thank you for your very capable and expert work on the helistop environmental impact statement.

Sincerely,

John M. Neff, M.D.
Medical Director

JMN:dn

4800 Sand Point Way N.E. PO Box 05371 Seattle, Washington 98105 (206) 526-2000

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Seattle
Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

April 25, 1988

Re: Children's Hospital Helistop EIS
(MUP No. 8405870)

Glenn Bachman, Vice President
Shapiro & Associates
Smith Tower, Suite 1812
506 Second Avenue
Seattle, Washington 98104

Dear Mr. ~~Bachman~~ Glenn:

Thank you for your letter requesting a schedule for review of the Children's Hospital Helistop EIS. Unfortunately, we are not able to commit to a schedule at this time. The complexity and uniqueness of the issues is requiring extensive review on our part. As soon as this review phase is complete, we can develop a schedule for the remainder of the project.

We are also interested in being able to complete the EIS and move on to the next step in this process. I appreciate your concern.

Sincerely,

HOLLY MILLER
Director

BY
JOHN T. DOAN
Land Use Specialist

JTD:mr

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100% recycled paper

TO: LHCC/CMHC

FROM:
Law Offices
Peter J. Eglick
1411 Fourth Ave. Bldg.
Suite 1130
Seattle, WA 98101

(206) 464-1435

SUBJECT: Transcript of Russell for Heliport DATE: 5/2/88

MESSAGE:

Enclosed please find a courtesy copy of the transcript of Paul Russell in the heliport matter.

-- Debbie Dean
Legal Assistant

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LARSEN, SMITH & ASSOCIATES
COURT REPORTERS

1800 SEATTLE TOWER • SEATTLE, WASHINGTON 98101
ID NO. 91-1179083 (206)623-6717

FILE NO. 88-505

Peter J. Eglick, Esq.
1411 Fourth Ave. Ste 1130
Seattle WA 98101

paid # 2479 5/2/88

APPEARANCE DATE	CASE NO.	ATTORNEY	REPORTER	OUR FILE NO.	INVOICE DATE
4-4-88	MUP 87-060	Eglick	Cassity	88-505	4-15-88

DESCRIPTION	AMOUNT
RE. CHILDRENS HOSPOITAL AND MEDICAL CENTER and LAURELHURST COMM. CLUB	
One copy of the deposition of Paul Russell, 17 pages, at $1.35 per page:	22.95
TOTAL	$22.95

PLEASE RETURN REMITTANCE COPY WITH PAYMENT THANK YOU

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BEFORE THE HEARING EXAMINER

OF THE CITY OF SEATTLE

RECEIVED
APR 15 1988
PETER EGLICK
ATTORNEY AT LAW

In the Matter of the Appeals of)
CHILDRENS HOSPITAL and MEDICAL)
CENTER and LAURELHURST COMMUNITY) File No. MUP 87-060(W)
CLUB from a Decision of the)
Director of the Department of)
Construction and Land Use on a)
Master Use Permit Application.)
)

COPY

Testimony of

PAUL RUSSELL

Taken at 400 Yesler Building, Seattle, Washington

APPEARANCES:

For Childrens Hospital and Medical Center:	MITCHELL J. OLEJKO, ESQ. JOHN E. KEEGAN, ESQ. Davis, Wright & Jones 2600 Century Square Seattle, Washington 98101
For Laurelhurst Community Club:	PETER J. EGLICK, ESQ. 1411 Fourth Avenue, Suite 1130 Seattle, Washington 98101
For the City of Seattle:	MICHAEL PAUL MONROE, ESQ. Assistant City Attorney 10th Floor, Municipal Building Seattle, Washington 98104
Presiding:	MARGARET KLOCKARS, ESQ. Deputy Hearing Examiner City of Seattle 5th Floor, 400 Yesler Building Seattle, Washington 98104

DATE: April 4, 1988

REPORTED BY: Kathleen J. Cassity, RPR, CM

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Seattle, Washington; Monday, April 4, 1988

10:49 A.M.

PAUL RUSSELL, witness herein, having been duly sworn testiied as follows:

D I R E C T E X A M I N A T I O N

BY MR. EGLICK:

Q. Mr. Russell, could you state your full name and address for the record, please.

A. Paul F. Russell, R-u-s-s-e-l-l, 15400 - 203rd Avenue Southeast, Issaquah.

Q. And -- oh, I'm sorry. And what is your present occupation?

A. I'm a flight crew instructor for The Boeing Commercial Airplane Company.

Q. And what was your occupational experience prior to becoming a flight crew instructor for Boeing?

A. I'm a retired captain from the United States Coast Guard and I flew helicopters and fixed wing in various capacities for them for about 24 years.

Q. In the Coast Guard did you have any particular responsibilities or did you just fly helicopters, or did you do anything more with them?

A. I flew helicopters. I commanded two aviation units and was chief of pilot training for the Coast Guard

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for three years.

Q. And chief of pilot training would include training for helicopter pilots?

A. That's correct.

Q. Now, are you familiar with the site of -- you've been sitting in the room for some time now, have you?

A. At least for about half an hour.

Q. So you know we're talking about the Children's Hospital and the proposed medical office pavilion. Are you familiar with the site of the proposed medical office pavilion?

A. Yes, sir, I am.

Q. And with the site which Childrens has asked for for siting of the proposed helistop?

A. I am, sir.

Q. And how are you familiar with that?

A. I reviewed the draft environmental impact statement for the helistop and I have walked over the ground in that area.

Q. In light of -- well, can you tell us what you understand to be the juxtaposition between the two proposals, the helistop and the medical office pavilion?

A. As you face the current hospital, the medical office building will be to the left. As you would

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approach the proposed helistop, heading toward it, it would be slightly to the left hand.

Q. And what is your understanding, if you have any, of how far apart the two would be?

A. From the helistop to the nearest corner will be somewhere around 120 to 150 feet, of the proposed building.

Q. And are you familiar with the proposed height of the medical office pavilion or the general dimensions?

A. I understand it's a four-story building on a slope with the basement, so I'm generally familiar, yes.

Q. Do you have any opinion as to the safety from a traption point of view of the juxtaposition of the proposed medical office pavilion and the proposed helistop?

A. Yes, sir, I do. It's my opinion that construction of the building in that location and of that height degrades the safety of operations at the helistop, the proposed helistop.

Q. And can you explain why? What do you base your opinion on?

A. It is another visual distraction to the pilot on the proposed approach. There is the definite impact of changing wind problems in bad weather conditions, particularly with the wind from behind the hospital, and it reduces the clear areas that a pilot can wave off an unsuccessful approach safely.

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Q. If you were flying helicopters into CHMC and this building were built and the helistop were located where it's also presently proposed, would you consider it a safe situation?

A. No, sir, I would not.

MR. EGLICK: No other questions at this time.

THE EXAMINER: Mr. Olejko.

C R O S S- E X A M I N A T I O N

BY MR. OLEJKO:

Q. When did you walk the site?

A. About a year ago, sir.

Q. About a year ago?

A. Yes, sir.

Q. So you haven't walked the site in the past twelve months?

A. No, sir. It's been about a year.

Q. Did you measure the slope of the hill? There is a hill there, isn't it?

A. Yes, sir, the whole area is sloped.

Q. Did you measure that slope?

A. No, sir, I did not.

Q. Now, how are you familiar -- how did you determine where the medical office building was going to go a year ago?

A. It was in general then, but since then I have

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looked at the proposed -- the drawings of the site.

Q. But since you looked at the drawings, did you go back and look at the slope and where the building was?

A. No, sir, I did not.

Q. Do you know how tall the building is going to be, aside from the four stories?

A. A four-story building will generally be somewhere in the 60-foot category. It depends on how it's constructed and if they add any antennas and that sort of thing to the top.

Q. What about this building? How tall is this building?

A. I have not seen an elevation on this, sir, the exact elevation.

Q. You haven't, okay. How about antennas? Any antennas that you're aware of?

A. I have not seen anything that describes the antennas.

Q. Now, you said you had an understanding of the distance. How did you derive that understanding of the distance between the pavilion and the helistop?

A. From a drawing that was prepared by the group proposing the addition.

Q. Who specifically? Do you know?

A. It's this one over here. I don't know who

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prepared that.

Q. You didn't measure it, then?

A. No, sir.

Q. Oh, so, you're making the assumption that it's 120 feet?

A. I'm making the assumption based on the blueprint, yes, sir, prepared by Medical Environments, Inc.

Q. Are you suggesting that Medical Environments measured the distance?

A. I'm suggesting they might have.

Q. They might have, but you don't know?

A. No, I don't know for sure.

Q. Now, as a Coast Guard helicopter pilot, how big are those helicopters that you fly and train in?

A. It depends on which type, sir.

Q. Okay. Well, why don't you tell me the type that you are most familiar with the safety issues regarding.

A. Okay. I'm most probably familiar with the H52, which is a helicopter about the same size as the Augusta that Life Flight is operating. It's 8,000 gross pounds. I've also operated S61's, which are considerably larger, Bell 222's, Jet Rangers, and H47's.

Q. Do you teach for all those?

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A. No, sir. I only taught the H52 and the H3.

Q. And you'll have to excuse me. I know --

A. Commercial version was the S61 and the S62, which are -- one is a single turbine three-bladed helicopter. The other is a twin turbine, much larger. If you'll remember the Vietnam era, it's what the Air Force called a Jolly Green Giant.

Q. Oh, it's a rather large helicopter, then?

A. Yes, sir.

Q. You wouldn't want to put that down next to the hospital in any circumstances?

A. No, sir.

Q. And you operate, as far as I understand --

A. It's my understanding that the intent would be to operate what are normal medical evacuation helicopters, and you're talking Bell 222, Augusta versions, Air Force Special Dalphines, that size.

Q. You may have to spell some of those names for the court reporter before you leave.

What if just the building was there and there was no helistop? Would it be unsafe?

MR. EGLICK: Objection. The question is unclear. What would be unsafe?

Q. Would there be any impact on helicopter traffic if no helicopters were landing there?

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A. No, sir.

Q. Is there any site on that campus where this new building will not have an impact?

MR. EGLICK: Objection. Not have an impact on what?

MR. OLEJKO: On safety. Excuse me.

MR. EGLICK: Of --

MR. OLEJKO: Well, I thought we were addressing safety of flight operations here.

MR. EGLICK: Okay. I didn't think the question said that. I withdraw my objection.

A. I'm not familiar with the extent of the campus, so I don't know -- you know, I don't know exactly where it could be put.

Q. So you don't know?

A. No, sir.

Q. But it's possible?

A. Generally, yeah.

Q. Now, you were talking about visual distraction.

A. Yes, sir.

Q. Is there any greater visual distraction from this building than the current hospital building?

A. Yes, sir. It adds another area off to the left which would probably be relatively dark at night, and now you may have a varying pattern of lights.

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Q. In terms of -- are you familiar with medical evacuation operations?

A. Yes, sir.

Q. Do you know if the pilots change much? Do you know what the situation is here?

A. I don't know what you mean by change.

Q. Okay. Let me strike that and ask a slightly different question. Let's say you had a pilot who was quite familiar with both the approach and the landing field. Would you believe that familiarity increases safety?

A. Yes, sir.

Q. What if the weather conditions were perfect? I mean, there's no wind, beautiful, lovely day, and it's during the daytime. Do you see a safety issue at chat point?

A. Yes, sir, I still see a safety issue at that site.

Q. Could you explain that safety issue.

A. Any time you make a visual approach into -- or any approach into a generally restricted pad -- by that I mean you don't have a clear escape route at the same level all way around -- it's a relatively unsafe operation. Looking at the approach path in the EIS, most of the time they'll be coming almost directly toward the hospital

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building, which eliminates a route of escape in the event they have a difficulty or he misjudges the approach, which can occur even on a clear day.

Q. Have you ever operated helicopters in situations you would consider unsafe as a Coast Guard pilot?

A. Yes, sir.

Q. Did it happen all the time?

A. Not all the time, no.

Q. Did it happen regularly?

A. Yes, sir.

Q. Did you refuse to operate that helicopter?

A. I have on occasion, yes, sir.

Q. But did you refuse to operate it in specific conditions or did you continue to operate it?

A. I'm not sure I follow your question.

Q. Well, you've testified that you're familiar with situations which are unsafe in the operations of helicopters; is that correct?

A. Yes, sir.

Q. Then I take it you have had personal experience operating helicopters in unsafe conditions.

A. Yes, sir.

Q. And how often have you done that?

A. I don't think I could put a number on it.

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Q. It would be a substantial number of times?

A. I've done it a few times, yes, sir.

Q. Wouldn't, say, aerodynamically a helicopter no matter where operated has safety issues?

A. Yes, sir, but they can be mitigated. Any airplane in flight has safety issues.

MR. OLEJKO: Okay. I have no further questions.

THE EXAMINER: Mr. Monroe?

MR. MONROE: No questions.

THE EXAMINER: Mr. Eglick, redirect?

R E D I R E C T E X A M I N A T I O N

BY MR. EGLICK:

Q. Mr. Russell, is the height of the building, give or take, for example, ten feet, critical to your opinion?

A. No, sir.

Q. You said you were most familiar with the H52 helicopter.

A. That's correct.

Q. And in your view -- I want to make sure I understand what you said. In your view that's comparable to the helicopters used for medical evacuation?

A. In general size, yes, sir; slightly different body style, but general size.

Q. Okay. This question of operating under unsafe

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conditions, is this something that you from your experience would recommend be done on a regular basis?

A. No, sir.

Q. If it could be avoided?

A. There's a difference between operating in what you consider to be unsafe and then doing it repeatedly.

Q. And in asking about whether familiarity with an unsafe situation would significantly increase the safety of that unsafe situation -- pilot familiarity, that is -- what's your view on that?

A. Training is a key to almost any safe operation. It's virtually impossible, however, to train under every situation.

Q. So would familiarity with an unsafe situation change your opinion if you could say that pilots were familiar with the unsafety that they were to face?

A. I think that the thing that the training will do is allow them to identify an unsafe situation and give them the knowledge to say no, on which to base a "no" decision; "I won't go in there."

Q. Is that an acceptable alternative to simply removing the unsafety, insafety -- I don't know what the right word is -- the unsafe situation?

A. No, not if you can eliminate it by other means.

Q. And you've come down here to testify today and

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I assume that means you take this potential lack of safety seriously; is that correct?

A. Yes, sir.

Q. Do you think it's significant enough to warrant, for example, moving the building as one potential alternative?

A. That's a potential alternative, yes.

Q. And would the unsafe situation warrant considering that alternative?

A. It will reduce the risk factor. If you moved the building, it would reduce the risk factor at that site, but there's still a significant risk factor.

Q. Would change in the configuration of the building perhaps be another alternative that would reduce the risk factor? For instance, if you had a low-rise --

A. Yeah. If it was spread out over a long area and only one story high, yeah.

MR. EGLICK: Okay. No other questions. Thank you.

MR. OLEJKO: I have two very quick questions.

R E C R O S S E X A M I N A T I O N

BY MR. OLEJKO:

Q. First, the other alternative, of course, would be to relocate the helistop somewhere on the campus, isn't that true, rather than move the building?

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A. Yes, sir.

Q. And are there any FAA rules regarding the location of the helistop relative to a building?

A. There are some FAA guidelines on the construction of helistops and helistop ports.

Q. And you weren't referring to them in your testimony, were you?

A. No, sir, I was not.

Q. At least you're not -- this location does not violate the FAA rules and guidelines, correct?

A. I'd have to review the rules and guidelines again to make sure, so I can't answer the question.

Q. So you don't know?

A. Yes.

MR. OLEJKO: I am sorry. I have no -- thank you.

THE EXAMINER: Mr. Eglick, anything further?

MR. EGLICK: No.

(Witness excused at 11:05 a.m.)

THE EXAMINER: Mr. Doan.

MR. EGLICK: Before I forget, I want to move the admission of 6, the TMP Memorandum of Agreement.

MR. OLEJKO: I have a question. Did Mr. Doan identify the page that's between 4 and 5 on the copies? There seems to be kind of a free-floating page in there. Is that part of the TMP that you're aware of? Otherwise,

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I have no objection.

THE WITNESS: I'm not sure what that is. I'm assuming it is someone's calculations. I don't know.

MR. EGLICK: We can eliminate that. I don't know where that came from.

MR. OLEJKO: I just want to make sure the exhibit is correct.

MR. EGLICK: We got this from DCLU, and unless this is part of DCLU's --

THE WITNESS: I haven't the foggiest idea what this is.

MR. OLEJKO: Well, it's located between two numbered pages, if that's something else.

MR. EGLICK: It's fine, we can eliminate it.

THE EXAMINER: Any objection to 6?

MR. MONROE: No objection.

THE EXAMINER: 6 is admitted.

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CERTIFICATE

I, Kathleen J. Cassity, RPR, CM, do hereby certify that the foregoing proceedings were stenographically reported by me and that this transcript was prepared by me and is a true, complete, and accurate transcription of same to the best of my ability.

Notary Public in and for the
State of Washington, residing
at Seattle.

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AIRLIFT NORTHWEST

N. Cola
Atlas
report

325 9th Avenue
Seattle, Washington 98104
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(Inside Washington)
1-800-426-2430
(Outside Washington)
■ Children's Orthopedic Hospital and Medical Center 206-526-2131
■ Harborview Medical Center 206-223-8427
■ Providence Medical Center 206-326-5691
■ University Hospital 206-543-5300
■ Virginia Mason Hospital 206-624-1144

24 October 1985

Bud Nicola, MD
Director
Seattle/King County Health Dept.
7th Floor
400 Yesler Bldg.
Seattle, Wa. 98104

Sir:

I write in support of the application of Children's Orthopedic Hospital of Seattle, Wasnington for the construction of a Helistop on the campus of Children's Orthopedic Hospital.

Transportation of the critically ill or injured child is a challenge to all emergency personnel. In recent years advances in technology, treatment, and transport modalities have contributed to a decrease in pediatric mortality secondary to acute illness, poisonings and trauma. While over 100,000 children die each year in the United States, they are widely scattered throughout the country. Each community thus accumulates little experience in caring for the critically ill child. The necessity for adequate, efficient resuscitation and rapid transportation has been clearly demonstrated in patients with severe illnesses or injuries. A response to the need for prompt, efficient delivery of proper medical care has been the development of regional centers to care for specific problems including regionalization of pediatric critical care to children's hospitals. Early reports indicate that regionalization of some facets of critical care may result in lower rates of pediatric morbidity and mortality, particularly trauma. Many cities, Seattle included, have pediatric centers dedicated to the special needs of children. Development of these services is costly and clearly not available in every community, therefore it is imperative that these services are available to all children regardless of their location. The speed and efficiency with which the child is delivered to the regional center may make the difference in outcome.

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Children's Orthopedic Hospital is a regional center. It has a national reputation for excellence in pediatric critical care. It provides the physicians practicing in the region with quick access to its critical care units by means of a regional critical care air transport system called Airlift Northwest (ALNW). Airlift Northwest is a consortium activity of four Seattle area hospitals. Airlift Northwest provides medically configured, ventilator-equipped turboprop jet and rotary winged aircraft, with a medical team of ICU physician and ICU nurse to resuscitate and provide proper medical care en route to critically ill children.

The COH medical teams and ALNW transport very sick children. Children's Orthopedic Hospital accounts for one-third of the use of Airlift Northwest fixed wing activity. It accounts for 12% of the ALNW rotary winged acitivity. In the preceding fiscal year 83% (175 children) of those transported to COH were admitted to an ICU setting. 100% of the children transported by rotary winged aircraft were ICU admissions. 39% (88 children) transported by fixed wing were intubated. 71% of the rotary winged transports were intubated. 11% of the children had central venous lines. 4% had chest tubes; 8% had vasopressor and/or prostoglandin infusions. 3% (6 children) had on-going CPR!.

The children were very young as well as being very sick. 40% of the children were newborns. 50% of the children were less than 6 months of age; 75% were less than 5 years of age. One third (35%) of the children under 6 months of age brought by the helicopter required endotracheal intubation in addition to IV infusions and the administration of medications. These medical interventions are delicate and cannot be disrupted by unnecessary additional transfers. Thus the ALNW service provides an intensive care support to a large number of very small and very fragile patients.

To summarize, Children's Orthopedic Hospital is a regional pediatric center with nationally known critical care excellence. It receives critically ill patients referred by local physicians from the Pacific Northwest region, many of whom are transported by air. Speed of transfer for patients from around the Puget Sound region, a majority of whom need continuous advanced life support, has been accomplished by using a helicopter. The number transported from within the region by helicopter is estimated to be 42 per year or less than one per week.

The continuous delivery of critical care justifies the need to fly a relatively small number of critically ill children directly to the door of the regional pediatric critical care center. COH has, in the helicopter, extended its critical care capabilitites to the smaller communities of the region. It must be argued that any disruption of the components of the critical care transport system extend unwarranted risk to the child and detracts from the level of service provided by Airlift Northwest.

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I ask that you permit the placement of the Helistop on the COH campus thus allowing Children's Orthopedic Hospital to have quick access to the critically ill children of the region transported by Airlift Northwest.

Respectfully your,

Michael K Copass

Michael K. Copass MD
Professor of Medicine/Neurology
Medical Director, Harborview Emergency Room

Medical Director
Airlift Northwest
Harborview Medical Center
Seattle, Wa. 98104

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City of Seattle
Charles Royer, *Mayor*

King County
Randy Revelle, *Executive*

Seattle-King County Department of Public Health
R.M. Nicola, M.D., M.H.S.A., *Director*

RECEIVED
DEC 5 - 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

December 4, 1985

Beatrice Ryan, Interim Director
Department of Construction and Land Use
400 Municipal Bldg.
Seattle, WA 98104

Dear Ms. Ryan:

This letter is in response to your request of August 30, 1985 for an opinion about the medical need for the Children's Orthopedic Hospital (COH) to establish a helipad on hospital grounds.

In order to review the complete facts of this issue, I have spoken with numerous physicians, administrators, community residents, and former patients. I have reviewed the medical literature on emergency medical services delivered by helicopter, viewed a simulated transport/helicopter landing at Graves Field and near the COH proposed helipad site, examined helicopter and transport equipment, held a public hearing October 24, 1985 in the City Council chambers from 6:00 to 9:00 p.m., (written testimony attached), toured the COH facility, reviewed Airlift Northwest logs and individual patient charts.

Existing Pediatric Emergency Medical Services System in Seattle

Pediatric and neonatal emergencies within Seattle which are hospitalized are generally admitted at one of the 19 neonatal intensive care (NICU) beds or 17 pediatric intensive care beds (PICU) at Children's Orthopedic Hospital or one of the 19 neonatal intensive care unit beds at the University of Washington Medical School Hospital. The only other NICU beds in the region are the 12 beds at Mary Bridge Children's Hospital in Tacoma; the only other pediatric or neonatal intensive care beds in the State are located in Spokane. All pediatric surgery in the region is currently done at Children's. Pediatricians and neonatologists from within the State and from surrounding states (Alaska, Montana, Idaho) generally use COH and the UW as referral centers for the most seriously ill children or neonates requiring tertiary specialty care.

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Personal health care can, in general, be subdivided into three functional levels: a primary level, where the health care system is entered and basic services received and where all health services are mobilized and coordinated; a secondary level, represented by ambulatory services of a specialist nature and inpatient services provided in a community hospital-type facility; and the tertiary level, which includes the highly complex and sophisticated services available only at a "medical center" (Alberta Parker, "The Dimensions of Primary Care" in Primary Care: Where Medicine Fails, 1974, New York, John Wiley and Sons).

The University of Washington has a program which admits high-risk mothers so that low birth weight babies do not have to be transported between hospitals. This method of delivering high-risk mothers has been found to substantially reduce the morbidity and mortality associated with the delivery of low birth weight babies (Hickok, D. et al., "Decreased Mortality of Very Low Birthweight Infants After Maternal Transport," Department of Obstetrics and Gynecology, University of Washington School of Medicine, unpublished paper.)

But even with an excellent maternal transport program, there will still be individual patients who deliver small birthweight babies at small community hospitals throughout the State, where the infant needs to be stabilized and transported to a tertiary care hospital. Even though the UW is the hospital generally designated for the care of premature low-birthweight infants, its beds are frequently full and patients are referred to COH. The same pediatric medical staff, including interns and residents, deliver services at both COH and UW. In addition to small birthweight babies who have undeveloped lungs and intestines and require intensive support for survival and growth, there are transfers from hospitals around the State to COH for pediatric surgery or acute infection. Trauma patients generally go first to the region's trauma center, Harborview Medical Center, but may be transferred to COH for follow-up after surgery and stabilization.

This referral pattern exists regardless of transportation mode.

Helicopter Transport

There are existing guidelines and standards for patient care while being transported (Guidelines for Perinatal Care, "Interhospital Care of the Perinatal Patient," American Academic of Pediatrics and American College of Obstetricians and Gynecologists, 1985) but there are no standard published guidelines for which mode of transportation to use on a given patient or, for example, which criteria a patient should have to be transported by helicopter versus ambulance. The State Medical Society's EMS Committee is working on the delineation of medical necessity or medical reasonableness for medical transport and under Dr. Lothar Pinker's direction are hoping to have guidelines published in six months (see attached letter). There are some generalities that all the experts agree on.

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Over 150 miles it is most timely, stable and economic to use fixed-wing aircraft, so most interstate transports occur in fixed wing. Between 100 and 150 miles, rotary-wing aircraft or helicopters appear most appropriate, so regional out-of-County transfers appear to be the general rule. Less than 70 miles, depending on geography, ground transport is the generally agreed preference.

The key to any transportation of sick people is the stabilization of the patient, making sure that vital signs are stable and that the general physical condition is not deteriorating. One of the most important aspects in the case of the critically ill neonate is the transport of a specially trained medical team, the neonatologist/pediatrician and neonatal nurse to the community hospital to stabilize a deteriorating baby. Once stable, a baby can be transported much more safely; some pediatricians prefer ground transport to helicopter because it is possible to stop an ambulance by the side of the road and listen to a baby's heart and lungs, and check the stability of its condition. There appears to be a balance between amount of transport time required and possibility of deterioration.

There are several studies in the literature that assess the severity of illness and injury in pediatric air transport. In one study, Mayer and Wallie prospectively evaluated 636 patients transported over 79 months of service to a regional children's center. Of these patients, 57.5% were transported by helicopter. Eighty-one percent of patients were taken to surgery or admitted to the intensive care unit immediately on arrival at the regional children's hospital. Overall mortality was 9%; a trauma score was used to classify patients (Ann. Emerg. Med. 1984 Feb.; 13(2):108-11). At Johns Hopkins, Dr. Columbani et al reviewed 267 children over a one-year period; 46% of patients arriving directly from the injury scene were delivered by helicopter. Fourteen of seventeen deaths resulted from head injury; a more aggressive approach to the management of brain trauma was advocated (J. Pediatric Surg. 1985 Feb.; 20(1):8-13). Other areas reviewed include a Hawaiian MAST system (Hawaii Med. J. 1984 Jun.; 43(6):200,202,204); a Kansas perinatal system (Respir. Ther., Mar.-Apr. 1985, 15(2):47-50, ISSN 0048-7392.

Another study evaluating air transport in a rural EMS system looked at 569 patients with multisystemic injuries. The emergency helicopter service was rated, utilizing strict specific guidelines as either essential, helpful, or not a factor in the preservation of life. The helicopter was essential to 16.5% and helpful to 10.9% of patients. In spite of rapid evaluation and maximal intervention, 102 (17.9%) of the patients died. The group for which air transport was judged "not a factor" (54.7%) consisted of patients whose injuries would not have proven fatal had their transportation to the tertiary care center been delayed. Retrospective analysis of the data available to the tertiary care center at the time of the decision to transfer the patients by air revealed that it was not possible to differentiate those patients who did not benefit from the service from those for whom the service was judged essential or helpful (Am. Surg. 1984 Apr.; 3-1348:183-8).

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Baxt et al. looked at a group of 1,273 blunt trauma patients who were treated and transported from the site by seven different hospital-based rotorcraft aeromedical emergency care services and saw a 21% reduction in expected mortality ($p<.05$) in five of the seven services. There is some debate about methodologic errors in the study. An editorial in the same journal issue (Annals Em. Med. 1985 Sept.; 14:9; 859-61) states that

> The effectiveness of aeromedical evacuation of battlefield casualties is well established; the transfer of this technology to the civilian setting is a logical event. Its effectiveness for civilian trauma care should be based on the following three principles: 1) early field resuscitation; 2) rapid transport; and 3) delivery to the hospital best suited to admit and treat the patient definitely and without delay. As Baxt and colleagues point out, helicopter emergency medical service (HEMS) patients may benefit from a highly integrated team effort at the receiving trauma center that is the direct or indirect result of a program but for which the helicopter (unless distance is a factor) is the least important component. This is a strong argument for the concept of regional trauma care that concentrates multiply injured patients in trauma centers organized to best care for them. The potential role of HEMS in making regional trauma care a reality should be explored by EMS systems.

My conclusions from the literature review are that there are medical conditions (especially trauma) where time of transport is critical regardless of mode of transportation, that specific clinical criteria may be helpful in selecting helicopter versus ground ambulance transport but do not help in predicting patient outcome, and that the experience of other tertiary centers, while helpful in describing the seriousness of injury seen in the usual patient populations transported, do not clearly shed any statistical light on your question at issue, the current Graves field site versus the hospital site 3-5 minutes away.

Current Data

COH admits approximately 1,000 patients per month in 200 regular beds and 36 intensive care beds (previously described) In August of 1985 82 patient admissions were ambulance transports to the emergency room, 34 were prearranged newborn ground transports, 30 were prearranged fixed-wing transports, and 6 were prearranged rotary transports. On an annual basis, there are 400-450 ground neonatal transports through the neonatal team; 80-85% of these transports go to COH, the rest to UW. During fiscal 1985 (a one-year period ending June 31) 279 patients were transported by air: 148 into intensive care units (see Attachment 1). Thirty-nine percent of these patients were under one month of age; 16% were greater than five years of age (see Attachment 2). Seventy-one percent (197) had peripheral intravenous lines, 27% (76) were intubated, and 2% (6) were undergoing CPR (see Attachment 2).

wrong # = 136

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I also reviewed the detailed flight logs of Airlift Northwest for August, 1985. There were 52 fixed-wing flights with 859 average miles per flight; 18 (54%) flights were out of State; all flights were out of County; 30 flights were to (or from) COH. There were 34 rotary-wing flights from Airlift Northwest averaging 110 miles: no flights were out of state; all but one of the flights were out of County (a motor vehicle accident to Harborview from South King County); 6 flights to COH.

Recommendations

It is my professional opinion that there are hospital transfers to COH where 3 to 5 minutes are critical to a severely ill infant or youngster, but the actual number of such cases is small. The criteria for helicopter transport in these cases would include the previous comments on distance, stable clinical condition during transport, severe injury or illness requiring tertiary center treatment (rather than secondary or community hospital level), and a strong possibility of decompensation (severe clinical deterioration) during transport. The most important part of the transport, in most cases, will be in getting a specially trained team out to community hospitals around the State.

In most cases, one single site near Graves Field would be adequate for both the University of Washington and COH; however, there will be a small number of cases at each hospital where the ability to land at the hospital may be life-saving. From the transport physicians I have talked to, about 5-10% of all transported children might fall into that category.

The number of children transported by air into COH for any given month may be 30 to 40 and based on the above criteria and clinical estimates, 3 to 4 of these patients may have a medical need for helicopter transport to the doors of the hospital.

The literature review indicated that there are no definitive predictive clinical indicators of prognosis; that is, any number would have to include an additional number of patients whose condition at time of referral was appropriate for air transport but who over time were determined not to have need of helicopter transport as essential. There also needs to be some flexibility for seasonal variation in disease.

Taking into account these factors, I would estimate ten expected helicopter transports for critically ill pediatric patients per month as an upward bound for COH.

I would also recommend that the emergency transport of patients by helicopter be a planned part of a complete EMS transportation system, with specific criteria for use, rather than a hospital-by-hospital provided service. A consortium of hospitals providing helicopter services such as the one in Airlift Northwest is

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certainly a most sensible approach and will make it easier to establish a systematic approach to provision of these services. We are, however, just beginning to integrate helicopter transport into our EMS system. Once a technology is made available to the medical community, it quickly becomes a standard of care for medico-legal reasons.

Until there is a defined systematic integration of these services on a County-wide (or regional or State-wide) basis, I would recommend that the permit granted be a conditional use permit pending a defined relationship to our existing State EMS system and final development of criteria by the Washington State Medical Association's EMS Committee, and that helistop use be reviewed for appropriate medical need in six months. Appropriate use could be monitored by review of individual patient records by an outside panel which includes recognized EMS/pediatric experts as well, perhaps, as out-of-County reviewers. The Health Department would offer our consultation services for that purpose, and I believe it might also be useful to ask the Department of Social and Health Services, Division of Health's Emergency Medical Services Program, and the Washington State Medical Society's EMS Committee for consultation assistance. If a helistop were being used for purposes outside those expressly permitted, I believe it would be appropriate to revoke the permit at the end of the six months.

I hope that these observations and recommendations will assist you in your permit procedure deliberations; please let me know if any comments need further clarification. My thanks to your staff, to a wide variety of health professionals involved in delivery care, to the staff and administration at COH, to the community residents of Laurelhurst, and to a number of other interested individuals who helped me to reach a better understanding of the emergency medical services delivered to infants and children in our community and the many factors which affect those services.

Sincerely,

Bud Nicola MD

Bud Nicola, M.D.
Director

BN:nr
Attachments

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Helicopter plan lands hospital in controversy

Mayor Charles Royer says Children's should go through the state Certificate of Need process and justify the helipad, even though the state has decided not to require it.

At a public hearing in Seattle last week, the state House Committee on Social and Health Services was asked by several speakers to begin reviewing the use of medical helicopters.

The review is needed, the committee was told, because medical helicopter service is spreading quickly around the state without the traditional state review process to determine the need for costly new medical equipment.

The state's Certificate of Need program only reviews hospital equipment costing more than $1 million to buy or $500,000 annually to maintain.

Hospitals seeking medical helicopter service can avoid the review process since there are many ways to buy that service without spending a million dollars.

The helipad proposed for Children's, for example, will cost just $60,000 to build.

"They're deceiving . . . They refuse to justify this helicopter pad in an open way," Sharon East says of hospital administrators. A Windemere resident, she is a member of the Elisabeth Ripley Guild, which last year raised $10,000. All but two of the guild's 25 members signed a protest, she says.

"There is all sorts of information that COH is deliberately not sharing with the guilds . . . because they are afraid of losing support," says Liz Anderson, a member of Citizens Concerned About Helicopter Transport, which is fighting the helipad.

"We have made a good, honest effort to let the community know not only what we're doing but what we're *thinking* of doing," Katz says, "yet I realize some people don't see it that way."

The application for the helipad is based on the simple argument that saving time saves lives.

Children's for years has benefited from the Army's free MAST (Military Assistance in Safety and Traffic) helicopter service that lands at a nearby University of Washington playing field, only minutes away by ambulance. Hospital officials say they want to eliminate those minutes and reduce the amount of jiggling when a patient is transferred between vehicles.

Children's has joined a consortium of five hospitals hiring Airlift Northwest for air transport.

Cummings, the associate administrator, cannot cite a life that was lost due to extra time needed to bring someone from the playing field. But saving time would be one more way to increase chances that a patient might recover, she says.

She points to a recent case when a helicopter landed at the hospital without a permit (the third such incident in August). On board was a 28-week-old premature baby whose lungs collapsed during transport from Forks. Other problems also developed.

Mel Morse, the on-board physician who decided to land at the hospital, says landing at the UW playing field would have added more bumping and jostling. Morse, who is undergoing training to specialize in airlift care, says that would have meant adding a "critical risk" to the patient.

Both times when the helicopter landed on site, "We had no choice," says Dr. John Neff, hospital medical director.

Medical opinion on the helipad is by no means unanimous, however. Some physicians say hospital arguments are greatly overstated.

'We do very well with ground transportation'

Dr. Jay Kranz, volunteer chairman of MAST's coordinating committee, says it is not necessary for Children's to have on-site landings.

Almost all of Children's helicopter arrivals have been transfers from other hospitals where time is not usually a critical factor. MAST will continue to do pick-ups from field locations, where time is almost always important. Kranz says the trip from the UW field takes six to seven minutes.

For now, Children's can only guess how often the helicopter will be used. At last week's Social and Health Services committee hearing, Neff said the hospital probably will use the landing pad about six times a month. The hospital is not projecting from the MAST trips, which numbered 23 during 1983-84.

Kranz says there never has been a problem involved in landing at the playing field, transferring to an ambulance and driving to Children's.

"The seriously ill people are all attended by doctors and nurses and special transport teams. So the question is whether the risk involved in establishing a helicopter pad in a neighborhood is justified by medical need. The answer is 'no.'"

Durlin Hickok, a neonatologist at Swedish Hospital, isn't taking sides on the helipad issue but doesn't express much concern about jostling. The helicopter ride itself is jostling, he says.

"We do very well with ground transportation in Western Washington," he says. "Stabilizing the baby at the (originating) hospital is the critical thing. Afterwards, ground transportation is fine."

He says there may be a few instances where saving a few minutes may make a difference, but "those circumstances are few and far between."

Paul Herndon, a pediatrician at Children's and a Laurelhurst resident, says in most cases an on-site helicopter landing is not necessary. He says marketing is a major aspect in Children's argument for the helipad. He'd like to see a study done to justify the need.

'We have to think of our overall mission'

As a possible compromise, Herndon suggests that Children's build a permanent helipad at the UW field so most landings would go there. When the unusual situation develops where on-site landing is vital, the helicopter can land where it has three times already, on a raised grassy island in front of the emergency room.

But the hospital is sticking to the proposal on the table. A few nearby guilds may be raising a fuss, but the hospital isn't distracted from its goals.

"We can't change everything for everyone because of one part of the constituency," says Neff, the hospital's medical director. "We have to think of our overall mission. Our constituency is broader than the Laurelhurst community."

Sunday, September 15, 1985

Seattle Post-Intelligencer

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Helicopter plan lands hospital in controversy

By O. Casey Corr
P-I Reporter

For 40 years, the women of the Minna Parks Guild have been tireless, unwavering supporters of Children's Orthopedic Hospital and Medical Center.

Members did volunteer work, joined penny drives, staged fund-raising carnivals and, in that era when women wore hats, mounted annual hat shows.

By raising $100,000, the guild has done its part to establish Children's as "Seattle's favorite charity," in the words of a hospital spokesman.

With annual fund raising at $3 million, a budget of $59.4 million, a powerful, well-heeled board of trustees, a pool of 15,000 volunteers and a 78-year history, no other single charity in the state surpasses Children's image and prestige.

The Minna Parks Guild, so named for a prominent supporter of the hospital, has never complained about the institution it so loyally served. Until one recent day, that is, when members heard about Children's plans to build a helicopter landing pad near its emergency entrance.

That raised the prospect of daily flights of noisy helicopters flying near homes and an elementary school. For years, Children's used a free military helicopter that landed a few blocks away. Patients were transferred from there by ambulance.

The Minna Parks Guild, largely comprised of Laurelhurst residents, agreed their big neighbor was becoming insensitive to the nearby, single-family community. They sent a letter of protest to the City Council, which will pass judgment on the helipad.

The Minna Parks Guild will continue to raise money for Children's, but trouble is brewing among at least some important, longtime hospital supporters.

Relations between hospital administrators and many Laurelhurst residents are souring.

At least four Laurelhurst area guilds have expressed unhappiness with the proposed helipad or Children's overall expansion efforts. At one guild of Laurelhurst-Windemere women, irritation with the hospital was so great that members briefly discussed disbanding, two members say.

That talk dismayed guild member Peggy Habegger, who is immediate past president of the hospital's board of trustees. Tensions between the Laurelhurst Community Club and the hospital "make my heart ache," she says.

Hospital officials say dissension by a handful of guilds is minor when compared with the more than 500 guilds supporting the hospital. They refuse to release names of guild presidents so an independent survey can be done.

Nothing so far indicates hospital fund raising is jeopardized, but open disagreement can have a corrosive effect on a charity's image. The hospital has assigned a top-level administrator to brief guilds on the issue.

Roberta Solhaug, chairwoman of the 42-member Marion Blethen Mesdag Guild, says members of her group talked briefly about disbanding. The Mesdag guild last year donated $1,000.

Solhaug is also a member of other guilds that each year donate several thousand dollars.

"When people have mixed emotions, that absolutely can have an effect on fund raising. When people are feeling offended or hurt, you don't want to be a part of it," Solhaug says. She adds that she personally feels Children's "does a wonderful job."

Solhaug is particularly upset by discontent toward Children's because the hospital has been an essential element of social life in that part of Seattle. For decades, the hospital has brought people together for fund-raisers of all kinds, making for long-term friendships. Children, even grandchildren, of guild members have formed new guilds. That spirit is threatened by tensions over the hospital.

"There's a sadness that the feeling is not the same anymore," Solhaug says.

Habegger says the few guild members in opposition will be more understanding once they hear all the facts. "I don't like the mudslinging," she says. "I wish we could make peace."

The trouble isn't entirely tied to the helipad proposal. The latest dispute has revived long-held grievances against the hospital that date back to when Children's moved to Laurelhurst in 1953 and promised to remain small and unobstrusive, several longtime Laurelhurst residents and a former president of the board say.

Aside from whether such a statement was binding, much less realistic, Children's has become a massive presence in a neighborhood that feels threatened by a host of proposed developments and zoning changes in Laurelhurst and along Sand Point Way.

Children's alone has grown from 220,000 square feet to 429,000, hospital figures show, not counting a new 215,000-square-foot garage. The hospital recently announced plans to remodel a surgical wing for more than $900,000.

It has yet to make public plans to build a 40,000- to 60,000-square-foot physicians' office building. Residents complain the hospital is vague about the future and won't share its long-term planning.

"I'm careful not to say 'never' anymore because people say, 'You promised,' and things do change," says Karen Cummings, associate hospital administrator.

What's more, the helipad controversy is a typical outgrowth in debate over modern, competitive health care. Helicopters, as even some of Children's own physicians will say, can be valuable not only as life-savers but as marketing tools.

Guild dissidents stress they remain committed to the hospital's care for children but say hospital administrators have become unresponsive, even rude, to neighbors.

Treuman Katz, the hospital's chief executive officer, says he's been "inappropriately treated" by some residents, adding, "Perhaps my responses have been unkind."

Katz has met with a four-member delegation from the Laurelhurst Community Club. By all accounts, the two meetings were strained and unproductive.

Katz told John Kehoe, president of the club and not a member of the delegation, that he'd prefer meeting with a different, "open-minded" group. The hospital has failed to respond to club questions sent last spring about the helipad.

Kehoe says Laurelhurst-Children's relations have deteriorated and are "as bad as I can remember." He's trying to ease tensions.

City Council President Norm Rice spoke to a club meeting in August and, hearing a stream of complaints, promised that every council member would inspect the proposed landing site before a conditional use permit is issued. Later, he said Children's "has a certain blindness" to the neighborhood.

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NF 350

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APR 4 1990
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

Office of the President

March 29, 1990

RECEIVED
APR - 3 1990
Dept. of Construction & Land Use

Mr. Dennis McLerran
Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Dennis:

We appreciate the opportunity to review and comment on the preliminary draft of the Final Environmental Impact Statement (FEIS) for "Construction of a Helistop at Children's Hospital and Medical Center".

As we have stated several times over the past year, the University is ready and willing to assist the City and Children's in developing an acceptable solution to the helistop issue. We are prepared to allow CHMC flights to continue to land at the existing helistop as long as their use does not jeopardize our operations.

It is our understanding that a Conditional Uses permit is attached to land, rather than the applicant, and therefore conditions which the City may impose on CHMC's use of the helistop would be viewed as restrictions to the use of University property. This would not be acceptable to us.

There is no written agreement between the University and CHMC regarding use of the helistop. We have received a draft from CHMC and are reviewing it. Until such an agreement is signed, the "preferred alternative" listed is the FEIS is not possible.

We understand the City's desire to resolve this issue, and we will therefore expedite our efforts to finalize this agreement.

We really are trying to help.

Regards,

Tallman Trask III
Executive Vice President

1990
1989

306 *Administration Building, AH–05 / Telephone: (206) 543–6410*

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UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

TECHNICAL SERVICES FJ-05

April 18, 1990

Dennis McLerran
Director
Department of Construction and Land Use
400 Municipal Building
Seattle WA 98104

Dear Mr. McLerran:

Thank you for the opportunity to provide specific comments on the preliminary draft of the Final Environmental Impact Statement for construction of a helistop at Children's Hospital and Medical Center. This letter provides specific responses to statements made in the document. As you know, we are working with Nancy Fox and Children's Hospital and Medical Center on possible solutions to the larger issue of City approval of Children's use of University facilities. We are awaiting DCLU's recommendations before we take further action.

Comments - Volume I

Page 3, 3rd paragraph - The University does not intend to use the helistop on the roof of the University's Medical Center at this time. Since the Intramural Field helistop is an existing use, the University's position is that a Council Condition Use is not required. A use agreement between the University and Children's is being developed.

Page 6, 2nd to last line - University of Washington Hospital should be changed to University of Washington Medical Center.

Page 9, last paragraph - The reference to hospital should be changed to medical center, and cite 32 neonatal intensive care beds rather than 19.

Page 32, 2nd paragraph - Our understanding is that the Board of Health is now responsible for needs assessment and preparation of a biennial state health report. The Board of Health is separate from the Department of Health. The Department of Health does administer the Certificate of Need program. Since there is a paragraph covering the Certificate of Need program, perhaps this paragraph should be dropped.

Page 45, 5th paragraph - At this time, the University is not intending to use the rooftop helistop at the Medical Center.

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M E M O

CHMC register file

September 24, 1990

To: Mr. John Doan

From: Mrs. Maryann E. Spangler
4013 N.E. 46th St.
Seattle, WA. 98105

Maryann E. Spangler

Re: Helicopter landings at Children's Hospital and Medical Center -- on-going

1. Enclosed is a copy of most recent report received unsolicited from CHMC by neighbors; date of receipt 9-13-90 for some, later for some.

2. Note number of in flights for May as told to you via phone and letter in June, 1990.

3. Most recently on September 22, 1990 the neighbors were endangered (and insulted) with two landings within a few hours on same day. These must be halted. When will appropriate action be taken?

4. Once again in this "flight activity" report, CHMC neglected to list the out-flight times. Once again the air activity over our homes is only half represented as for each landing there are two flights overhead-- in and out flights. This is not honest reporting on the part of CHMC.

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Page 46, 1st paragraph - Reference is made to the Medical Center rooftop helistop. We recognize that this option was in the original DEIS; however, since it is no longer under discussion, it should be dropped from the FEIS.

Page 52 - Graphic refers to University Hospital. The name has been changed to University of Washington Medical Center.

Page 53 - The graphic does not show the current configuration of the University of Washington Medical Center. Also, the reference to the University Hospital should be changed, as previously noted.

Page 57, 1st paragraph - Reference is made to construction of a "second" helistop at the intersection of Clark and Walla Walla Roads. This statement is confusing. At this time, the University has no plans regarding the existing University of Washington helistop at this location. Minor safety improvements may be made to the University's existing helistop at that location sometime in the future.

Page 61, 3rd paragraph - The first sentence should read, "While not under consideration at this time,..."

Page 65, 4th paragraph - Reference to City Council approval of the University's Medical Center rooftop helistop should be omitted, since it is not under consideration by the University at this time.

Page 68, 1st sentence - Reference is made to "a" helistop at the Intramural Field rather than the existing helistop.

Page 69, 1st paragraph - References are made to construction of a new helistop at the Intramural fields and the rooftop helistop at the Medical Center. Both references should be revised, per our previous comments.

Page 115, 5th paragraph - Should be revised as follows:

> Construction noise impacts could occur if the University of Washington made improvements to the existing helistop. The Intramural Field alternative is not expected to result in noise impacts from helicopters, since it is an existing use and the primary approach and departure paths are used. There could, however...campus is used.

Page 118, 3rd paragraph - Should read:

> University - Neonatal, Obstetrical, and Adult Medical (including Cardiac) Emergencies

Page 120, 4th sentence - Should state that the University's Intramural field site is an existing helistop and, therefore, does not need any approvals.

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Page 121, Noise, 1st sentence - Should be revised:

> There would be noise generated during the two-month-long construction period if improvements were considered for the existing intramural field helistop.

Volume II

Response #3, Seattle-King County Department of Public Health - Transporting a patient via elevator from the roof of the Triangle garage to the underground tunnel is not a viable alternative because the elevator is too small to accommodate a gurney.

Response #149, Liz Anderson - This refers to a "proposed" helistop; the helistop is an existing use.

Response #201, Liz Anderson - Should be revised:

> Future improvements at the University of Washington's existing helistop at the Intramural Fields might include paving and fencing.

Response #206, Liz Anderson - Should be revised to note that the existing helistop is not currently paved.

Response #244, Liz Anderson - Should be revised to state that no accidents have occurred at the existing University of Washington helistop.

Response #14, Bruce Balick - Should note that the University does not plan to utilize the rooftop helistop location at this time.

Response #8, Dorothy McCormick - Should note University of Washington Medical Center.

Again, thank you for the opportunity to comment on these documents.

Sincerely,

Christine Knowles
Director

CK:mg

cc: Helen Shawcroft

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Chris Weiss CWAD/CR

Seattle City Council

RECEIVED
APR 3 1990
DEPT OF CONSTRUCTION & LAND USE
SAND POINT BRANCH

April 2, 1990

Harold and Mildred Kurtz
5043 Sand Point Place NE
Seattle, WA 98105

Dear Mr. and Mrs. Kurtz:

Thank you for your letter to Tom Weeks regarding the heliport at Children's Hospital.

Because the City Council functions like a judge rather than a legislative body on many land use issues, Tom cannot read letters, respond to phone calls or be lobbied on individual land use projects, including the heliport. If he does, he risks prejudicing himself before all relevant facts of the case are determined and losing the right to vote on the project if it comes before the Council.

Since you cannot appeal directly to Tom on this issue, I have forwarded your letter to the staff members at the Department of Construction and Land Use who will be dealing with the project. You can reach them at 684-8875. DCLU will add your name to the project mailing list, and you will be notified about all public hearings conducted on the project.

Your comments are extremely important as the Department of Construction and Land Use evaluates this project. I urge you to contact them directly, either in writing or by attending public hearings, and make your views known.

Tom cannot become involved in this process until and unless this project is appealed to the City Council. If that happens, he will be permitted to review only the information contained in the public record. He will not be permitted to consider new information or to meet with any interested persons except at a public hearing. That is why it is so important for you to work with DCLU from the beginning.

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I am sorry that Tom cannot be of more help to you on this issue. I appreciate your frustration and hope you understand the importance of his efforts to remain impartial. If you have any additional questions about the procedure by which this project will be reviewed, please feel free to call me at 684-8805. Again, thank you for taking the time to write.

Sincerely,

Mary Bourguignon

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5043 Sand Point Place N. E.
Seattle, Washington 98105
March 28, 1990

RECEIVED
APR 02 1990
TOM WEEKS
SEATTLE CITY COUNCIL MEMBER

Q1

Honorable Councilman Tom Weeks
600 4th Avenue
11th Floor
Seattle, Washington 98104

Dear Councilman Weeks,

On the 20th of March, this year, another illegal Helicopter landing was made on the grounds of the Childrens Medical Hospital in the Laurelhurst residential district with considerable news media coverage.

We have long contended that a residential area is in no way an appropriate area for a helicopter landing pad--regardless of the reasons.

We have listed below some very basic points along with alternate suggestions that would alleviate a dangerous operation to everyones satisfaction.

1. When Sand Point Naval Airstation was closed, a public vote rejected any further air activity in this area due to dangerous overflying of a residential area.

2. There is strong action to limit the overflying of Seattle by commercial aircraft.

3. The Medivac Helicopter System has the poorest safety record of any type of flying activity, which gives us reason to question the wisdom of allowing this practice to continue.

4. One block from the Childrens Medical Hospital helicopter landing site is the Laurelhurst Elementary School, which is disturbed as well as endangered by each landing.

5. There is a very adequate landing area at the University of Washington Intramural Field that allows all air approaches over water and unpopulated areas. This eliminates any risk to life or property and is only 3 minutes away from the Childrens Hospital.

6. The University of Washington emergency hospital uses essentially the same area for emergency patient transport activity and we do not understand why the same conditions should not apply to all helicopter landings for this purpose.

We are asking that you take all of these thoughts into consideration and require that all emergency medical helicopter landings be confined to an area of minimal risk to life and property.

Thank you.

Very truly yours,

Harold L. Hurtz
Mildred L. Hurtz

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Children's
Hospital & Medical Center

September 1990

To Our Neighbors,

We are sending you quarterly reports about patients transported by emergency medical helicopter to Children's Hospital and Medical Center in order to keep you informed about the number and types of the cases of children who require immediate transport directly to the emergency room entrance. We have been careful to protect patient confidentiality in our attempt to share with you as much information as possible about these life-threatening cases.

Emergency helicopter transport of patients to Children's Hospital occurs when time is a critical element of saving a child's life. This service is used by emergency medical teams responding to crises in the field and by community hospital physicians who need to send patients to Children's for emergency tertiary (highly specialized) care services. For example, during the summer months, near drownings are too often examples of some of the conditions that require immediate, advanced medical intervention at Children's. The hospital's medical and surgical teams are notified of the helicopter transport and are ready to provide immediate treatment upon the child's arrival.

If you have questions about this report or about emergency medical helicopter landings at Children's, please direct them to Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write to her at Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98105.

Sincerely,

Treuman Katz

Treuman Katz
President and Chief Executive Officer

*** Definition of Diagnosis/Treatment**

Bacterial meningitis: *Life-threatening infection of the membranes which surround the brain and spinal cord.*

ECMO: *Extracorporeal membrane oxygenation is a form of heart-lung bypass used as a treatment of last resort for newborn infants who are critically ill with reversible heart or lung disease. ECMO can take over most of an infant's heart and lung functions, giving the baby's injured organs time to rest and heal.*

In March, Children's Hospital began providing ECMO treatment for newborns in the Infant Intensive Care Unit.

Epiglottitis: *Swelling in the back of the throat due to bacterial infection that can rapidly block the airway. Treated by a pediatric anesthesiologist or otolaryngologist (ENT) who inserts a tube to bypass the swelling to allow the patient to breathe.*

Grand mal status epilepticus: *Rapid succession of major epileptic seizures attended by loss of consciousness.*

Pyelonephritis: *Infection of the kidneys which, if not treated promptly, can lead to growth arrest of the kidneys, deterioration of kidney function, and obstruction. In the most severe cases, acute pyelonephritis can spread, causing the child to develop a generalized, life-threatening infection of the blood.*

Sudden Infant Death Syndrome: *Also known by its acronym, SIDS is a collection of disorders whose common feature is the sudden death of an infant who appeared to be in good health and developing normally. SIDS deaths remain unexplained after a complete case study and postmortem examination is completed. The child is usually discovered during a sleeping period with no heart rate and no respirations. Emergency medical personnel will attempt to resuscitate a child who has a detectable heart rate or whose skin color is near normal.*

Printed on Recycled Paper

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center: A summary of flight activity is published quarterly by the Communications Department at Children's Hospital and Medical Center, Seattle, WA. If you have comments or questions, please call Suzanne Petersen, Director of Government Affairs, at (206) 526-2530.

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of flight activity, April through June 1990

Children's
Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center April through June 1990

Date	Time	Transported From	Age	Admitting Diagnosis	Receiving Unit	Outcome (as of 7/90)
April						
1	9:00 p.m.	Valley Medical Center, Renton	Infant	Bacterial meningitis with neuro-degenerative disorder *	Emergency Room	Hospitalized 38 days
8	11:00 a.m.	King County Medic 6, Covington	Preschool	Grand mal status epilepticus *	Emergency Room	Hospitalized 24 days
14	9:00 p.m.	Grays Harbor Hospital, Aberdeen	Toddler	Near drowning	Pediatric Intensive Care Unit	Hospitalized 5 days
17	3:10 a.m.	King County Medic 6, Kent	Newborn	Prematurity	Infant Intensive Care Unit	Hospitalized 45 days
22	7:15 p.m.	St. Joseph Hospital, Bellingham	Infant	Bacterial meningitis with severe neurological impairment *	Pediatric Intensive Care Unit	Hospitalized 17 days
May						
2	2:05 p.m.	Children's Hospital, Seattle to Emanuel Hospital, Portland	Newborn	Infant respiratory distress syndrome	ECMO Unit * Emanuel Hospital, Portland	Hospitalized 12 days in Portland
4	9:25 a.m.	King County Medic 19, Redmond	Infant	Sudden Infant Death Syndrome *	Emergency Room	Died
7	4:18 p.m.	King County Medic 4, Renton	Infant	Seizures, staph infection	Emergency Room	Hospitalized 2 days
7	9:05 p.m.	Vashon Island	Infant	Seizures	Pediatric Intensive Care Unit	Hospitalized 2 days
9	5:25 a.m.	Stevens Memorial Hospital, Edmonds	Infant	Bacterial meningitis *	Pediatric Intensive Care Unit	Died
11	4:30 p.m.	King County Medic 5, Kent	Toddler	Seizures	Emergency Room	Hospitalized 2 days
14	4:55 p.m.	Valley Medical Center, Renton	Infant	Bacterial meningitis *	Pediatric Intensive Care Unit	Died
16	5:00 p.m.	King County Medic 5, Renton	School-age	Pyelonephritis with seizure *	Emergency Room	Hospitalized 3 days
23	11:05 p.m.	King County Medic 6, Kent	Infant	Seizures	Emergency Room	Hospitalized 1 day
26	10:20 p.m.	Island Hospital, Anacortes	Newborn	Prematurity with infant respiratory distress syndrome	Infant Intensive Care Unit	Still in hospital
29	10:16 p.m.	Harrison Memorial Hospital, Bremerton	Teenager	Severe asthma attack	Pediatric Intensive Care Unit	Hospitalized 20 days
June						
13	12:39 p.m.	King County Medic 6, Auburn	Infant	Upper respiratory infection	Emergency Room	Hospitalized 6 days
14	7:02 p.m.	Providence Hospital, Everett	School-age	Near drowning	Pediatric Intensive Care Unit	Hospitalized 3 days
20	6:30 p.m.	King County Medic 13, Vashon Island	School-age	Rule out epiglottitis *	Emergency Room	Treated and released
25	5:25 a.m.	St. Joseph Hospital, Bellingham	Infant	Respiratory arrest	Infant Intensive Care Unit	Died
30	2:06 a.m.	Valley Medical Center, Renton	Infant	Seizures	Pediatric Intensive Care Unit	Hospitalized 2 days

** Definition of diagnosis/treatment on back panel.*

Crime hearsfor box

June 26, 1990

RECEIVED
JUN 27 1990
DEPT OF CONSTRUCTION & LAND USE
CODE ENF. DIVISION

Mr. John Doan
Dept. of Construction
& Land Use
400 Municipal Bldg.
Seattle, WA. 98104

Re: Helicopter landings at
Children's Hospital &
Medical Center (CHMC)

Dear Mr. Doan:

Since our telephone conversation of May 29, 1990, the helicopter landings at CHMC have continued. Neighbors in Laurelon Terrace Condominiums (135 units contiguous to CHMC property) and Laurelhurst and Windermere Circle (adjacent to CHMC) agonize over these unsafe landings. SAFETY is the issue here. As you know, most helicopter crashes occur during landings or take-offs.

Enclosed are pamphlets mailed by CHMC to its neighbors. Notable omissions occurred: 5 landings were omitted in the June-December '89 report; all departure flight times were omitted in each June-December and January-March '90 reports. Departure flights are a definite part of the flight activity in our high-density, residential area.

Also enclosed is copy of the Laurelhurst Newsletter, May, 1990, with article about these reports.

Please take appropriate action to stop these landings. Thank you.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th St.
Seattle, WA. 98105

cc: Dennis McLerran
Enc: 3 pamphlets - CHMC
1 Newsletter copy

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

LAURELHURST LETTER

Published by the Laurelhurst Community Club serving 2100 households

MAY 1990

NE 45th STREET REZONE PROJECT
by Bob Klug

Six year battle over the two vacant lots on NE 45 continues; NE 45th St. Neighbors request that it be a single family/SF5000 zone as it was in the past (1982); YOU CAN HELP: sign the petition and attend the public hearing of the City Council on June 6 at 7 pm, 11th floor, Municipal Building.

You may remember, the City Council, as a result of a map change request by the brother of the owner of those two lots, changed the zoning throughout the area in 1982. One day it was a single family SF5000 zone, the next day it was a high-density multi-family MF:L3 zone without any discussion or debate. Of course, the City Council had at the time suspended the regular notification process so no one had any idea that a zoning change had occurred in the area until 1985.

In 1985, the owners of the lots sold the land rights to a Bellevue developer and it was stated at that time that he would construct a four-story, fifteen unit apartment condo project. It was a project totally out of scale and character with the neighborhood, in particular the single family houses in this half block along NE 45th. The adjacent neighbors decided that they would fight the project as it would completely disrupt the single family character of this part of the area. With widespread support, they eventually defeated the project.

In 1988 the City Council put conditions or restrictions on the height, bulk, scale, and character of the project. To try to reverse that action of

(continued on page 2)

MEETING DATES

Meeting, Block Captains, Crime Watch Program SPD: Auditorium, Laurelhurst Elementary School, Thursday, May 31 at 7:30 pm.

Public Hearing, Case No. 29, NE 45th St. Rezone Project: Land Use Committee, City Council, Wednesday, June 6 at 7:00 pm (see lead story).

Regular Meeting, Board of Trustees LCC: Monday, June 11 at 7:30 pm, St. Stephens Epis. Church.

Work Party, NE 41st St. Boulevard Project: Saturday, June 16 at 9:00 am; 4102 37th Ave. NE.

GREEN LAKE PIPELINE UPDATE
by Susan Burchfield

SUBA (Save Union Bay Association) has been working vigorously to oppose the pipeline into Union Bay. They are concerned that pumping 11 mgd out of Union Bay and returning Green Lake and sewer water into Union Bay will cause negative environmental effects including increased entrification of Union Bay and leaching of toxins out of the Montlake fill. The executive committee (Susan Burchfield, Steve Sulzbacher, Frank Henry, Art Ward, Beth Morrison, Bill Holliday & Rick Hess) have attended numerous meetings, written letters, talked to DOE, City Council, and the Park Dept. SUBA filed a legal appeal of the FEIS and the hearing is set for August.

Thanks to everyone who phoned or wrote DOE, the DOE has given the Park Dept. a list of permits needed to implement the pipeline plan. Completion of all of the steps is expected to take 10 years -- and approval of permits is NOT anticipated. DOE recommends that the Park Dept. look at on-site treatment of Green Lake instead of pursuing the pipeline!

At this point in time we don't know the Park Dept. response. They have tried to pressure DOE to ease their regulations and they may continue to try to implement the pipeline. SUBA is following the issues closely and will continue to provide updates on new/continued developments.

ALERT ! ! ! HELICOPTER LANDING REPORT
by Maryann E. Spangler

A recent report received by neighbors in the Laurelhurst community listed flight activity by Airlift Northwest at Children's Hospital and Medical Center (CHMC) between June-December 1989. But this report was not complete!

Omitted were 5 landings: 2 in June, 1 in July, 1 in August and 1 in September. Also omitted were departure times for all flights. These are a part of the flight activity in our neighborhood. There are 2 overflights per landing. These endanger the lives of residents each time they occur.

Thus, between June-December 1989, there were 58 overflights from helicopter landings at CHMC!

(continued on page 2)

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

REZONE PROJECT
(continued from page 1)

the council, the developer sought review of the issue in King County Superior Court through legal action against the Neighbors and the city.

Later that same year, the City Council identified (in Resolution No. 27850 dated Oct. 24, 1988) approximately 150 areas throughout the city where significant errors occurred in the zoning process in 1982. It was stated in the resolution that the city would within two years review each case. The half block area along NE 45th was one of these, as the City Council erred and had violated the land use code of the city when it put a high density multi-family MF:L3 zone and a single family zone together side by side on the map.

This so-called remapping process of the City Council could really help us and the neighbors in the area. Should the council decide in the review that it should be a single family zone rather than a multi-family zone, it would resolve the problem of out-of-scale development in this area.

The possible reversal of the 1982 zoning error will take much hard work however, as it is highly likely that the absentee owners of the two lots will oppose the changeback to single family zone. For that reason, it will be important that the Council see and clearly understand that the downzone project has widespread support.

Here's how you can help: (1) sign the position statement of the Neighbors and the Community Club that this area meets all the requirements of a single family zone in the land use code of the city of Seattle. To get a copy of that statement, call Bob Klug 527-4892 or Luanne Johnson 524-9736. (2) attend the public hearing of the City Council, 11th floor, Municipal Bldg. on Wed., June 6 at 7:00 pm. A big turnout can make a difference. For your help: thank you.

CRIME WATCH WORKS -- IF YOU DO

The Laurelhurst community in conjuction with the Seattle Police Department are the elements involved in the Crime Watch Program. It means a lot of eyes watching and people reporting suspicious activity promptly -- and it is quite effective in keeping crime and vandalism down in our area.

One of the key elements is to report anything that doesn't look quite right to you even if you are not sure whether you should or not. Capt. Farrar of the Seattle Police Department supports this idea completely. Call 527-6601 and let the Crime Watch staff follow up on your report. If you see something in progress -- even just groups of cars and kids gathering -- call 911 directly. And then call the Crime Watch number: 527-6601.

If you call the 911 number, please tell the Crime Watch people what was happening, what the police response was, etc. Sometimes a small bit of information can be helpful.

Crime Watch works -- if you do. Make the call.

IT'S ICE CREAM TIME AGAIN ! !

The fifth grade class at Laurelhurst Elementary will host its 16th Annual Ice Cream Social on Friday, June 8th, from 6:30 to 8:30 on the school's north playground.

Everybody is invited! Cone and sundaes will be the order of the day. And there will be the traditional sponge toss as well as the Bavarian Village Band, the moon walk, the cake walk, the SPD Mounted Patrol, and a fish pond.

This year Carolyn Meeks, M.D., Laurelhurst pediatrician, will be selling and signing copies of her new book, Prescriptions for Parenting, with a portion of the proceeds going to the Laurelhurst PTA.

In case of rain, the event will move inside the building. This Annual Ice Cream Social helps underwrite the class's outdoor education camp.

Have your dinner at home, but come to the school for dessert!

HELICOPTER LANDINGS
(continued from page 1)

Noting the omissions, a neighbor phoned Suzanne Petersen, the name given in the report as being the Director of Government Affairs at CHMC. She was shocked; she could not believe it possible that omissions had occurred. She requested a list of the omissions be mailed to her. Within the hour she called the neighbor back, said she had checked records, apologized, and acknowledged the omisions and said, "You are absolutely right. We did omit 5." She then gave the dates of omissions and stated that a corrected list would be issued.

Building expansion at CHMC has greatly reduced the space for helicopter landings. With condominiums of the Laurelon Terrace complex (136 units) contiguous to and single family houses adjacent to CHMC property, the landings/take-offs/overflights are extremely unsafe. They pose a life-threatening situation for residents. By contrast, landings at the nearby soccer field (NE 45th and Union Bay) in open space pose no threat. Furthermore, it is a fact that no child's life has been lost by landings at the soccer field.

The Northeast District Council will hold its regular meeting on Thursday June 7 at 7:30 pm in the St. Stephens Episcopal Church, 4805 NE 45th St.

NEXT DEADLINE: Fri., June 15, 1990

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Rec'd 6-14

Children's
Hospital & Medical Center

May 1990

To Our Neighbors,

In an ongoing effort to keep you informed about patients transported by emergency medical helicopter to Children's Hospital and Medical Center, we are sending you periodic reports. These reports indicate the date, time and origination of the airlift; the age range and admitting diagnosis of each child; where the child went within Children's; and his or her outcome. We have been careful to protect patient confidentiality in our attempt to share with you as much information as possible about these life-threatening cases.

Most requests for emergency helicopter transport of patients to Children's come from physicians in the Puget Sound area or Olympic Peninsula. These reports describe the cases of children most critically ill who require immediate transport to the emergency room entrance at Children's. Other critically ill or injured children, determined able to withstand delay and movement, are helicoptered to other landing sites in Seattle and then transported by ambulance to Children's Hospital.

If you have questions about this report or about emergency medical helicopter landings at Children's, please direct them to Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write to her at Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98105.

Sincerely,

Treuman Katz

Treuman Katz
President and Chief Executive Officer

• Definition of Diagnosis/Treatment

Kidney and lung hypoplasia: *A condition in which the kidneys and lungs are underdeveloped, which can result in a lack of or diminished function of the organs.*

Oomphalocele: *A defect in the abdominal muscle structure causing some portion or all of the abdominal organs to herniate out of the cavity.*

Persistent fetal circulation: *A condition in which the blood circulation in newborns fails to switch over from in utero oxygenation or oxygenation by the mother, to oxygenation by the newborn's own lungs. As a result, the newborn's blood bypasses its lungs and fails to absorb enough oxygen. The infant's metabolism continues without sufficient oxygen, which produces acid in the bloodstream. This acid is toxic to body systems.*

Respiratory syncytial virus: *Also known by its acronym, RSV is a serious respiratory virus that affects the lining of the airways in the lungs, producing a large amount of mucous and swelling. Because young children cannot cough up the mucous, it remains in their airways and increases labored breathing. RSV is especially serious in premature infants, whose health is already compromised.*

ECMO: *Extracorporeal membrane oxygenation is a form of heart-lung bypass used as a treatment of last resort for newborn infants who are critically ill with reversible heart or lung disease. ECMO can take over most of an infant's heart and lung functions, giving the baby's injured organs time to rest and heal.*

In March, Children's Hospital began providing ECMO treatment for newborns in the Infant Intensive Care Unit.

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center: A summary of flight activity is published quarterly by the Communications Department at Children's Hospital and Medical Center, Seattle, WA. If you have comments or questions, please call Suzanne Petersen, Director of Government Affairs, at (206) 526-2530.

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of flight activity, January through March 1990

Children's
Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center January through March 1990

Date	Time	Transported From	Age	Admitting Diagnosis	Receiving Unit	Outcome (as of 3/90)
January						
1	7:30 am	Kitsap Medic Unit, Port Orchard	Infant	Seizures	Emergency Room	Hospitalized 3 days
4	10:30 pm	Skagit Valley Hospital, Mt. Vernon	Newborn	Respiratory distress syndrome with kidney hypoplasia and lung hypoplasia*	Infant Intensive Care Unit	Died
15	11:31 pm	Children's Hospital, Seattle to Emanuel Hospital, Portland	Infant	Respiratory syncytial virus*	ECMO Unit* Emanuel Hospital, Portland	Died
19	10:52 am	Children's Hospital, Seattle to Emanuel Hospital, Portland	Infant	Respiratory syncytial virus*	ECMO Unit* Emanuel Hospital, Portland	Died
19	5:25 pm	Medic Unit, Bainbridge Island	Toddler	Ingested 3/4 cup liquid dishwasher soap	Emergency Room	Hospitalized 1 day
30	7:00 pm	Providence Hospital, Centralia	Preschool	Pulmonary edema due to multiple congential heart defects	Pediatric Intensive Care Unit	Died
February						
7	5:42 am	Oak Harbor Naval Hospital	Newborn	Oomphalocele*	Infant Intensive Care Unit	Died
8	8:00 pm	Children's Hospital, Seattle to Emanuel Hospital, Portland	Newborn	Persistent fetal circulation*	ECMO Unit* Emanuel Hospital, Portland	Hospitalized 15 days in Portland
9	12:46 pm	United General Hospital, Sedro Woolley	Adolescent	Respiratory distress, rule out sepsis (life-threatening infection)	Pediatric Intensive Care Unit	Hospitalized 13 days
23	3:05 pm	Medic 7, Edmonds	School-age	Near drowning	Emergency Room	Died
26	10:05 pm	Central Washington Hospital, Wenatchee	Newborn	Infant respiratory distress syndrome	Infant Intensive Care Unit	Hospitalized 1 day
27	8:00 pm	Children's Hospital, Seattle to Emanuel Hospital, Portland	Newborn	Infant respiratory distress syndrome	ECMO Unit* Emanuel Hospital, Portland	Hospitalized 40 days in Portland
March						
2	9:00 pm	Children's Hospital, Seattle, to Emanuel Hospital, Portland	Newborn	Sepsis (life-threatening infection)	ECMO Unit* Emanuel Hospital, Portland	Died
4	6:00 pm	Olympic Memorial Hospital, Port Angeles	School-age	Asthma	Pediatric Intensive Care Unit	Hospitalized 9 days
6	12:46 pm	Auburn General Hospital	Newborn	Prematurity	Infant Intensive Care Unit	Died
20	12:00 pm	Mason County Fire District 5	Preschool	Near drowning	Emergency Room	Died

16
× 2
32 overflights

* Definition of diagnosis/treatment on back panel.

Children's
Hospital & Medical Center

March 1990

To Our Neighbors,

As I'm sure you are all aware, the most critically ill patients admitted to Children's Hospital and Medical Center, particularly those from outside the city, are transported via the emergency medical helicopter operated by Airlift Northwest to the Emergency Room entrance at Children's.

In an effort to keep you informed about the number and types of cases landing at the hospital, we plan to send you periodic reports about medical airlift activity at the hospital. This report will indicate the date, time and origination of the airlift; the age range and admitting diagnosis of each child; where the child went within Children's; and his or her outcome. We have been careful to protect patient confidentiality in our attempt to share with you as much information as possible about these life-threatening cases.

If you have any questions about this report or about emergency medical helicopter landings at Children's, please direct them to Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write to her at Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98105.

Sincerely,

Treuman Katz

Treuman Katz
President and Chief Executive Officer

*** Definition of Diagnosis**

Congenital diaphragmatic hernia: *A condition at birth in which the abdominal contents are displaced into the chest cavity causing respiratory distress and usually requiring immediate surgery.*

Epiglottitis: *Swelling in the back of the throat due to bacterial infection that can rapidly block the airway. Treated by a pediatric anesthesiologist or otolaryngologist (ENT) who inserts a tube to bypass the swelling to allow the patient to breathe.*

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center: A summary of Airlift Northwest flight activity is published quarterly by the Communications Department at Children's Hospital and Medical Center, Seattle, WA. If you have comments or questions, please call Suzanne Petersen, Director of Government Affairs, at (206) 526-2530.

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of Airlift Northwest flight activity, June through December 1989

Children's
Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center June through December 1989

Date	Time	Transported From	Age	Admitting Diagnosis	Receiving Unit	Outcome (as of 2/90)
June						
4	4:35 pm	St. Joseph Hospital, Bellingham	Newborn	Congenital heart defect	Infant Intensive Care Unit	Still in hospital
17	4:43 am	Harrison Memorial Hospital, Bremerton	Newborn	Congenital diaphragmatic hernia *	Emergency Room	Died
20	2:55 pm	King County Medic 4, Sea-Tac	Preschool-age	Respiratory arrest (history of asthma)	Emergency Room	Hospitalized 2 days
28	1:04 pm	Central Washington Hospital, Wenatchee	Newborn	Infant respiratory distress syndrome	Infant Intensive Care Unit	Died
July						
5	10:06 pm	Stevens Memorial Hospital, Edmonds	Adolescent	Cardiac arrest	Pediatric Intensive Care Unit	Hospitalized 42 days
22	6:00 pm	King County Medic 6, Auburn	School-age	Near drowning	Emergency Room	Hospitalized 40 days
28	3:09 pm	Harrison Memorial Hospital, Bremerton	Toddler	Near drowning	Emergency Room	Died
30	3:50 pm	Olympic Memorial Hospital, Port Angeles	Adolescent	Sepsis (life-threatening infection)	Pediatric Intensive Care Unit	Died
30	6:05 pm	King County Medic 4, Burien	Preschool-age	Airway obstruction (foreign object–beauty bark)	Emergency Room	Hospitalized 1 day
August						
1	10:45 pm	Providence Hospital, Everett	Toddler	Epiglottitis *	Emergency Room	Hospitalized 5 days
6	7:42 pm	Overlake Hospital Medical Center, Bellevue	Preschool-age	Epiglottitis *	Pediatric Intensive Care Unit	Hospitalized 2 days
12	3:25 pm	St. Joseph Hospital, Bellingham	Adolescent	Asthma	Pediatric Intensive Care Unit	Hospitalized 17 days
22	8:40 pm	Highline Hospital, Burien	Infant	Airway obstruction (foreign object–safety pin)	Emergency Room	Hospitalized 1 day
September						
15	7:43 pm	King County Medic 6, Kent	School-age	Amitriptyline ingestion (antidepressant)	Emergency Room	Hospitalized 4 days
21	9:30 pm	Skagit Valley Hospital, Mt. Vernon	Newborn	Multiple birth defects	Infant Intensive Care Unit	Died
October						
8	6:45 pm	King County Medic 8, Federal Way	Infant	Airway obstruction (foreign object–turkey)	Emergency Department	Hospitalized 1 day
13	9:25 pm	Valley Medical Center, Renton	School-age	Respiratory arrest (history of asthma)	Pediatric Intensive Care Unit	Hospitalized 11 days
November						
3	11:30 am	Valley Medical Center, Renton	Infant	Sudden Infant Death Syndrome	Emergency Room	Died
18	5:50 pm	Snoqualmie Valley Hospital, Snoqualmie	Infant	Bacterial meningitis	Infant Intensive Care Unit	Died
26	7:50 pm	St. Joseph Hospital, Bellingham	Infant	Sepsis, chronic heart disease	Infant Intensive Care Unit	Still in hospital
29	8:15 am	Harrison Memorial Hospital, Bremerton	Adolescent	Doxepin overdose (antidepressant)	Emergency Room	Still in hospital
December						
4	9:50 am	King County Medic 4, Renton	Preschool-age	Seizures	Emergency Room	Hospitalized 3 days
17	4:40 pm	Group Health, Olympia	Toddler	Airway obstruction (foreign object–peanut)	Emergency Room	Hospitalized 1 day
23	4:20 pm	St. Joseph Hospital, Bellingham	Infant	Cardiac arrest	Infant Intensive Care Unit	Hospitalized 49 days

** Definition of diagnosis on back panel.*

Children's
Hospital & Medical Center

March 1990

To Our Neighbors,

As I'm sure you are all aware, the most critically ill patients admitted to Children's Hospital and Medical Center, particularly those from outside the city, are transported via the emergency medical helicopter operated by Airlift Northwest to the Emergency Room entrance at Children's.

In an effort to keep you informed about the number and types of cases landing at the hospital, we plan to send you periodic reports about medical airlift activity at the hospital. This report will indicate the date, time and origination of the airlift; the age range and admitting diagnosis of each child; where the child went within Children's; and his or her outcome. We have been careful to protect patient confidentiality in our attempt to share with you as much information as possible about these life-threatening cases.

If you have any questions about this report or about emergency medical helicopter landings at Children's, please direct them to Suzanne Petersen, Director of Government Affairs, at (206) 526-2530, or write to her at Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98105.

Sincerely,

Treuman Katz

Treuman Katz
President and Chief Executive Officer

*** Definition of Diagnosis/Treatment**

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Epiglottitis: *Swelling in the back of the throat due to bacterial infection that can rapidly block the airway. Treated by a pediatric anesthesiologist or otolaryngologist (ENT) who inserts a tube to bypass the swelling to allow the patient to breathe.*

Pulmonary hypertension: *A condition in which a newborn is unable to oxygenate his own blood because his lungs have malfunctioned due to high blood pressure in the lungs themselves. Blood vessels in the lungs constrict abnormally, increasing the amount of pressure required to deliver blood into the lungs to be oxygenated.*

ECMO: *Extracorporeal membrane oxygenation is a form of heart-lung bypass used as a treatment of last resort for newborn infants who are critically ill with reversible heart or lung disease. ECMO can take over most of an infant's heart and lung functions, giving the baby's injured organs time to rest and heal.*

In March, Children's Hospital began providing ECMO treatment for newborns in the Infant Intensive Care Unit.

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center: A summary of Airlift Northwest flight activity is published quarterly by the Communications Department at Children's Hospital and Medical Center, Seattle, WA. If you have comments or questions, please call Suzanne Petersen, Director of Government Affairs, at (206) 526-2530.

A report to the community about emergency medical helicopter landings at Children's Hospital and Medical Center

A summary of Airlift Northwest flight activity, June through December 1989

Corrected Version

Rec'd: 4-12-90

Children's
Hospital & Medical Center

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center June through December 1989

Date	Time	Transported From	Age	Admitting Diagnosis	Receiving Unit	Outcome (as of 2/90)
June						
**2	5:30 pm	Children's Hospital, Seattle, destined for Emanuel Hospital, Portland	Newborn	Respiratory distress	Not applicable	Newborn died before transport occurred
4	4:35 pm	St. Joseph Hospital, Bellingham	Newborn	Congenital heart defect	Infant Intensive Care Unit	Still in hospital
17	4:43 am	Harrison Memorial Hospital, Bremerton	Newborn	Congenital diaphragmatic hernia *	Emergency Room	Died
20	2:55 pm	King County Medic 4, Sea-Tac	Preschool-age	Respiratory arrest (history of asthma)	Emergency Room	Hospitalized 2 days
28	1:04 pm	Central Washington Hospital, Wenatchee	Newborn	Infant respiratory distress syndrome	Infant Intensive Care Unit	Died
**29	1:00 pm	Children's Hospital, Seattle, to Emanuel Hospital, Portland	Newborn	Pulmonary hypertension *	*ECMO Unit, Emanuel Hospital, Portland	Hospitalized 61 days in Portland
July						
5	10:06 pm	Stevens Memorial Hospital, Edmonds	Adolescent	Cardiac arrest	Pediatric Intensive Care Unit	Hospitalized 42 days
**9	7:30 pm	Children's Hospital, Seattle, to Emanuel Hospital, Portland	Newborn	Pulmonary hypertension *	*ECMO Unit, Emanuel Hospital, Portland	Hospitalized 24 days in Portland; re-admitted to Children's Aug. 2, hospitalized 14 days
22	6:00 pm	King County Medic 6, Auburn	School-age	Near drowning	Emergency Room	Hospitalized 40 days
28	3:09 pm	Harrison Memorial Hospital, Bremerton	Toddler	Near drowning	Emergency Room	Died
30	3:50 pm	Olympic Memorial Hospital, Port Angeles	Adolescent	Sepsis (life-threatening infection)	Pediatric Intensive Care Unit	Died
30	6:05 pm	King County Medic 4, Burien	Preschool-age	Airway obstruction (foreign object–beauty bark)	Emergency Room	Hospitalized 1 day
August						
1	10:45 pm	Providence Hospital, Everett	Toddler	Epiglottitis *	Emergency Room	Hospitalized 5 days
6	7:42 pm	Overlake Hospital Medical Center, Bellevue	Preschool-age	Epiglottitis *	Pediatric Intensive Care Unit	Hospitalized 2 days
12	3:25 pm	St. Joseph Hospital, Bellingham	Adolescent	Asthma	Pediatric Intensive Care Unit	Hospitalized 17 days
**21	5:10 pm	Children's Hospital, Seattle, to Emanuel Hospital, Portland	Newborn	Congenital diaphragmatic hernia *	*ECMO Unit, Emanuel Hospital, Portland	Hospitalized 37 days in Portland
22	8:40 pm	Highline Hospital, Burien	Infant	Airway obstruction (foreign object–safety pin)	Emergency Room	Hospitalized 1 day
September						
**11	5:30 am	Children's Hospital, Seattle, to Emanuel Hospital, Portland	Newborn	Infant respiratory distress syndrome	*ECMO Unit, Emanuel Hospital, Portland	Hospitalized 9 days in Portland
15	7:43 pm	King County Medic 6, Kent	School-age	Amitriptyline ingestion (antidepressant)	Emergency Room	Hospitalized 4 days
21	9:30 pm	Skagit Valley Hospital, Mt. Vernon	Newborn	Multiple birth defects	Infant Intensive Care Unit	Died
October						
8	6:45 pm	King County Medic 8, Federal Way	Infant	Airway obstruction (foreign object–turkey)	Emergency Department	Hospitalized 1 day
13	9:25 pm	Valley Medical Center, Renton	School-age	Respiratory arrest (history of asthma)	Pediatric Intensive Care Unit	Hospitalized 11 days
November						
3	11:30 am	Valley Medical Center, Renton	Infant	Sudden Infant Death Syndrome	Emergency Room	Died
18	5:50 pm	Snoqualmie Valley Hospital, Snoqualmie	Infant	Bacterial meningitis	Infant Intensive Care Unit	Died
26	7:50 pm	St. Joseph Hospital, Bellingham	Infant	Sepsis, chronic heart disease	Infant Intensive Care Unit	Still in hospital
29	8:15 am	Harrison Memorial Hospital, Bremerton	Adolescent	Doxepin overdose (antidepressant)	Emergency Room	Still in hospital
December						
4	9:50 am	King County Medic 4, Renton	Preschool-age	Seizures	Emergency Room	Hospitalized 3 days
17	4:40 pm	Group Health, Olympia	Toddler	Airway obstruction (foreign object–peanut)	Emergency Room	Hospitalized 1 day
23	4:20 pm	St. Joseph Hospital, Bellingham	Infant	Cardiac arrest	Infant Intensive Care Unit	Hospitalized 49 days

** Definition of diagnosis on back panel.*

*** We regret that these cases were mistakenly omitted from the previous version of this report.*

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.



8405870 CHMC Webster file JTD

RECEIVED
JUL 2 1990

June 26, 1990

Governor Booth Gardner
Capitol Building
Olympia, WA. 98504-0413

RE: Helicopter landings at Children's Hospital & Medical Center, Seattle (CHMC)

Dear Governor Gardner:

We have written to you previously on March 30, 1987 on the above subject and you were kind enough to answer. Thank you.

The helicopter overflights and landings at CHMC are still occurring -- and increasing. For example, during the month of May, 1990 there were 12 landings which means 24 overflights in a high-density, residential area (SEE: enclosed snapshot).

Enclosed is the most recent report from CHMC in which it is shown that 9 out of the 16 patients died. Each of these flights endangered hundreds of other lives--that is, the residents who live adjacent to CHMC. CHMC is responsible for these other lives, too. So are you as Governor for all of us. (Please note: Each landing means 2 overflights; thus, a total of 32 within this time frame. Children's does not show the time for departure flights; however, they are a part of the air activity in the area, too.)

CHMC has acknowledged that no children's lives have been lost over many years of landing at the nearby soccer field (corner of N.E. 45th St. and Union Bay). The University Hospital also uses this soccer field for its emergencies.

Please use the power vested in you and your office to stop these landings, to stop the danger of these low overflgihts (landings and take-offs) in a populated area. Safety is the issue. As you know, most helicopter crashes occur during landings and take-offs.

Thank you.

8405870

Sincerely,

Helen Newman

Helen Newman
4525 N.E. 50th St.
Seattle, WA. 98105

Maryann E. Spangler

Maryann E. Spangler
4013 N.E. 46th St.
Seattle, WA. 98105

Enc: Pamphlet
Picture
cc: John Doan - Dept. of Construction & Land Use, Seattle.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Patients Transported by Airlift Northwest Helicopter Landing at Children's Hospital and Medical Center January through March 1990

Date	Time	Transported From	Age	Admitting Diagnosis	Receiving Unit	Outcome (as of 3/90)
January						
1	7:30 am	Kitsap Medic Unit, Port Orchard	Infant	Seizures	Emergency Room	Hospitalized 3 days
					Infant Intensive Care Unit	Died
4	10:30 pm	Skagit Valley Hospital, Mt. Vernon	Newborn	Respiratory distress syndrome with kidney hypoplasia and lung hypoplasia*	ECMO Unit* Emanuel Hospital, Portland	Died
15	11:31 pm	Children's Hospital, Seattle to Emanuel Hospital, Portland	Infant	Respiratory syncytial virus*	ECMO Unit Emanuel Hospital, Portland	Died
19	10:52 am	Children's Hospital, Seattle to Emanuel Hospital, Portland	Infant	Respiratory syncytial virus*	Emergency Room	Hospitalized 1 day
19	5:25 pm	Medic Unit, Bainbridge Island	Toddler	Ingested 3/4 cup liquid dishwasher soap	Pediatric Intensive Care Unit	Died
30	7:00 pm	Providence Hospital, Centralia	Preschool	Pulmonary edema due to multiple congential heart defects		
February						
7	5:42 am	Oak Harbor Naval Hospital	Newborn	Oomphalocele*	Infant Intensive Care Unit	Died
8	8:00 pm	Children's Hospital, Seattle to Emanuel Hospital, Portland	Newborn	Persistent fetal circulation*	ECMO Unit* Emanuel Hospital, Portland	Hospitalized 15 days in Portland
9	12:46 pm	United General Hospital, Sedro Woolley	Adolescent	Respiratory distress, rule out sepsis (life-threatening infection)	Pediatric Intensive Care Unit	Hospitalized 13 days
23	3:05 pm	Medic 7, Edmonds	School-age	Near drowning	Emergency Room	Died
26	10:05 pm	Central Washington Hospital, Wenatchee	Newborn	Infant respiratory distress syndrome	Infant Intensive Care Unit	Hospitalized 1 day
27	8:00 pm	Children's Hospital, Seattle to Emanuel Hospital, Portland	Newborn	Infant respiratory distress syndrome	ECMO Unit* Emanuel Hospital, Portland	Hospitalized 40 days in Portland
March						
2	9:00 pm	Children's Hospital, Seattle, to Emanuel Hospital, Portland	Newborn	Sepsis (life-threatening infection)	ECMO Unit* Emanuel Hospital, Portland	Died
4	6:00 pm	Olympic Memorial Hospital, Port Angeles	School-age	Asthma	Pediatric Intensive Care Unit	Hospitalized 9 days
6	12:46 pm	Auburn General Hospital	Newborn	Prematurity	Infant Intensive Care Unit	Died
20	12:00 pm	Mason County Fire District 5	Preschool	Near drowning	Emergency Room	Died

ALIVE 4 DIED - 01

* Definition of diagnosis/treatment on back panel.

~~IFD~~

✓

Gayle Gray
3926½ NE Surber Dr.
Seattle, WA 98105
523-1648

RECEIVED
APR 10 1990
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

April 9, 1990

Dear Mr. McLerran;

I wanted to write in support of emergency helicopter service at Childrens Orthopedic Hospital and Medical Center. Our family is a resident, approximately three blocks from the hospital, and do hear the noise from the helicopter. Our feeling is that the benefits and life-saving possibilities far out weight the noise and possible "crash" risk factors.

We would be happy to testify or do anything we can to secure a permit for Children's to build a helicopter landing pad and keep the program going and ensure safety for all concerned.

Please support this needed and life-saving program.

Sincerely, Gayle M. Gray
Ladrelhurst Resident

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RECEIVED
APR 20 1990
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dennis McLerran, Director
Construction and Land Use
Room 408
Municipal Building
Seattle, Washington 98104

Dear Mr. McLerran:

My address, as you see, makes me a "neighbor" of Children's Orthopedic Hospital. I also receive the Laurelhurst Newsletter, and I am aghast at the callousness of the people who are trying to stop the building of the heliopad at COH.

In your decision on this matter please consider my strong support for this project. I know I speak for many others in this area. Perhaps, most of them, like me, feel that, of course, such a life-saving project will be authorized.

Counting on a favorable decision from you, I am,

Sincerely,

Eileen M. Egan

Eileen M. Egan
4527 NE 55th #2
Seattle, Washington 98105

April 18, 1990

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March 4, 1990

RECEIVED
MAR 06 1990
TOM V[illegible]
SEATTLE CITY COU[illegible]

Seattle City Council
600 Fourth Avenue
Seattle, WA. 98104

Dear City Council Member Tom Weeks:

I wish someone on our City Council lived in the Laurelon Terrace Condominium complex (136 units) contiguous to Childrens Hospital and Medical Center, CHMC.

I wish someone on our City Council cared about the safety and quality of life of residential neighborhoods such as Laurelon Terrace.

I wish everyone on our City Council would read the letters and testimonies and petitions on record about the helicopter over-flights and landings at Childrens Hospital.

I wish everyone on our City Council would study the EIS on file on this project, which has lain in the DCLU office without action for over a year.

I am not a bald eagle, nor am I a spotted owl, but I, too, am an endangered species. I live in Laurelon Terrace (where I own my condominium). Each time a helicopter lands at CHMC, my life is endangered (along with hundreds of other innocent residents). Not only once for each flight but twice are we endangered with an in and an out flight.

To date in 1990, we have suffered 11* landings which equal 22* over-flights while I have been home (there may well have been others). I have six pages of single-spaced documentation of helicopter landings at CHMC. My records begin with 10-15-85 and go through 3-2-90.

Repeatedly I have written to City Council members, DCLU, and other offices to voice concerns about the unsafe situation of helicopter landings in minimal space (less and less as CHMC expands its build-ings), in high-density, residential neighborhoods, such as Laurelon.

Repeatedly I have asked that these landings be stopped before a tragedy (crash and/or conflagration) occurs.

I write again. I ask again. Please respond. Please stop these continuous helicopter landings at CHMC now.

Sincerely,
Maryann E. Spangler
Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

cc: All City Council Members
Office of DCLU
Mayor

* 12 ... 24 > landing on 3-4-90 after typing letter.
MES

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Seattle City Council

March 7, 1990

Maryann E. Spangler
4013 NE 46th Street
Seattle, WA 98105

Dear Mrs. Spangler:

Thank you for your letter to Tom Weeks regarding the heliport at Children's Hospital and Medical Center.

Because the City Council functions like a judge rather than a legislative body on many land use issues, Tom cannot read letters, respond to phone calls or be lobbied on individual land use projects. If he does, he risks prejudicing himself before all relevant facts of the case are determined and losing the right to vote on the project if it comes before the Council.

Since you cannot appeal directly to Tom on this issue, I have forwarded your letter to the staff members at the Department of Construction and Land Use who will be dealing with the project. You can them at 684-8875. DCLU will add your name to the project mailing list, and you will be notified about any public hearings conducted on the heliport.

Your comments are extremely important as the Department of Construction and Land Use and the Hearing Examiner evaluate this project. I urge you to contact them directly, either in writing or by attending public hearings, and make your views known.

Tom cannot become involved in this process unless the Hearing Examiner's decision on this project is appealed to the City Council. If that happens, he will be permitted to review only the information contained in the Hearing Examiner's record. He will not be permitted to consider new information or to meet with any interested persons except at a public hearing. That is why it is so important for you to work with DCLU from the beginning.

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I am sorry that Tom cannot be of more help to you on this issue. I appreciate your frustration and hope you understand the importance of his efforts to remain impartial. If you have any additional questions about the procedure by which this project will be reviewed, please feel free to call me at 684-8805. Again, thank you for taking the time to write.

Sincerely,

Mary Bourguignon

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RECEIVED
MAR 1990

RECEIVED
MAR 8 1990

March 5, 1990

RECEIVED
MAR 06 1990
TOM WEEKS
SEATTLE CITY COUNCIL MEMBER

Seattle City Council
600 Fourth Avenue
Seattle, WA. 98104

Dear City Council Member

There has been an increase in helicopter landings at Children's Hospital & Medical Center in recent weeks/months. In the original and final EIS, 3 a month were temporarily permitted. In 1990 thus far we have had 12 landings equalling 24 overflights (day and night hours).

There is no necessity for these landings. At both University Hospital and Harborview Hospital landings are not at the emergency entrance. This is an imposition which endangers our neighborhood.

It seems that CHMC is counting on "no response" from you and thus is doing exactly as they please with total disregard to any consideration for the neighborhood -- hundreds of innocent residents.

I hope you will change your "no response" to immediate reassessment of this matter and once and for all STOP helicopter landings at CHMC. This ought to have been done years ago.

After all you as elected officials represent the endangered citizens, do you not? Please now act on our behalf.

Thank you.

Sincerely,

Helen Newman
4252 N.E. 50th
Seattle, WA. 98105

cc: Members of Seattle City Council
Office of DCLU
Mayor

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Seattle City Council

March 7, 1990

Helen Newman
4252 NE 50th
Seattle, WA 98105

Dear Ms. Newman:

Thank you for your letter to Tom Weeks regarding the heliport at Children's Hospital and Medical Center.

Because the City Council functions like a judge rather than a legislative body on many land use issues, Tom cannot read letters, respond to phone calls or be lobbied on individual land use projects. If he does, he risks prejudicing himself before all relevant facts of the case are determined and losing the right to vote on the project if it comes before the Council.

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Sincerely,

Mary Bourguignon

Mary Bourguignon

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The NBBJ Group **Memorandum**

RECEIVED
JUN 29 1989
DEPT. OF CONSTRUCTION AND LAND USE

DATE: June 28, 1989

TO: File

FROM: Mike Miller M.M.

RE: **CHMC Helipad**
Job No. 23881.14
Report of Telephone Conversation – John Doan, DCLU, to Mike Miller on June 27, 1989 at 1:45 pm

I asked John if since the E.I.S. gives approximate dimensions for siting the helipad, we could alter the location yet stay on the same site .... the "kitchen garden".

John said that we could alter the location as long as we did not move to another site, i.e., south side of the hospital. He said that the drawings submitted for the Master Use Permit would give more accurate location information for the helipad and that the exact location could deviate from this drawing as long as it did not move from the kitchen garden site.

cc: John Doan, DCLU
John Keegan, Davis Wright & Jones
Vince Vergel de Dios
Leigh Sutphin
Bob Miller-Rhees

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→ JTD

Children's
Hospital & Medical Center

4800 Sand Point Way N.E.
P.O. Box C5371
Seattle, Washington 98105
(206) 526-2001

Treuman Katz
Chief Executive Officer

RECEIVED
MAR 13 1989
DEPT. OF CONST. & LAND USE

March 10, 1989

Dennis McLerran
Director
Seattle Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Mr. McLerran:

I have received your March 6, 1989, letter regarding the 4800 Sand Point Way N. E. MUP #8405870. We will be working diligently with our consultant in order to submit the final EIS for the proposed Helistop within the 45 day requested time frame (by April 20, 1989).

I do not agree that progress on the EIS has been unsatisfactory in light of the number, length, and complexity of the comments received. The extensive information we are gathering in order to respond to the comments and prepare the revised draft has required additional time and will fully address the issues raised.

Sincerely,

Treuman Katz
President and CEO

phs

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84058870

Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Charles Royer, Mayor

March 6, 1989

Re: 4800 Sand Point Way N.E.
Children's Hospital and Medical Center

Allene C. Caddy
4658 41st Ave. N.E.
Seattle, Washington 98105

Dear Ms. Caddy:

Councilmember Street's staff has requested that I respond to your letter regarding development at Children's Hospital and Medical Center (CHMC).

The helicopter issue is one that we have been working on for several years. Because of the significant impacts, a consultant has been preparing an Environmental Impact Statement, which addresses the issues you have raised, including safety, noise, and the medical need for the facility. Unfortunately, because the project is unique and involves a great deal of information, the development of the EIS has been time consuming. I can appreciate your concerns and frustrations about the current landings at the hospital.

Although a notice of violation has been issued against the hospital, they have been given the opportunity to complete the permit review process, before ceasing operation. Following completion of the EIS, our Department and the City Hearing Examiner will make recommendations to the City Council on whether to grant the hospital a permit to land helicopters at the site. The City Council will ultimately have to make the decision. Council members cannot become directly involved in a project like this until it is formally referred to them.

Regarding general development on the CHMC campus, we carefully reviewed the medical office building, now under construction, prior to giving it any permits. The hospital was required to provide significant incentives to employees to ride the bus and carpool to reduce the traffic impacts experienced by the community. The Mayor and Councilmember Street have also recently proposed no changes to the zoning at CHMC Hospital. Although too complex to fully explain in this letter, the new regulations would greatly limit the

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outright development potential of the property. Deviations from the standards would only be allowed through the implementation of a master plan developed in conjunction with the community.

Thank you for sharing your concerns, and I encourage your continuing participation. I will make sure you are made aware of further activity regarding the helicopter permit. If you have any questions, please call John Doan, the Land Use Specialist assigned to this project, at 684-8875.

Sincerely,

DENNIS McLERRAN
Director

Nancy Fox

By
NANCY FOX
Director
Land Use Division

NF:jdk
wp2/ltracc
cc: Darlene Flynn, Councilmember Street's Office

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AIRLIFT NORTHWEST

STANDING ORDERS FOR CHILDREN'S LANDINGS

If during the transport of a critically ill child any of the following clinical conditions occur, a Children's Landing is authorized by the Medical Director of Airlift Northwest

I. UNSTABLE AIRWAY

- A. Diagnosis or clinical presentation of epiglottitis
- B. Inability to protect the airway
- C. Inability to provide an artificial airway

II. INABILITY TO VENTILATE/OXYGENATE

- A. Inadequate PaO2 confirmed by oxygen saturation monitoring
- B. Significant hypoxia in the face of 100% oxygen administration
- C. Inability to generate adequate gas exchange, as in status asthmatics or acute pulmonary edema.

III. INABILITY TO MAINTAIN ADEQUATE CARDIAC OUTPUT

- A. Low or absent blood pressure
- B. Lethal cardiac rhythm
- C. Inability to provide IV access in hypotensive patients

IV. INABILITY TO MAINTAIN ADEQUATE CEREBRAL BLOOD FLOW

- A. Uncontrolled seizures
- B. Signs and symptoms of massive cerebral edema as in Drowning, Carbon Monoxide Poisoning, Strangulation

V. THE PERSISTENCE OF UNSTABLE VITAL SIGNS DESPITE HEROIC ATTEMPTS TO CONTROL THEM

Approved 9/16/89
Michael K Gaines

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AIRLIFT NORTHWEST

AIRLIFT NORTHWEST ROTARY WING LANDINGS AT CHMC
MEDICAL JUSTIFICATION

DATE: _____

PATIENT NAME: _____ _____

FLIGHT TEAM: _____

_____

An emergency landing on the CHMC campus was medically required for the following reasons (please check appropriate number and circle the appropriate letter subtitle):

_____ I. UNSTABLE AIRWAY

A. Diagnosis or clinical presentation of epiglottitis
B. Inability to protect the airway
C. Inability to provide an artificial airway

_____ II. INABILITY TO VENTILATE/OXYGENATE

A. Inadequate PaO2 confirmed by oxygen saturation monitoring
B. Significant hypoxia in the face of 100% oxygen administration
C. Inability to generate adequate gas exchange, as in status asthmatics or acute pulmonary edema

_____ III. INABILITY TO MAINTAIN ADEQUATE CARDIAC OUTPUT

A. Low or absent blood pressure
B. Lethal cardiac rhythm
C. Inability to provide IV access in hypotensive patients

_____ IV. INABILITY TO MAINTAIN ADEQUATE CEREBRAL BLOOD FLOW

A. Uncontrolled seizures
B. Signs and symptoms of massive cerebral edema as in Drowning, Carbon Monoxide Poisoning, Strangulation

_____ V. THE PERSISTENCE OF UNSTABLE VITAL SIGNS DESPITE HEROIC ATTEMPTS TO CONTROL THEM

REVIEWED: _____ _____
Medical Director **Chief Flight Nurse**

COMMENTS: _____

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CHILE helistop

RECEIVED
SEP - 5 1989
DEPT. OF CONST. & LAND USE

August 30, 1989

Mr. Dennis McLerran, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA. 98104

Re: Helicopter landings at Children's Hospital & Medical Center

Dear Mr. McLerran:

We have been and continue to be against helicopters landing at Children's Hospital which are endangering lives of those who live adjacent to the hospital, especially since a landing site is available nearby at the University of Washington soccer field without endangerment of lives. It is a crime to continue to expose the neighbors to the danger of helicopters landing at the hospital.

A case in point, within the past ten days, two air ambulance medical helicopters have crashed with loss of lives (one in southern Oregon, the other near Spokane, WA). More lives would have been lost had these crashes been in high density residential neighborhoods such as surround Children's Hospital.

Please do not sanction a helipad at Children's Hospital. Think about the hundreds of innocent neighbors whose lives are endangered by each flight in and out. Crashes most frequently occur during ascent and descent of the helicopters.

Please review all previous letters emphasizing the safety factors of helicopter landings at Children's Hospital. Thank you.

Sincerely,

Helen Newman

Helen Newman
4252 NE 50th
Seattle, WA 98105

Maryann E. Spangler

Maryann E. Spangler
4013 NE 46th Street
Seattle, WA 98105

cc: City Council members

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DAVIS WRIGHT & JONES
Law Offices
2600 Century Square · 1501 Fourth Avenue · Seattle, Washington 98101-1688
(206) 622-3150

APR 13 1989

John E. Keegan

April 11, 1989

Mr. Glenn C. Bachman
Shapiro and Associates
Smith Tower, 506 Second Ave.
Seattle, WA 98104

Re: CHMC Helistop EIS

Dear Glenn:

Enclosed is the summary report of safety review for the proposed kitchen garden helistop at Children's.

As we discussed by phone, John Doan determined that the analysis need only look at the proposed kitchen garden site and, as alternatives, the existing helistop site at Children's and the intramural site. Harborview does not need to be included as part of the safety review of alternative sites.

Please call me if you have any questions.

Very truly yours,

DAVIS WRIGHT & JONES

John E. Keegan

JEK:jah
3344L
Enclosure

cc: Treuman Katz
John Doan
Mitch Olejko

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Telex: 328919 DWJ SEA · Fax: (206) 628-7040
Anchorage, Alaska · Bellevue, Washington · Richland, Washington · Washington, D.C.

Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Charles Royer, Mayor

May 15, 1989

Re: 4800 Sand Point Way Northeast
(MUP No. 8405870)

Helen Newman
4525 Northeast 50th Street
Seattle, Washington 98105

Dear Ms. Newman:

I understand your concerns and those of your neighbors regarding the noise and safety of helicopter flights at Children's Hospital and Medical Center.

Our department is working with the Environmental Impact Statement (EIS) consultant, experts, and interested parties to gather information for the City Council, which must make a decision on the application. By early this summer we hope to be able to release the Final EIS and our recommendation to the Hearing Examiner.

If you have any questions about the EIS or how you can participate, please call Senior Land Use Specialist, John Doan at 684-8875

Sincerely,

DENNIS J. McLERRAN
Director

cc: Mayor Charles Royer
All City Councilmembers

DJM:as

wp1\luk8\newman1

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ltd

RECEIVED
MAY 15 1989
Dept. of Construction & Land Use

May 2, 1989

RECEIVED
MAY 18 1989
DEPT. OF CONSTRUCTION & LAND USE

Mr. Dennis McLerran, Director
Department of Construction & Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Mr. Mc Lerran:

The Board of Directors of the Laurel Crest Residential Park Condominium endorses, in full, the sentiments expressed in the April 27, 1989 letter to you from the Board of Trustees of the Laurelhurst Community Club, copy enclosed.

Sincerely,

Elizabeth Spaethe

Elizabeth Spaethe
President

Board Members:

Harlan Borow
Elizabeth Donaldson
Lawrence Hennings

cc: Mayor Charles Royer
City Council Members:
George E. Benson
Virginia Galle
Paul Kraabel
Jane Noland
Norm Rice
Delores Sibonga
Sam Smith
Jim Street
Jeanette Williams

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April 27, 1989

Mr. Dennis McLerran, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA. 98104

RE: Unauthorized Helicopter Flights at Children's Hospital and Medical Center

Dear Mr. McLerran:

We appreciate and share your concern about preserving the livability of Seattle's neighborhoods.

However, we are not certain that you are aware of the continuous and frequent unauthorized helicopter landings at Children's Hospital. We feel that the adverse public impact and comments concerning these landings have been ignored. Letters of concern are on file as well as testimony at public hearings. Due process regarding the helipad permit is not taking place. After four and one-half years this issue remains unresolved.

Each landing, in increasingly limited space now that enlargement of the Medical Office Building at Children's is in progress, poses endangerment of lives of hundreds of innocent patients, staff and nearby residents. This is particularly true for the residents of the Laurelon Terrace Condominium complex (136 units) contiguous to Children's property and for the single-family residents nearby. Each landing means two flights--one in, another out--placing hundreds of lives in needless jeopardy.

Why does DCLU and City Council give special consideration to Children's Hospital over widespread public objections and the history of medical helicopter crashes? Why does DCLU and City Council allow a continued extension of a temporary permit to land at Children's Hospital? What is the rule for granting continuations of temporary permits--where in the code is this stated? Why have public objections been ignored?

Please do not wait until a tragedy (crash and/or conflagration) occurs before action is taken to halt once and for all these helicopter landings at Children's Hospital in a high-density, residential neighborhood.

Please revoke the temporary permit for landings. Please stop the landings on Children's campus. Please place this on-going, long-suffering issue at the top of your list for the earliest possible resolution in 1989.

Thank you.

Sincerely,

BOARD OF TRUSTEES of the
Laurelhurst Community Club

Please mail responses to:

4013 N.E. 46th Street
Seattle, WA. 98105

cc: Mayor Charles Royer
City Council Members:
George E. Benson
Virginia Galle
Paul Kraabel
Jane Noland
Norm Rice
Dolores Sibonga
Sam Smith
Jim Street
Jeanette Williams

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Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Charles Royer, Mayor

March 31, 1989

Re: 4800 Sand Point Way N.E.
(MUP #8405870)

Mr. Stanley T. Sinex
Portage Bay/Roanoke Park Community Council
2611 Broadway East
Seattle, Washington 98102

Dear Mr. Sinex:

I want to thank you for keeping me informed about your correspondence with Children's Hospital and Airlift Northwest.

On December 10, 1985 the Department of Construction and Land Use issued a notice of violation against those two organizations for landing helicopters on the Children's Hospital campus without a permit. The Department of Construction and Land Use Director, at that time, made the decision to continue the enforcement action to a time adequate for the hospital to complete the permit review process. Unfortunately, because of the complexity of the issues and uniqueness of the permit, it has taken a great deal of time to prepare the necessary environmental impact statement (EIS). We are in the final stages of the EIS process, and are refining information on medical need and safety impacts. After the EIS is completed, both the Department of Construction and Land Use and the Hearing Examiner, following a public hearing, will make recommendations to the City Council. The City Council will make the final decision on the permit application.

The authority to extend the compliance date for a notice of violation comes from the enforcement provisions of the Land Use Code (Chapter 23.90). Section 23.90.008 provides that among the considerations for the Director to use when determining a compliance date are "the procedural requirements for obtaining a permit to carry out corrective action" and "the complexity of the corrective action...."

With regard to the use of the University of Washington intermural field for landings, neither the University nor Airlift Northwest has a permit for those landings. We have

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informed the University of the requirement for a permit and have indicated that we will be issuing a notice of violation if a permit application is not submitted.

I hope this addresses your concerns about our violation process. I will make sure you are kept aware of future actions relative to the helistop permit at Children's Hospital.

If you have any questions about that permit, please call Senior Land Use Specialist John Doan at 684-8875. If you have questions about the notice of violation, please call Housing and Zoning Enforcement Division Director, Joe Garcia at 684-7899.

Sincerely,

Dennis J. McLerran

DENNIS J. McLERRAN
Director

DJM:JTD:v

cc: Mayor Royer
Joe Garcia, Housing and Zoning Enforcement
bcc: Darlene Flynn
wp1\ltrss

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DOLORES SIBONGA
Seattle City Councilmember

March 28, 1989

Stanley T. Sinex
Portage Bay/Roanoke Park
2611 Broadway East
Seattle, WA 98102

Dear Mr. Sinex:

Thank you for sending me a copy of your recent letter to Dr. Copass of Airlift Northwest.

It is my understanding that Nancy Fox of the Department of Construction and Land Use (DCLU) is preparing a response to the concerns raised in your letter. I am requesting a copy of this reply from DCLU for my information and review. No action is presently scheduled before Council on this issue.

Again, thank you for keeping me informed of community concerns.

Sincerely,

Dolores Sibonga

DOLORES SIBONGA
Seattle City Councilmember

DS:em

cc: Nancy Fox
Dept. of Construction & Land Use

Eleventh Floor, Municipal Building, Seattle, Washington 98104
(206) 684-8802

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Dolores,
we need your help.
DCLU has ignored us
and has allowed this
operation to continue
without a permit.
thx. Stan

2/9/89

Airlift Northwest
325 9th Ave.
Seattle, Wa. 98104
(206) 223-8377

Stanley T. Sinex
Portage Bay/Roanoke Park
2611 Broadway E.
Seattle, Wa. 98102
(206) 325-8400

Re: Continued Jet Aircraft Overflights in Residential Neighborhoods for Childrens Hospital & University of Washington.

Dear Dr. Copass,

Thank you for your letter of February 14, 1989. Your response to my letter was what I had feared, and justifies my concern and desire to have your operations stopped as soon as possible.

Your justification for doing business is both irrelevant and fails to address the problem I initially wrote you about. This region has many hospitals that could provide the services you mentioned and nothing is stopping the U.of W. or Childrens Hospital from developing satellite services at Harborview or other locations where TWIN JET Helicopters do not regularly impact residential neighborhoods.

You service is intrusive and as I stated asks us to subsidize it with the lessening of our quality of life and health.

You also wrongly state that you have worked with community groups to develop flight paths that have minimal impacts. You have never worked with our community nor the Montlake Community and the Laurelhurst opposition is totally unsatisfied with your operation and wants it eliminated since there is no mitigation of Jet Helicopters.

We oppose your continued operation and with this latter ask that the City Attorney review the Director of D.C.L.U.'s decision to ignore the land use code section 23.90.016 which clearly states that no extension of a land use violation may be granted if there are adverse impacts. Your letter indicates that there are negative overflight impacts and seems to indicate the incredibly selfish position that since there are other impacts, you should be allowed to add to them?!!!

As a health professional you must realize that overflights do have negative health & quality of life impacts and that our existing impacts already are significant - are you saying that you want to increase the negative health impacts that already exist???

We are disappointed that Hospitals with the reputation of Childrens and U. of W. seem to want to use their "good name" to bully the city and the neighborhoods into accepting this unnecessary service in a residential area. The TWIN JET rotor aircraft you fly are the greatest noise impacts in this area.

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I have researched the F.A.A. regulations and understand that what they allow, and what is reasonable in a residential area are two very different things - as is evidenced by our support to regulate Seaplanes on Lake Union and our support for the changing of Sea-Tac overflights. Why would you think we would support your MORE intrusive JET AIRCRAFT overflights?

Again, your argument that you are flying within F.A.A. standards is not relevant, and the statement that you regularly fly at one thousand feet merely substantiates my complaint that you do fly far below this level at least irregularly as you did again today at 4:30 P.M. (literally shaking my home)

Lastly, we would be happy to meet with you as I stated to Ms. Lippman however, our time is valuable and if you are only going to continue to justify your current unacceptable (as this letter indicates) position there is not much point.

You seem to have made an poorly researched business decision that requires us to subsidize it - I hope this letter makes our position clear.

Sincerely,

Stanley T. Sinex
Portage Bay/Roanoke Park Community Council

cc James Fern — City Attorney
Dennis McLarren — D.C.L.U.
Clarisa Easton — Montlake Community Council
Beth Means — Seattle Community Council Federation
City Council Members
Charles Royer — Mayor
Trueman Katz — Childrens Hospital
Robert Muilenburg — University Hospital
Kirt Horner — Environmental Health
Dr. Nicola — Department of Public Health
Chris Leman — Eastlake Community Council
Mary Bennet — Captial Hill Community Council
[illegible] Anderson — Laurelhurst
Linda Kane — Floating Homes Association

RECEIVED
FEB 22 1989
DOLORES SIBONGA
SEATTLE CITY COUNCIL MEMBER

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Forward to Bapay & Joe

Dennis - we don't seem to have any rights in your Dept.?

RECEIVED
FEB 22 1989
DEPT. OF CONST. & LAND USE

John Dean

2/9/89

Airlift Northwest
325 9th Ave.
Seattle, Wa. 98104
(206) 223-8377

Stanley T. Sinek
Portage Bay/Roanoke
2611 Broadway E.
Seattle, Wa. 98102
(206) 325-8400

Bapay to Joe 4

Re: Continued Jet Aircraft Overflights in Residential Neighborhoods for Childrens Hospital & University of Washington.

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You seem to have made an poorly researched business decision that requires us to subsidize it - I hope this letter makes our position clear.

Sincerely,

Stanley T. Sinex
Portage Bay/Roanoke Park Community Council

cc	James Fern	City Attorney
	Dennis McLarren	D.C.L.U.
	Clarisa Easton	Montlake Community Council
	Beth Means	Seattle Community Council Federation
	City Council Members	
	Charles Royer	Mayor
	Trueman Katz	Childrens Hospital
	Robert Muilenburg	University Hospital
	Kirt Horner	Environmental Health
	Dr. Nicola	Department of Public Health
	Chris Leman	Eastlake Community Council
	Mary Bennet	Captial Hill Community Council
	Liz Anderson	Laurelhurst
	Linda Kane	Floating Homes Association

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AIRLIFT NORTHWEST

325 9th Avenue
Seattle, Washington 98104
Business Office 206-223-8377
1-800-542-1646
(Inside Washington)
1-800-426-2430
(Outside Washington)
- Children's Hospital and Medical Center
- Harborview Medical Center
- Providence Medical Center
- University Hospital

RECEIVED
FEB 15 1989
DEPT. OF CONST. & LAND USE

February 14, 1989

Mr. Stanley T. Sinex
Portage Bay/Roanoke Park Community Council
2611 Broadway
Seattle, WA 98102

Dear Mr. Sinex:

Thank you for your letter of January 22, 1989 which was referred to me by Mr. Treuman Katz, Chief Executive Officer of Children's Hospital & Medical Center, and Mr. Robert Muilenburg, Executive Director of University Hospital. In response to your letter, Ms. Wendy Lippmann, Public Relations Director for Airlift Northwest, was instructed to schedule a meeting with representatives of your community. I understand, however, that you do not wish to meet with Airlift Northwest representatives without receiving a promise that Airlift Northwest will either change its flight patterns or cease operation. I hope you will reconsider your position.

I should like to respond specifically to the points raised in your letter:

*Since Airlift Northwest helicopter service began in 1985, we have worked with neighborhood community groups to develop flight paths that have minimal impact on residential areas. The current flight patterns to and from Children's Hospital & Medical Center, University Hospital and the Graves Field landing site were developed through long-term, ongoing discussions with the people who live near these regional, tertiary care hospitals.

*Airlift Northwest adheres to Federal Aviation Administration Regulations (F.A.R.) with respect to minimum altitudes. F.A.R. 135.203 establishes a minimum flight altitude of 300 feet for helicopters except for take-off and landing. Airlift Northwest helicopter pilots routinely fly at a minimum altitude of 1,000 feet during the approach to the Graves Field landing site.

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*The internal modifications to Airlift Northwest aircraft, enabling them to serve critically ill or injured patients, do not affect aircraft speed or engine noise.

*The normal approach and departure patterns for Airlift Northwest flights transporting patients to Children's Hospital and Medical Center and University Hospital are as follows:

The helicopter follows Interstate-5 and turns east at Interstate-520, following the highway. From a minimum altitude of 1,000 feet, the pilot begins his descent at or near Husky Stadium while following Montlake Boulevard toward Graves Field, or NE 45th Street/Sandpoint Way to Children's Hospital. On departure, the pattern is reversed.

-or-

The helicopter follows Interstate-5 and turns east at NE 45th Street. The aircraft follows the major arterial, begins its descent at or near 15th Avenue NE, continues to follow NE 45th Street to Graves Field, or Sandpoint Way to Children's.

*In selecting flight paths, Airlift Northwest is sensitive to considerations of safety, reduction in patient transport time, and noise. In general, when and where possible, the pilots avoid flying over hills, over or near densely populated areas, or at altitudes less than 1,000 feet. Flight patterns are never "short cut" to save fuel or maintenance.

We make every effort to keep aircraft noise at the lowest possible level in your community. As you can see, our flight pattern follows major arterial and interstate routes, in compliance with existing safety and noise reduction guidelines. Unfortunately, residents living along or near these thoroughfares experience some inconvenience due to helicopter noise, as well as from the noise of other emergency medical vehicles, such as ambulances and fire engines.

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Finally, I'd like to share some thoughts about the mission of Airlift Northwest. Airlift Northwest transports only extremely ill patients to hospitals with specialties unavailable in their home communities. We represent regional, tertiary care hospitals that are dedicated to caring for seriously ill or injured patients. Children's Hospital & Medical Center and University Hospital, for example, are the only two hospitals in King County that offer neonatal services, while Children's is one of two in all of Washington, Alaska, Montana and Idaho that can perform pediatric cardiac bypass surgery. Airlift Northwest is part of an emergency services system in the Northwest that was developed as a regional system, and helicopter transport is integral to the provision of these services. The service was founded to serve the critical care health needs of all the people of the region, including you, your family and neighbors.

Thank you for this opportunity to respond to your concerns. I hope you will contact me at your earliest convenience. I look forward to meeting with you and your neighbors.

Respectfully,

Michael K. Copass, M.D.
Medical Director

cc: Federal Aviation Commission
Dennis McLerran, D.C.L.U.
Doris Burns, Montlake Community Club
Beth Means, Seattle Community Council Federation
Sam Smith, Seattle City Council
Mayor Charles Royer
Treuman Katz, Children's Hospital & Medical Center
Robert Muilenburg, University Hospital
David Gitch, Harborview Medical Center
Barbara Larson, Providence Medical Center

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RECEIVED
FEB 6 1989
DEPT. OF CONST. & LAND USE.

January 22, 1989

Children's Hospital
C/O Treuman Catz
P.O. C-5371
Seattle, Wa. 98015

University Hospital
C/O Robert Muilenburg
1959 N.E. Pacific Pl.
Seattle, Wa. 98195

D.C.L.U. - your copy please end extension - Stop Zoning at this Helipad.

Stanley T. Sinex
Portage Bay/Roanoke Park Community Council
2611 Broadway
Seattle, Wa. 98102
(206) 325-8400

Dear Sirs,

We are writing to express our concern on the subject of Airlift Northwest's unreasonable flight pattern, noise pollution, and lack of cooperation.

We have received complaints from our residents as well as Montlake residents over your medivac service's extremely loud engine noise and vibration in our residential homes during normal business hours as well as many 3:00 a.m. arrival and departure flights. We have verified complaint times with Airlift N.W. flights.

We believe that this is caused by the following conditions:

1. They fly below F.A.A. minimum ceiling of 1,000. Eye witnesses available.

2. They have modified their aircraft with the result being a dramatic increase in noise and vibration. (Note: Only military aircraft approach these levels of noise and vibration. Independent tests will prove this.)

3. In their desire to save fuel and maintenance they are short cutting their flight pattern, both by route and flight ceiling level

4. They refuse to work with the community in altering their flight plan to a reasonable height and over the Freeway bridge and through the University of Washington Campus rather than over our residential neighborhoods.

With this letter we will be making a formal complaint to the F.A.A. asking them to revoke their license because of unsafe flying practices and our belief that they have altered their aircraft.

We will also be asking D.C.L.U. to eliminate or severely restrict the Helipad operation until you responsibly establish a medivac Trauma Center at an airport or use Harborviews' facilities.

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We would like to work with you to find a solution to medivac types of services that include establishing a Trauma Center at Boeing Field or Sea-Tac since your current service requires that we subsidize it with negative impacts to our health and the peaceful enjoyment of our Homes.

The success of YOUR service is too much for us to pay.

Sincerely,

Stanley T.Sinex

cc. F.A.A.
Dennis McLerran D.C.L.U.
Doris Burns Montlake Community Club
Beth Means Seattle Community Council Federation
Sam Smith Seattle City Council
Charles Royer Mayor

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8405870 John D

✓

4554 45th Ave NE
Seattle WA 98105
15 May 1989

Mr. Dennis McLerran
400 Municipal Building
Seattle WA 98104

Dear Mr. McLerran:

I am not sure what is the present status of the application by Childrens Orthopedic Hospital for a helipad and for further landings by helicopters in this residential area. Like many people in this area, I fear that the hospital will in some way manage to sneak through a permit and ignore the unanimous wishes of residents in this ~~area~~ neighborhood.

Every helicopter flight is an auditory abomination. While some residents are bothered by the flights of passenger jets over this area, I find that they are relatively easy to tune out. But no one who lives ~~in this area~~ here can tune out a helicopter flight (it's always two flights--first the circling in for a landing, and then later on, a take-off and departure). The noise is so awful that there should be no such flights at all in a residential ~~area~~ section.

Besides, as is evident from almost daily news stories in the press, helicopters have a degree of unreliability that makes every landing and take-off at the hospital a risk to life and property in the area.

Hence I urge--and I am sure that this feeling is unanimous in this area--that no permit be granted for any helicopter landings and take-offs at the hospital. The hospital, however worthy its work, has already inflicted enough damage on a residential neighborhood; it should in no way be permitted to do any more. What is at stake is the quality of life of a whole residential area.

Sincerely yours,

Robert B. Heilman

Robert B. Heilman

MAY 17 1989

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Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Charles Royer, Mayor

May 15, 1989

Re: 4800 Sand Point Way Northeast
(MUP No. 8405870)

Helen Newman
4525 Northeast 50th Street
Seattle, Washington 98105

Dear Ms. Newman:

I understand your concerns and those of your neighbors regarding the noise and safety of helicopter flights at Children's Hospital and Medical Center.

Our department is working with the Environmental Impact Statement (EIS) consultant, experts, and interested parties to gather information for the City Council, which must make a decision on the application. By early this summer we hope to be able to release the Final EIS and our recommendation to the Hearing Examiner.

If you have any questions about the EIS or how you can participate, please call Senior Land Use Specialist, John Doan at 684-8875

Sincerely,

DENNIS J. McLERRAN
Director

cc: Mayor Charles Royer
All City Councilmembers

DJM:as

wp1\luk8\newman1

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April 11, 1989

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APR 1 ? 1989
DEPT. OF CONSTR. & LAND USE

Mr. Dennis McLerran, Director
Dept. of Construction & Land Use
400 Municipal Building
Seattle, WA. 98104

Re: Unauthorized Helicopter Flights - Children's Hospital

Dear Mr. McLerran:

Once again I am writing to express my concern and objection to the unauthorized helicopter landings at Children's Hospital. We in the surrounding neighborhood have been under this pressure for four and a half years.

We have endured the danger of possibility of a helicopter falling on our roofs. Often the helicopter flies so low it barely misses the tree tops. (The FAA measures height by tree tops, incidentally.)

We have endured disruption of sleep as the flights are noisy, jarring, and frightening. This affects little children, senior citizens, and the ill (the latter including my late husband).

It is time to heed the rights of these citizens and to protect their lives. Please stop these dangerous flights.

Please refer to the numerous letters on file in the DCLU office, City Council, and FAA, some of which in answer questioned the height of these flights.

Thank you.

Sincerely,

Helen Newman

Helen Newman
4525 N.E. 50th Street
Seattle, WA. 98105

cc: Mayor Charles Royer
City Council Members:
George E. Benson
Virginia Galle
Paul Kraabel
Jane Noland
Norm Rice
Dolores Sibonga
Sam Smith
Jim Street
Jeanette Williams

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8405870 JD

Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Charles Royer, Mayor

June 9, 1989

Re: 4800 Sand Point Way Northeast
(MUP No. 8405870)

Robert H. Klug, President
Board of Trustees
Laurelhurst Community Club
4013 Northeast 46th Street
Seattle, Washington 98105

Dear Mr. Klug:

Thank you and the other members of the Community Club Board of Trustees for the letter regarding the Children's Hospital helistop permit.

As you know, this project raises a number of complex and unique environmental issues. This has complicated the Environmental Impact Statement (EIS) preparation and made it very time consuming. We are completing our review of the Final EIS and plan to release it and our recommendations this summer.

The notice of violation action against the hospital and the helicopter operator, Airlift Northwest, has been continued to allow completion of the permit process. With our recommendation pending, we will not change that decision at this time. We anticipate instead being able to complete the permit process and reach a final decision on this project soon.

I appreciate the neighbors patience in dealing with this complex issue. If you have any questions or inquiries about the project status, please do not hesitate to call Senior Land Use Specialist John Doan at 684-8875.

Sincerely,

DENNIS J. McLERRAN
Director

cc: Mayor Royer
All City Councilmembers

DJM:jds
\luk9\klug

An equal employment opportunity - affirmative action employer
Seattle Department of Construction and Land Use, 400 Municipal Building, Seattle, Washington 98104
Printed on Recycled Paper

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April 27, 1989

Mr. Dennis McLerran, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA. 98104

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APR 28 9 15 AM
DEPT. OF CONST. & LAND USE

RE: Unauthorized Helicopter Flights at Children's Hospital and Medical Center

Dear Mr. McLerran:

We appreciate and share your concern about preserving the livability of Seattle's neighborhoods.

However, we are not certain that you are aware of the continuous and frequent unauthorized helicopter landings at Children's Hospital. We feel that the adverse public impact and comments concerning these landings have been ignored. Letters of concern are on file as well as testimony at public hearings. Due process regarding the helipad permit is not taking place. After four and one-half years this issue remains unresolved.

Each landing, in increasingly limited space now that enlargement of the Medical Office Building at Children's is in progress, poses endangerment of lives of hundreds of innocent patients, staff and nearby residents. This is particularly true for the residents of the Laurelon Terrace Condominium complex (136 units) contiguous to Children's property and for the single-family residents nearby. Each landing means two flights--one in, another out--placing hundreds of lives in needless jeopardy.

Why does DCLU and City Council give special consideration to Children's Hospital over widespread public objections and the history of medical helicopter crashes? Why does DCLU and City Council allow a continued extension of a temporary permit to land at Children's Hospital? What is the rule for granting continuations of temporary permits--where in the code is this stated? Why have public objections been ignored?

Please do not wait until a tragedy (crash and/or conflagration) occurs before action is taken to halt once and for all these helicopter landings at Children's Hospital in a high-density, residential neighborhood.

Please revoke the temporary permit for landings. Please stop the landings on Children's campus. Please place this on-going, long-suffering issue at the top of your list for the earliest possible resolution in 1989.

Thank you.

Sincerely,

BOARD OF TRUSTEES of the
Laurelhurst Community Club

Myron A Sayles
Barbara Rapp
Grace H. Nelson
Maryann E. Spangler

Please mail responses to:

4013 N.E. 46th Street
Seattle, WA. 98105

cc: Mayor Charles Royer
City Council Members:
George E. Benson
Virginia Galle
Paul Kraabel
Jane Noland
Norm Rice
Dolores Sibonga
Sam Smith
Jim Street
Jeanette Williams

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JTJ

CITY COUNCIL TRANSMITTAL

C. F. #

TO: John Doan
DCLU

RECEIVED
FEB 21 1989
DEPT OF CONSTRUCTION & LAND USE

Date Sent: 2/17

Reply Requested By: 3/3/89

FROM: Darlene Flynn
for Jim Street, City Council

Subject: Attached comment letter.

ACTION — required

	Review and Return File With Your Answer to Sender
X	Review and Answer Petitioner, Return File and Copy of Answer to Sender & with Status of project review and include letter in file.
	Copy to my attention, Review and Make Recommendations, Return File and Recommendations to Sender ( ) In Duplicate
	Prepare Legislation and Return File to Sender

Additional Information:

Thank you,

Darlene Flynn
Signature

LDI – 110–5002 CS 20.19

4658-41st Ave NE
Seattle Wa 98105

February 8, 1989

RECEIVED
FEB 21 1989
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Jim Street,

I have lived in the Laurelhurst area for over 35 years. When I moved into my present home, I gave no thought to the hospital.

The first time the hospital decided to do was build a parking lot that would not be seen from Sand Point. You can see it from Sand Point.

Then a little over five years ago I was awakened between 1 or 2 AM by a loud noise. I thought it was a helicopter but why so low. It was landing at the hospital. We have had several meetings only to be told the helipad would be used only in emergency and that a doctor from the hospital would determine if it was an emergency. I question what happened to the other emergencys before this time.

There weren't many! I remember that a helicopter would land at the bottom of the hill on what is now known as a baseball field. The helicopter would be met by an ambulance and a police escort that would take them up the hill to the hospital. I've learned that once a place offers a service or special service, people say 'Let's go there they offer this or that'.

So have this service offered for over 5 years with no consideration to the residents and the school is unbelievable. In one of the meetings, one of our

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residents asked How often do you have accidents involving helicopters?' The reply was One every 20 years.' When questioned when in the 20 years were we now - the resident got no reply.

I feel the need for a helipad is not important, especially when the reason is to be able to come to well other hospitals - like the University Hospital, which is less than 5 miles away, both owned by the University of Washington.

The hospital is now building a new building that is going to take over 2 years to build. The original concept of the hospital was to be a college hospital. Some college! When will it stop!

This helipad is an accident just waiting to happen. I hope that both the city and the helicopter service - not to forget to mention the Children's Hospital have enough money saved to pay the suits that will be filed.

Allen C Cabby

VL-11 5/62

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Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Charles Royer, Mayor

February 22, 1989

Re: 4800 Sand Point Way N.E.
(MUP #8405870)

Suzanne Peterson, Director
Governmental Relations
Children's Hospital and Medical Center
4800 Sand Point Way N.E.
P.O. Box C5371
Seattle, Washington 98105

Dear Ms. Peterson:

This is in regard to the permit application for a helistop on the Children's Hospital Campus.

At application for your permit, $272.50 was paid to cover the environmental review. The Permit Fee Ordinance establishes that the fee for an Environmental Impact Statement is a function of the project's construction value. The helistop proposal is unusual because it has no valuation for fee calculation purposes. The fee ordinance provides that special fees shall be assessed to recover city costs where the valuation or other methodology normally used (to determine costs) does not reflect actual costs. In conformance with this, we will be charging you the hourly fee of $71.00 per hour for the time spent on the EIS.

Because we are informing you of this at this late date, you will only be responsible for the environmental review costs incurred after January 1, 1989. Payment of these fees and those owing as a result of the Council Conditional Use will be due prior to our publication of a decision. The Conditional Use charges through 1988 are approximately $7,500.00.

This information is being provided to help you plan for the resolution of this issue. If you have any questions, please do not hesitate to call me at 684-8875.

Sincerely,

DENNIS McLERRAN
Director

By
JOHN T. DOAN
Land Use Specialist

JTD:lls
wp2\speter$

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Ave. Hours CCU 16.35

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

POST-1989 TIME SPENT ON PROJECT 8405870 OR CASE 0 AS OF 1992-04-15 PAGE 1

DIV	SECT			PROJ NR	CASE NR	COMP	ACTVY	REG	OT
LU	SP	FLUMSDE	1991-11-12	8405870	0	CC	P	0.50	0.00
			1991-11-25	8405870	0		XFL	0.50	0.00
			1991-12-26	8405870	0	CC	P	0.50	0.00
								1.50	0.00
								1.50	0.00
LU	LR	FLUMSDE	1992-01-02	8405870	0	CC	P	2.00	0.00
			1992-01-06	8405870	0	CC	XSU	0.50	0.00
			1992-01-07	8405870	0		XPI	0.50	0.00
			1992-01-10	8405870	0	CC	P	2.00	0.00
			1992-02-04	8405870	0	FD	P	0.50	0.00
			1992-02-21	8405870	0	CC	P	1.00	0.00
			1992-03-06	8405870	0	CC	P	1.50	0.00
			1992-03-06	8405870	0	FD	P	0.50	0.00
			1992-03-20	8405870	0	CC	P	1.00	0.00
			1992-03-24	8405870	0	CC	P	1.00	0.00
			1992-03-24	8405870	0	FD	P	1.00	0.00
			1992-04-13	8405870	0	FD	P	1.00	0.00
			1992-04-14	8405870	0	CC	P	6.50	0.00
								19.00	0.00
								19.00	0.00
LU	SP	JDOAN	1990-02-26	8405870	-	SR	FE	1.50	0.00
			1990-03-26	8405870	-	SR	FE	1.00	0.00
			1990-04-09	8405870	-	SR	FE	2.00	0.00
			1990-04-16	8405870	-	SR	FE	1.50	0.00
			1990-04-29	8405870	-	SR	FE	1.00	0.00
			1990-04-30	8405870	-	SR	FE	3.50	0.00
			1990-05-14	8405870	-	SR	P	1.00	0.00
			1990-05-21	8405870	-	SR	FE	2.00	0.00
			1990-05-21	8405870	0	SR	FE	2.50	0.00
			1990-06-18	8405870	0	CC	P	1.00	0.00
			1990-07-30	8405870	0	SR	FE	3.00	0.00
			1990-08-27	8405870	0	CC	P	3.00	0.00
			1990-09-10	8405870	0	CC	P	2.50	0.00
			1990-12-24	8405870	0	CC	P	0.50	0.00
			1991-01-21	8405870	0	SR	FE	1.50	0.00

Assign 9 misc. (blue) hours to SR per CP.

16.5 3

23.5 1

23.5

1991-02-25	8405870	0	CC	P	1.00	0.00
1991-03-04	8405870	0		P	1.00	0.00
1991-03-11	8405870	0	FE	P	0.25	0.00
1991-03-12	8405870	0	FE	P	1.00	0.00
1991-03-14	8405870	0	FE	P	2.00	0.00
1991-03-19	8405870	0		P	1.50	0.00
1991-03-22	8405870	0		P	4.00	0.00
1991-03-25	8405870	0	CC	P	1.50	0.00
1991-04-02	8405870	0	CC	P	0.50	0.00
1991-04-03	8405870	0	CC	P	1.25	0.00

53.5

2

27.75

26.75

1.5

POST-1989 TIME SPENT ON PROJECT 8405870 OR CASE 0 AS OF 1992-04-15

DIV	SECT			PROJ NR	CASE NR	COMP	ACTVY	REG	OT
LU	SP	JDOAN	1991-04-05	8405870	0	SR	FE	2.50	0.00
			1991-04-08	8405870	0	CC	P	0.50	0.00
			1991-04-15	8405870	0	CC	P	0.50	0.00
			1991-04-16	8405870	0	CC	P	0.50	0.00
			1991-04-17	8405870	0	CC	P	0.75	0.00
			1991-04-18	8405870	0	CC	P	1.50	0.00
			1991-04-22	8405870	0	CC	P	0.50	0.00
			1991-04-23	8405870	0	CC	P	2.25	0.00
			1991-04-24	8405870	0	CC	P	1.50	0.00
			1991-04-25	8405870	0		P	2.00	0.00
			1991-04-26	8405870	0	CC	P	0.50	0.00
			1991-05-01	8405870	0	CC	P	0.50	0.00
			1991-05-02	8405870	0	CC	P	1.00	0.00
			1991-05-03	8405870	0	CC	P	1.00	0.00
			1991-05-06	8405870	0	CC	P	1.00	0.00
			1991-05-08	8405870	0	CC	P	0.50	0.00
			1991-05-13	8405870	0	CC	P	0.50	0.00
			1991-05-14	8405870	0	CC	P	2.50	0.00
			1991-05-21	8405870	0	CC	P	3.00	0.00
			1991-06-03	8405870	0	CC	P	1.50	0.00
			1991-07-01	8405870	0	SR	FE	0.50	0.00
			1991-07-15	8405870	0	SR	P	0.50	0.00
			1991-07-16	8405870	0	SR	XFL	0.50	0.00
			1991-07-16	8405870	0	CC	P	0.50	0.00
			1991-08-14	8405870	0	CC	P	0.25	0.00
								68.25	0.00
								68.25	0.00
								88.75	0.00

48.5

30.75

9.5

TS_HOURS: LU SPECIALIST TIMESHEET HOURS AS OF 1992-04-15

4

48.5

PROJ NR	PERSON	CODE	DATE	TIME
8405870	DOAN	CC	880909	0.50
			881216	0.50
			881223	0.50
			870109	0.75
			870123	0.50
			870130	0.50
			870206	0.75
			870220	0.75
			870227	1.50
			870306	0.50
			870313	0.75
			870320	1.00
			870403	2.50
			870417	5.50
			870424	4.50
			870529	0.75
			871106	1.50
			871113	5.00
			871218	2.00
			880108	1.00
			880115	1.00
			880610	3.00
			880617	0.50
		CC SUB-TOTAL		35.75
		DE	870130	2.00
			870123	1.25
			870116	7.25
			870109	3.75
		DE SUB-TOTAL		14.25
		FE	870109	1.50
			870116	0.25
			870123	1.50
			870213	0.50
			870619	3.00
			870703	5.50
			870710	3.00
			870807	8.50
			870814	6.00
			870828	6.00

84.25

870904	6.00
870925	4.50
871002	3.50
880624	3.00
880715	14.00
880722	1.50
880610	2.00
880527	5.00
880603	3.50
880212	0.50

TS_HOURS: LU SPECIALIST TIMESHEET HOURS AS OF 1992-04-15

PROJ NR	PERSON	CODE	DATE	TIME
8405870	DOAN	FE	880219	1.00
			880304	1.00
			880311	3.50
			880318	2.00
			880401	0.25
			880429	0.50
			880520	2.00
			871218	0.50
			880101	3.50
			871211	2.50
			871127	3.00
			871204	5.00
			871106	2.50
			871113	3.00
			871120	1.00
			871030	1.50
			871016	4.50
			871023	2.00
			890217	1.50
			890303	0.50
			890310	2.50
			890317	2.00
			890324	1.50
			890414	2.00
			890505	1.00
			881209	1.00
			880916	1.00
			881202	1.50
			880812	8.00
			880729	1.00
			880805	1.50
			890512	6.00
			890519	2.50
			890526	5.50
			890602	4.50
			890616	1.00
			890619	0.50
			890630	0.50
			890714	2.00
			890721	1.00
			890728	2.50
			890811	0.50
			890825	0.25

6

41.75

68.5

	891027	1.00
	891124	1.00
	891222	0.50
FE SUB-TOTAL		172.75
DOAN SUB-TOTAL		222.75
GETCHES	DE 860822	2.00

 TS_HOURS: LU SPECIALIST TIMESHEET HOURS AS OF 1992-04-15

PROJ NR	PERSON	CODE	DATE	TIME
		DE SUB-TOTAL		2.00
8405870	GETCHES	SR	860926	3.00
			880101	1.50
		SR SUB-TOTAL		4.50
		GETCHES SUB-TOTAL		6.50
	GIBB	DE	860124	3.25
			860131	2.75
			860207	10.25
			860214	13.25
			860221	0.75
			860228	2.25
			860307	2.75
			860314	4.25
			860321	0.50
			860328	5.75
			860404	12.25
			860418	1.25
			860425	2.50
			860606	11.00
			860606	11.00
			860618	4.00
			860627	0.25
			860725	8.00
			860815	1.75
			860822	4.25
			860829	1.25
		DE SUB-TOTAL		103.25
		FE	860926	15.00
			861003	4.75
			861010	8.50
			861017	8.50
			861024	6.00
			861031	0.75
			861107	3.25
			861114	2.50

	861121	8.75
	861205	1.25
	861212	0.75
	861219	1.75
	861226	5.50
FE SUB-TOTAL		67.25
FL	870102	3.00

TS_HOURS: LU SPECIALIST TIMESHEET HOURS AS OF 1992-04-15

PROJ NR	PERSON	CODE	DATE	TIME
		FL SUB-TOTAL		3.00
8405870	GIBB	SR	860926	2.50
			860822	4.50
			860815	5.75
			860829	8.50
			860905	1.50
			860912	2.00
			860919	2.00
			860808	0.25
			860725	5.50
			860801	6.25
			860703	0.25
			860627	0.25
			860618	0.25
			860606	0.50
			860606	0.50
			860530	0.25
			860530	0.25
			860502	1.25
			860509	0.50
			860516	1.25
			860523	7.25
			860117	17.75
			860110	7.00
			860110	3.00
			851227	14.25
			860103	7.00
		SR SUB-TOTAL		100.25
		GIBB SUB-TOTAL		273.75
IP		CC	850118	2.75
			850125	2.00
			850131	4.50
			850208	2.75
			850215	2.75
			850222	3.25
			850301	2.00
			850308	2.00
			850419	2.00

850426	0.50
850503	0.50
850510	0.75
850517	2.00
850607	2.25
850802	0.75
850802	0.75
851101	6.75
851108	5.75
851115	8.25

136.5

 TS_HOURS: LU SPECIALIST TIMESHEET HOURS AS OF 1992-04-15

PROJ NR	PERSON	CODE	DATE	TIME
8405870	IP	CC	851123	6.75
			851129	7.25
		CC SUB-TOTAL		66.25
		CU	850823	1.25
			850816	4.00
			850531	4.00
		CU SUB-TOTAL		9.25
		SP	850408	1.00
			850131	2.75
		SP SUB-TOTAL		3.75
		SR	850322	5.50
			850408	0.50
			850809	0.50
		SR SUB-TOTAL		6.50
		IP SUB-TOTAL		85.75
	MULDER	FE	890421	3.00
		FE SUB-TOTAL		3.00
		MULDER SUB-TOTAL		3.00
	PORTMAN	?	841221	1.00
		? SUB-TOTAL		1.00
		CC	850426	0.50
			851129	3.00
			851206	2.50
		CC SUB-TOTAL		6.00
		MI	860801	1.50

CC 165.75

SETA 74

MISC. BILLABLE 9.5

MI SUB-TOTAL		1.50
SR	860103	1.50
	851122	1.00
SR SUB-TOTAL		2.50
PORTMAN SUB-TOTAL		11.00

PAGE 6 TS_HOURS: LU SPECIALIST TIMESHEET HOURS AS OF 1992-04-15

PROJ NR	PERSON	CODE	DATE	TIME
				602.75
			***	602.75

249.25
+ 4.00 9106441
+ 50.00 FINAL DECISION + HEARING

POST-1989 TIME SPENT ON PROJECT 9106441 OR CASE 0 AS OF 1992-04-20

DIV	SECT			PRDJ NR	CASE NR	COMP	ACTVY	REG	OT
LU	LR	FLUMSDE	1992-02-04	9106441	0	CC	P	0.50	0.00
			1992-02-20	9106441	0	CC	P	0.50	0.00
			1992-02-28	9106441	0	SR	P	0.25	0.00
			1992-03-06	9106441	0	CC	P	1.00	0.00
			1992-03-20	9106441	0	CC	P	1.00	0.00
			1992-04-15	9106441	0	CC	P	0.75	0.00
								4.00	0.00
								4.00	0.00
LU	ZD	RBAKER	1992-01-10	9106441	0		IP	1.50	0.00
								1.50	0.00
								1.50	0.00
								5.50	0.00

3.75 @ $110/hr = 412.50

1 @ $71/hr = 266.25

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POST-1989 TIME SPENT ON PROJECT 8405870 OR CASE 0 AS OF 1992-04-15 PAGE 1

DIV	SECT			PROJ NR	CASE NR	COMP	ACTVY	REG	OT
LU	SP	FLUMSDE	1991-11-12	8405870	0	CC	P	0.50	0.00
			1991-11-25	8405870	0		XFL	0.50	0.00
			1991-12-26	8405870	0	CC	P	0.50	0.00
								1.50	0.00
								1.50	0.00
LU	LR	FLUMSDE	1992-01-02	8405870	0	CC	P	2.00	0.00
			1992-01-06	8405870	0	CC	XSU	0.50	0.00
			1992-01-07	8405870	0		XPI	0.50	0.00
			1992-01-10	8405870	0	CC	P	2.00	0.00
			1992-02-04	8405870	0	FD	P	0.50	0.00
			1992-02-21	8405870	0	CC	P	1.00	0.00
			1992-03-06	8405870	0	CC	P	1.50	0.00
			1992-03-06	8405870	0	FD	P	0.50	0.00
			1992-03-20	8405870	0	CC	P	1.00	0.00
			1992-03-24	8405870	0	CC	P	1.00	0.00
			1992-03-24	8405870	0	FD	P	1.00	0.00
			1992-04-13	8405870	0	FD	P	1.00	0.00
			1992-04-14	8405870	0	CC	P	6.50	0.00
								19.00	0.00
								19.00	0.00
LU	SP	JDOAN	1990-02-26	8405870	-	SR	FE	1.50	0.00
			1990-03-26	8405870	-	SR	FE	1.00	0.00
			1990-04-09	8405870	-	SR	FE	2.00	0.00
			1990-04-16	8405870	-	SR	FE	1.50	0.00
			1990-04-29	8405870	-	SR	FE	1.00	0.00
			1990-04-30	8405870	-	SR	FE	3.50	0.00
			1990-05-14	8405870	-	SR	P	1.00	0.00
			1990-05-21	8405870	-	SR	FE	2.00	0.00
			1990-05-21	8405870	0	SR	FE	2.50	0.00
			1990-06-18	8405870	0	CC	P	1.00	0.00
			1990-07-30	8405870	0	SR	FE	3.00	0.00
			1990-08-27	8405870	0	CC	P	3.00	0.00
			1990-09-10	8405870	0	CC	P	2.50	0.00
			1990-12-24	8405870	0	CC	P	0.50	0.00
			1991-01-21	8405870	0	SR	FE	1.50	0.00

1991-02-25	8405870	0	CC	P	1.00	0.00
1991-03-04	8405870	0		P	1.00	0.00
1991-03-11	8405870	0	FE	P	0.25	0.00
1991-03-12	8405870	0	FE	P	1.00	0.00
1991-03-14	8405870	0	FE	P	2.00	0.00
1991-03-19	8405870	0		P	1.50	0.00
1991-03-22	8405870	0		P	4.00	0.00
1991-03-25	8405870	0	CC	P	1.50	0.00
1991-04-02	8405870	0	CC	P	0.50	0.00
1991-04-03	8405870	0	CC	P	1.25	0.00

POST-1989 TIME SPENT ON PROJECT 8405870 OR CASE 0 AS OF 1992-04-15 PAGE 2

DIV	SECT		PROJ NR	CASE NR	COMP	ACTVY	REG	OT
LU	SP	JDOAN	1991-04-05	8405870	0	SR	FE	2.50	0.00
			1991-04-08	8405870	0	CC	P	0.50	0.00
			1991-04-15	8405870	0	CC	P	0.50	0.00
			1991-04-16	8405870	0	CC	P	0.50	0.00
			1991-04-17	8405870	0	CC	P	0.75	0.00
			1991-04-18	8405870	0	CC	P	1.50	0.00
			1991-04-22	8405870	0	CC	P	0.50	0.00
			1991-04-23	8405870	0	CC	P	2.25	0.00
			1991-04-24	8405870	0	CC	P	1.50	0.00
			1991-04-25	8405870	0		P	2.00	0.00
			1991-04-26	8405870	0	CC	P	0.50	0.00
			1991-05-01	8405870	0	CC	P	0.50	0.00
			1991-05-02	8405870	0	CC	P	1.00	0.00
			1991-05-03	8405870	0	CC	P	1.00	0.00
			1991-05-06	8405870	0	CC	P	1.00	0.00
			1991-05-08	8405870	0	CC	P	0.50	0.00
			1991-05-13	8405870	0	CC	P	0.50	0.00
			1991-05-14	8405870	0	CC	P	2.50	0.00
			1991-05-21	8405870	0	CC	P	3.00	0.00
			1991-06-03	8405870	0	CC	P	1.50	0.00
			1991-07-01	8405870	0	SR	FE	0.50	0.00
			1991-07-15	8405870	0	SR	P	0.50	0.00
			1991-07-16	8405870	0	SR	XFL	0.50	0.00
			1991-07-18	8405870	0	CC	P	0.50	0.00
			1991-08-14	8405870	0	CC	P	0.25	0.00
								68.25	0.00
								68.25	0.00
								88.75	0.00

TS_HOURS: LU SPECIALIST TIMESHEET HOURS AS OF 1992-04-15

PROJ NR	PERSON	CODE	DATE	TIME
8405870	DOAN	CC	880909	0.50
			881216	0.50
			881223	0.50
			870109	0.75
			870123	0.50
			870130	0.50
			870206	0.75
			870220	0.75
			870227	1.50
			870306	0.50
			870313	0.75
			870320	1.00
			870403	2.50
			870417	5.50
			870424	4.50
			870529	0.75
			871106	1.50
			871113	5.00
			871218	2.00
			880108	1.00
			880115	1.00
			880610	3.00
			880617	0.50

		CC SUB-TOTAL		35.75
		DE	870130	2.00
			870123	1.25
			870116	7.25
			870109	3.75

		DE SUB-TOTAL		14.25
		FE	870109	1.50
			870116	0.25
			870123	1.50
			870213	0.50
			870619	3.00
			870703	5.50
			870710	3.00
			870807	8.50
			870814	6.00
			870828	6.00

870904	6.00
870925	4.50
871002	3.50
880624	3.00
880715	14.00
880722	1.50
880610	2.00
880527	5.00
880603	3.50
880212	0.50

TS_HOURS: LU SPECIALIST TIMESHEET HOURS AS OF 1992-04-15

PROJ NR	PERSON	CODE	DATE	TIME
8405870	DOAN	FE	880219	1.00
			880304	1.00
			880311	3.50
			880318	2.00
			880401	0.25
			880429	0.50
			880520	2.00
			871218	0.50
			880101	3.50
			871211	2.50
			871127	3.00
			871204	5.00
			871106	2.50
			871113	3.00
			871120	1.00
			871030	1.50
			871016	4.50
			871023	2.00
			890217	1.50
			890303	0.50
			890310	2.50
			890317	2.00
			890324	1.50
			890414	2.00
			890505	1.00
			881209	1.00
			880916	1.00
			881202	1.50
			880812	8.00
			880729	1.00
			880805	1.50
			890512	6.00
			890519	2.50
			890526	5.50
			890602	4.50
			890616	1.00
			890619	0.50
			890630	0.50
			890714	2.00
			890721	1.50
			890728	2.50
			890811	0.50
			890825	0.25

		891027	1.00
		891124	1.00
		891222	0.50
		FE SUB-TOTAL	172.75
		DOAN SUB-TOTAL	222.75
GETCHES	DE	860822	2.00

TS_HOURS: LU SPECIALIST TIMESHEET HOURS AS OF 1992-04-15

PROJ NR	PERSON	CODE	DATE	TIME
		DE SUB-TOTAL		2.00
8405870	GETCHES	SR	860926	3.00
			880101	1.50
		SR SUB-TOTAL		4.50
		GETCHES SUB-TOTAL		6.50
	GIBB	DE	860124	3.25
			860131	2.75
			860207	10.25
			860214	13.25
			860221	0.75
			860228	2.25
			860307	2.75
			860314	4.25
			860321	0.50
			860328	5.75
			860404	12.25
			860418	1.25
			860425	2.50
			860606	11.00
			860606	11.00
			860618	4.00
			860627	0.25
			860725	8.00
			860815	1.75
			860822	4.25
			860829	1.25
		DE SUB-TOTAL		103.25
		FE	860926	15.00
			861003	4.75
			861010	8.50
			861017	8.50
			861024	6.00
			861031	0.75
			861107	3.25
			861114	2.50

	861121	8.75
	861205	1.25
	861212	0.75
	861219	1.75
	861226	5.50

FE	SUB-TOTAL	67.25
FL	870102	3.00

TS_HOURS: LU SPECIALIST TIMESHEET HOURS AS OF 1992-04-15

PROJ NR	PERSON	CODE	DATE	TIME
		FL SUB-TOTAL		3.00
8405870	GIBB	SR	860926	2.50
			860822	4.50
			860815	5.75
			860829	8.50
			860905	1.50
			860912	2.00
			860919	2.00
			860808	0.25
			860725	5.50
			860801	6.25
			860703	0.25
			860627	0.25
			860618	0.25
			860606	0.50
			860606	0.50
			860530	0.25
			860530	0.25
			860502	1.25
			860509	0.50
			860516	1.25
			860523	7.25
			860117	17.75
			860110	7.00
			860110	3.00
			851227	14.25
			860103	7.00
		SR SUB-TOTAL		100.25
		GIBB SUB-TOTAL		273.75
	IP	CC	850118	2.75
			850125	2.00
			850131	4.50
			850208	2.75
			850215	2.75
			850222	3.25
			850301	2.00
			850308	2.00
			850419	2.00

850426	0.50
850503	0.50
850510	0.75
850517	2.00
850607	2.25
850802	0.75
850802	0.75
851101	6.75
851108	5.75
851115	8.25

TS_HOURS: LU SPECIALIST TIMESHEET HOURS AS OF 1992-04-15

PROJ NR	PERSON	CODE	DATE	TIME
8405870	IP	CC	851123	6.75
			851129	7.25
		CC SUB-TOTAL		66.25
		CU	850823	1.25
			850816	4.00
			850531	4.00
		CU SUB-TOTAL		9.25
		SP	850408	1.00
			850131	2.75
		SP SUB-TOTAL		3.75
		SR	850322	5.50
			850408	0.50
			850809	0.50
		SR SUB-TOTAL		6.50
		IP SUB-TOTAL		85.75
	MULDER	FE	890421	3.00
		FE SUB-TOTAL		3.00
		MULDER SUB-TOTAL		3.00
	PORTMAN	?	841221	1.00
		? SUB-TOTAL		1.00
		CC	850426	0.50
			851129	3.00
			851206	2.50
		CC SUB-TOTAL		6.00
		MI	860801	1.50

MI SUB-TOTAL		1.50
SR	860103	1.50
	851122	1.00
SR SUB-TOTAL		2.50
PORTMAN SUB-TOTAL		11.00

PROJ NR	PERSON	CODE	DATE	TIME
			***	602.75
				602.75

1988

March 2, 1988

SHAPIRO & ASSOCIATES INC
The Smith Tower
Suite 1812
506 Second Avenue
Seattle
Washington 98104
206/624-9190

RECEIVED
MAR 3 1988
DEPT. OF CONSTRUCTION & LAND USE

Mr. John Doan
Department of Construction and Land Use
City of Seattle
402 Municipal Building
Seattle, WA 98109

Dear John:

Per your request, I am identifying the items related to the proposed Children's Helistop that have changed from the time that the Draft EIS was issued to date. I also am providing some brief statements on how the changes may relate to the consideration of whether a Supplemental or an Addendum is appropriate, or whether the Final EIS would be sufficient.

A. REGULATORY BACKGROUND

The following provisions of the Seattle SEPA Ordinance were considered:

Supplemental EIS

SMC 25.05.405 (4) states that:

"A supplemental EIS (SEIS) shall be prepared as an addition to either a draft of final statement if:

(a) There are substantial changes to a proposal so that the proposal is likely to have significant adverse environmental impacts; or

(b) There is significant new information indicating, or on, a proposal's probable significant adverse environmental impacts."

EIS Addendum

SMC 25.05.600 (4) states that:

"Existing documents may be used for a proposal by employing one or more of the following methods:...

(c) An addendum, that adds analyses or information about a proposal but does not substantially change the analysis of significant impacts and alternatives in the existing environmental documentation."

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Final EIS

SMC 25.05.560 (1) states that:

an FEIS response to comments shall be prepared by one or more of the following means:

"(a) Modify alternatives including the proposed action.

(b) Develop and evaluate alternatives not previously given detailed consideration by the agency.

(c) Supplement, improve or modify the analysis.

(d) Make factual corrections..."

B. CHANGES

The following items are the key changes that I've identified:

The Preferred Alternative: The Preferred Alternative, which was presented in the preliminary Final EIS but not the Draft EIS, is a combination of features from the Proposed Action, the Intramural Field Alternative and the No Action Alternative. This alternative would appear to be consistent with SMC 25.05.560 (1), (a) and (b).

Loss of University Helistop Alternative: The 'Rooftop' Alternative was an alternative that was mandated by the City through its scoping process. The "Rooftop" was intended to serve as a 'reasonable alternative of lesser environmental impact' with respect to the concern regarding establishment of precedents. It never was a medically acceptable alternative in the minds of CHMC. Consequently, CHMC indicated that it would not pursue the alternative if it were the Build Alternative that was approved by the City.

The withdrawal of the University's support and pursuit of this alternative does not alter the 'availability' of other helistops (i.e. The Intramural Field) to serve as a reasonable alternative of lesser environmental impact with respect to the concern regarding establishment of precedents.

Helicopter Basing: The Airlift helicopter is now based at Harborview instead of at Boeing Field. Medical transport teams are at Harborview rather than at CHMC as envisioned when the Draft EIS was issued. Consequently, instead of the helicopter landing at CHMC to pick up the medical transport team, the helicopter is flying directly to pick up the patient. Thus, for every patient being transported there is only one round-trip into CHMC: while the number of patients being transported is effectively the same, the total number of flights in and out of CHMC is less than what was assumed in the Draft EIS.

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Flight Numbers: The Proposed Action and Alternatives are structured around building a helistop that would allow critically ill and injured children to be transported by helicopter to CHMC. It was assumed that for every patient transported to CHMC there would be two round trip flights landing at the Proposed Helistop: one to land and leave with the medical transport team to pick up the patient; the other to deliver the patient and leave to return to base. The patient transport numbers initially estimated by CHMC and Airlift Northwest were provided as a means to quantify noise and risk of accident impacts.

Actual patient transport numbers reveal that the estimates for 1990 in the Draft EIS (15-20/month) were achieved in 1987, when there was an average of 15 patient transports per month. It is uncertain as to whether the number of patients being transported would exceed the upper bound (20/month) by 1990.

Safety Data: The data that have been assembled on EMS aircraft safety have been growing by leaps and bounds. Data are now available and presented in the Final EIS that simply had not been collected or interpreted by any group or agency at the time that the Draft EIS was issued.

We now have better data on accident rates by patient transport rather than by engine time (Incidentally, the accident rate dropped dramatically from approximately 20.7 accidents per 100,000 patient transports in 1985, which was presented in the Draft EIS, to approximately 4.5 accidents per 100,000 patient transports in 1987).

There also are better data on accident causes for EMS operations. These in part serve as a basis for the development of recommendations from NTSB and 11 other agencies, as discussed below.

The NTSB Report: In response to the EMS accident rate that occurred during the mid-1980s, the NTSB was commissioned to investigate causes of EMS accidents and means by which EMS helicopter operations could be improved. The results of the investigation were presented at the Helicopter Association International (HAI) EMS Safety Seminar last month and the report will be on the streets in March. It does not appear as though there will be recommendations that are substantially different than Airlift Northwest's existing operations.

Professional Organization Safety Guidelines: Again, in response to the EMS accident rate that occurred during the mid-1980s, the American Society of Hospital Based Emergency Aeromedical Services (ASHBEAMS) and the National Emergency Medical Services Pilots Association (NEMSPA) established guidelines for the pilots of their member organizations. At the time of the issuance of the Draft EIS these standards had not been

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finalized; the guidelines, however, have been finalized since. Airlift Northwest's consistency with these guidelines are examined in the Final EIS. According to Airlift, there are no important departures from the provisions of the NEMSPA and ASHBEAMS guidelines.

It should be noted that the National Flight Nurses Association is intending to develop safety guidelines this summer.

Federal Aviation Administration: The FAA has updated (January 1988) their Advisory Circular on Helistop Design Guidelines. The preliminary Final EIS evaluated, in response to a comment, the consistency of the Children's Helistop with the provisions of the earlier version of the FAA Circular (The helistop was consistent.).

Based on conversations with FAA representatives regarding the contents of the new Circular, I believe that the proposed helistop design will remain consistent with FAA guidelines.

DSHS: At the time that the Draft EIS was issued, the Air Ambulance Subcommittee of the Washington State Medical Association's EMS Standards Committee was investigating the development of guidelines for the use of helicopters. DSHS since has taken the committee recommendations and proposed amendments to the WAC to address licensing, personnel, equipment, and selection and use of air ambulances.

Dr. Nicola did review (in his second report to DCLU) patient transports to CHMC with respect to the proposed guidelines and determined that the helicopter transports were appropriate.

Airlift Northwest Expansion: The Airlift consortium recently added St. Joseph's of Tacoma as an Associate Member of the consortium. This brings Mary Bridge Children's Hospital into the consortium as an Associate Member. Although there is some services that both CHMC and Mary Bridge offer, Airlift believes that because their EMS helicopter service is a service to the referring physician (rather than to a hospital) that the patient transport pattern will not change significantly, if at all. The number of patients transported to CHMC is not expected to change as a result of this addition.

General Changes to the EIS: As a result of comments on the Draft EIS, as well as other research, there have been a number of subtle changes and modifications to the text provided in the Final EIS. These changes include more detail on dispatching, ground transport times, updating the Nicola report and a variety of other improvements, as well as the fact that the City has granted permits for helistops elsewhere in the City.

In examining these changes, it does not appear as though there is new information that has a bearing on the significance of the adverse environmental impacts. Based upon the cited sections of the Seattle SEPA

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Ordinance, there are neither substantial changes to the proposal or significant information which would require a supplemental EIS or recirculation of the EIS in draft form. The new information that has been obtained since the Draft EIS has been incorporated into the preliminary Final EIS in order to supplement and improve the analysis.

In any case I hope that this information has been helpful to you. If you should have any questions, I'd be pleased to discuss them with you.

Sincerely,

SHAPIRO AND ASSOCIATES, INC.

Glenn Bachman
Vice President, Planning

cc: Nancy Greenawalt

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~~DH~~ NF✓ CP✓ JTD✓

RECEIVED
DEC 5 1988
DEPT. OF CONST. & LAND USE

5003 45th Ave. N.E.
Seattle, WA 98105
November 29, 1988

Dennis McLerran, Director
Dept. of Construction and Land Use
600 Fourth Avenue
Seattle, WA 98104

Dear Mr. McLerran:

The intent of this letter is to follow up on and confirm Liz Anderson's phone conversation with you on November 22. The memorandum we recently received from Peter Eglick, attorney, stated that you received a call from Treuman Katz, Chief Executive Officer of Childrens Hospital. Apparently, Mr. Katz had suggested to you that he wants to make another effort at negotiating with the community on issues "relating to the helipad and other concerns."

We appreciate your efforts to help us reach a settlement on these matters. As a general policy, we are always willing to work on good faith efforts at negotiating. We would be pleased to receive in writing from Childrens Hospital any proposals that they are interested in making. Only by seeing such proposals is it possible for us to be definite about whether negotiations would be fruitful.

As you know, we have met Hospital representatives many times over the past four years. We have asked for additional information and they have denied the requests, we have asked for reviews of land use policies and they have said their lawyers argue against even discussing such things; so we are not optimistic about the value of yet more discussion. However, if they wish to make specific proposals we will certainly review them and respond. We are interested in a resolution of the many issues between the community and the Hospital.

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The helicopter landing site at the Hospital emergency door is inherently dangerous and, as you know, we are unhappy about the continuing illegal landings at the Hospital, in violation of the city code. These landings at the Hospital are especially aggravating since there is a safe, open, level landing site nearby.

Thanks again for your efforts on this issue.

Sincerely,

Anita

Anita Francis

(for) Laurelhurst Community Club/
CHMC liaison committee
Liz Anderson
Kate Hemer
Jerry Schneider

cc: R. Klug, President, LCC
Peter Eglick, Atty.

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RECEIVED
DEC 5 1988
DEPT. OF CONST. & LAND USE

4746 45th Ave. N.E.
Seattle, WA 98105
November 22, 1988

Dennis McLerran, Director
Department of Construction and Land Use
The Municipal Building
600 Fourth Ave.
Seattle, WA 98104

Dear Mr. McLerran:

Thanks very much for returning my recent calls. I know your schedule must be incredibly busy these days. Laurelhurst Community appraciates your interest in our problems and the time you spend on them.

As I understand from our conversation, you share our concern that we must have adequate time to review the FEIS and, understandably, this precludes our reviewing it during the holidays. You also understand that we are concerned that we have enough time to review the document and get our comments to you so that you may review them prior to making your recommendation. Thanks for your reassurance on these matter and for your continued help.

Sincerely,

Liz

Liz Anderson

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John D.

Children's
Hospital & Medical Center

4800 Sand Point Way N.E. P.O. Box C5371 Seattle, Washington 98105 (206) 526-2000

RECEIVED
MAR 16 1988
DEPT. OF CONST. & LAND USE

March 14, 1988

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Holly:

Per my discussion with Randy Revelle today, I am sending you a copy of the proposed medical review committee plan originally sent to the Laurelhurst community in July, 1987. I would be happy to discuss any questions you might have regarding the plan.

Sincerely,

Nancy

Nancy Greenawalt
Director, Government Affairs

nmg

Enclosure

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Children's
Hospital & Medical Center

4800 Sand Point Way N.E. P.O. Box C5371 Seattle Washington 98105 (206) 526-2000

August 10, 1987

Katy Chaney, Acting Director
for Holly Miller, Director
Department of Construction & Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Katy:

On Monday, July 27, I gave Liz Anderson eight copies of Children's proposed medical review committee plan. As has been our practice, we wanted to allow sufficient time for the neighbors to review documents prior to our meeting with them to discuss their opinions. Liz told me today that their group has not yet had an opportunity to meet among themselves, and that she would call me with their proposal as soon as possible.

Although Jan Kumasaka from the Department of Community Development has a copy of the proposed plan, I thought you might appreciate a copy. Please call me if you have any questions or concerns.

Sincerely,

Nancy Greenawalt, Director
Government Affairs

nmg

Enclosure

cc. John Doan

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M E M O R A N D U M

TO: Liz Anderson, Anita Francis, Kate Hemer, Jan Kumaska, Jane Piehl, and Jerry Schneider

FROM: Nancy Greenawalt Nancy Greenawalt
Randy Revelle Randy Revelle

DATE: Proposed Medical Review Committee

RE: July 23, 1987

The Seattle City Council can permit construction and operation of a helistop on the CHMC campus as a Council Conditional Use if they conclude that:

(1) The helistop is needed to save lives;

(2) The helistop is located so as to minimize impacts upon surrounding residential property; and

(3) Use of the helistop will be restricted to occurrences involving life threatening emergencies.

The following is a draft proposal for a Medical Review Committee offered by Children's Hospital and Medical Center (CHMC) as a mitigating measure to review compliance with condition (3) and to recommend corrective action where appropriate. The proposal addresses:

* purpose of the Committee
* composition and appointment
* responsibilities
* staff support and funding
* operations
* reports and recommendations
* evaluation/duration

We look forward to meeting with you to discuss the proposed Medical Review Committee at your earliest convenience.

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DRAFT

MEDICAL REVIEW COMMITTEE

(July 23, 1987 Draft Proposal)

Purpose of the Committee

The purpose of the Medical Review Committee is to review compliance with condition (3) of the Council Conditional Use Permit and recommend corrective action where appropriate.

Composition and Appointment

The Committee will consist of the following five members:

(1) The Director of the Seattle-King County Department of Public Health, who will serve as Committee chair.

(2) A representative of CHMC selected by the Chief Executive Officer.

(3) A physician representative of the Washington State Medical Association (WSMA), selected by the President of the Association. The representative must be a qualified neonatologist, pediatric intensivist, or pediatric emergency physician.

(4) A physician representative of the Washington State Society of Pediatrics (WSSP), selected by the President of the Society. The representative must be a board certified pediatrician.

(5) A distinguished citizen, appointed by the Mayor of Seattle and confirmed by a majority of the Seattle City Council.

(6) A rep of Laurelhurst

The representative of CHMC will be appointed for a term set by the Chief Executive Officer of CHMC. The representatives of the WSMA, the WSSP, and the Mayor/City Council will be appointed for three

DRAFT

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years. In the event a Committee member can no longer serve, a replacement will be appointed by the original appointing authority.

Responsibilities

The role of the Committee is advisory. The Medical Director of Airlift Northwest (ALNW) will retain ultimate authority and responsibility for all ALNW helicopter transports to the CHMC campus.

The Committee members will work cooperatively with the Chief Executive Officer of CHMC, the Chairman of the ALNW Executive Committee, and the ALNW Medical Director to assure use of the helistop will be restricted to life-threatening emergencies.

The five-member Committee will have the following responsibilities:

(1) In consultation and cooperation with the ALNW Medical Director, develop written guidelines for determining whether a helicopter transport to the CHMC campus involves a "life-threatening emergency." The ALNW Medical Director will be responsible for establishing the final guidelines.

(2) In consultation with the ALNW Medical Director and based on the final guidelines and information available at the time of transport, conduct a semi-annual (twice a year) review and evaluation of all helicopter transports to the CHMC campus to determine whether each transport involved a life-threatening emergency.

(3) Prepare and submit a semi-annual report to the Mayor of Seattle, the Director of the Seattle Department of Construction and Land Use, the Chief Executive Officer of CHMC, the Chairman of the ALNW Executive Committee, and the ALNW Medical Director discussing the Committee's

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evaluation of all helicopter transports to the CHMC campus.

(4) Prepare and implement written policies and procedures designed to assure the Committee's proceedings and the results of the Committee's work are open to the public to the extent allowed by the laws and administrative rules governing the confidentiality of patient medical records.

(5) Adopt additional rules and procedures needed to govern the conduct of the Committee's responsibilities.

Staff Support and Funding

The City of Seattle will provide the Committee's staff support and funding as follows:

(1) The Emergency Medical Services (EMS) Division of the Seattle-King County Department of Public Health will provide the staff support needed by the Committee to carry out its responsibilities.

(2) The City of Seattle (through the EMS Division) will provide the funds needed for equipment, supplies, and other Committee expenses.

(3) The City of Seattle will reimburse Committee members for their reasonable expenses required to carry out their responsibilities. Committee members will not receive any compensation or other benefits for their service on the Committee.

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Operations

CHMC will request the written consent of the parent or guardian of each patient transported by helicopter to the CHMC campus for Committee members to review the patient's medical records.

Each Committee member will agree in writing to abide by all laws and administrative rules governing the confidentiality of patient medical records.

Semi-annually, the EMS Division staff will conduct a preliminary review and evaluation of all helicopter transports to the CHMC campus.

The Committee will meet semi-annually to consider the EMS Division staff evaluation of all helicopter transports to the CHMC campus for the previous six months.

With the help of EMS Division staff and the ALNW Medical Director, the Committee will prepare and publish semi-annual written reports of the Committee's evaluation of all helicopter transports to the CHMC campus.

Reports and Recommendations

Based on information available at the time of transport, the Committee's semi-annual reports will identify and report all helicopter transports to the CHMC campus that did and did not involve a life-threatening emergency.

The semi-annul reports will recommend actions to be taken by the Chief Executive Officer of CHMC, the Chairman of the ALNW Executive Committee, the ALNW Medical Director, and the Committee to decrease the incidence of medically unnecessary helicopter landings on the CHMC campus, if any.

DRAFT

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The Committee will submit the semi-annual reports to those officials listed above in subparagraph (3) of Responsibilities. The Committee's reports will be made available to interested community groups, appropriate media, and any community resident or interested citizen who requests a copy.

Evaluation/Duration of the Committee

Within three years of the date of the Conditional Use Permit, the Seattle Mayor and City Council will evaluate the Committee's operations and results to determine whether to continue the Committee. The Committee will be discontinued after three years unless the Mayor and City Council decide to continue it.

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CC H

Seattle
Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

July 24, 1987

1987

Marvin O. Christman
4350 53rd Avenue Northeast
Seattle, Washington 98105

Dear Mr. Christman:

In response to your letter, the Seattle Land Use Code gives the Department of Construction and Land Use (DCLU) authority to regulate where helicopters may land.

DCLU cited the hospital for permitting landings without an authorized use permit and originally set a compliance date for April 3, 1987. To give the hospital the opportunity to complete the environmental review process, we have extended the compliance date to October 1, 1987.

Ms. Nancy Greenawalt is Children's Medical Center Director for Government Relations. I encourage you to call her to discuss your concerns.

If you need further information about our enforcement procedures, please call Joe Garcia, Director of our Housing and Zoning Enforcement Division at 624-5031.

Sincerely,

HOLLY MILLER
Director

cc: John Doan, DCLU

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John Doan
01-64-03

To: John Doan
Via: Katy C

5003 45th Ave. NE
Seattle, WA 98105
July 1, 1987

Good work on the Mtg

RECEIVED
JUL 2 - 1987
DEPT. OF CONST. & LAND USE

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Miller:

Here is a copy of information provided by Mr. Paul Russell, an experienced helicopter pilot and flight instructor. He has personally examined the Childrens Hospital proposed helipad site and the UW playing field site in coming to his conclusions about the relative safety of each site. We hope that you will take his opinion, based as it is on a great deal of operational experience, into account when you formulate your recommendations on the hospital's request for a helipad. Mr. Russell stressed repeatedly to us that his opinion would be completely objective, so we think his judgements about the relative safety of the two proposed sites should receive your careful attention.

We intended to send this to you in April, when we received it, but just recently discovered that it was not sent at that time. Thank you for your attention to this matter.

Sincerely,

Anita Francis

Anita M. Francis
Citizens Concerned About
Helicopter Transport

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TAMJOY ENTERPRISES
MARINE AND AVIATION SAFETY CONSULTANTS
15040 253rd Ave, SE
Issaquah, WA 98027

20 April 1987
CHHP 02-87

Ms Anita Francis
5003 45th NE
Seattle, WA

Dear Ms Francis;

In my report to you of 4 March 1987 (CHHP 01-87) I did not address the safety aspects of operating from the University of Washington soccer field. I did not address the subject because it seemed obvious that the soccer field is a far safer area for helicopter operations than the proposed helistop at Children's Hospital.

Medical evacuation helicopter operations have been conducted at the soccer field for at least the last thirty years without mishap. The approach paths to the field are much easier to fly, transit more open areas and are thus safer than the proposed path to the helistop. A malfunction, such as loss of tail rotor control, on takeoff is not nearly as hazardous when operating from the field as it would be at the helistop.

Disregarding any medical considerations, the soccer field is far and away the best landing site of those outlined in the Draft Environmental Impact Statement.

If I can provide any additional information please contact me.

Sincerely;

Paul D. Russell
Captain, U.S. Coast Guard (Ret)

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TAMJOY ENTERPRISES
MARINE AND AVIATION SAFETY CONSULTANTS
15040 253rd Ave, SE
Issaquah, WA 98027

4 March 1987
CHHP 01-87

Ms. Anita Francis
5003 45th NE
Seattle, WA

Dear Ms. Francis;

As you requested, I have reviewed the Draft Environmental Impact Statement for the Children's Hospital and Medical Center Helistop. I believe the proposal, as it now stands, will lead to an unsafe operation. I base this conclusion on three major considerations:

1. The proposed flight path to the helicopter pad is not the safest approach.

2. There is a total lack of adequate regulations concerning the qualifications and training levels of the helicopter crews operating from the pad.

3. There is a total lack of adequate regulations concerning the minimum performance capabilities of the helicopters which will be operating from the pad.

Additionally, the proposed helistop is to be constructed without consideration as to its impact on any regional plans for medical evacuations. The Environmental Impact Statement's analyses are lacking in depth and scope on the regional implications of this proposal. For this reason, it is difficult to determine the true need for the helistop versus the commercial interest of bringing additional patients to this particular hospital instead of to a different adequate facility which might be closer. To truly serve the needs of the public, a regional emergency medical transportation plan should be developed. Allowing construction of medical evacuation helicopter pads based solely on commercial considerations will result in a proliferation of such pads and will not guarantee that patients receive the needed care in a timely manner.

The enclosures to this letter briefly discuss each of these points. If I can be of any further assistance please feel free to contact me.

Sincerely,

Paul D. Russell
Captain, U.S. Coast Guard (Ret)

Enclosures: 1) Flight Path Considerations
2) Helicopter Pad Regulation Considerations
3) Regional EMS Considerations

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Enclosure 1) to CHHP 01-87 of 4 Mar 87

CHILDREN'S HOSPITAL AND MEDICAL CENTER HELISTOP

FLIGHT PATH

In an effort to provide noise abatement the proposed approach and landing flight path requires, under most weather conditions, a descending right turn of approximately 120 to 150 degrees into the helistop. The final phase of this approach involves a flight path directly toward rising terrain, the hospital itself and the proposed medical office building. This requires the pilot to not only maneuver the helicopter but to adapt his visual sense to a changing landing site picture. These adjustments can be particularly difficult with strong winds or under conditions of reduced visibility.

As the flight path nears the landing site the area around the site becomes more restricted and is subject to gusting, and variable, winds caused by the structures. Throughout the approach the number of safe missed approach paths steadily decreases until,on final approach,the pilot is reduced to a near vertical climb over the buildings and terrain,or a small radius right turn over a group of apartment buildings,if he decides that he cannot finish the landing.

Under visual meteorological conditions pilots who have landed at the site, during training, should have little difficulty in making the approach and landing. Under conditions of darkness, reduced visibility or high winds, with the added tensions inherent in EMS operations, the proposed flight path is unsafe. It is particularly hazardous if the pilot has not previously landed at the facility during training, or if the helicopter has minimum performance characteristics.

Relocation of the helistop to the top level of the parking garage and adopting straight in approach paths would be safer. This might, however, negate some of the medical benefits of helicopter transport by increasing the distance traveled by the patient while exposed to the elements. It will also impact noise abatement considerations. The Environmental Impact Statement does not adequately investigate mitigation of the impacts of a site on the garage, nor does it adequately address the safety of the proposed flight path.

The EMS transportation operation has the worst safety record of any group within the non-military aviation community. EMS operations are particularly telling on the psychology of the flight crews leading them to press on in situations when they would normally back away. It is imperative, therefore, that the flight paths we expect them to fly be as safe as possible.

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Enclosure 2) to CHHP 01-87 of 4 Mar 87

CHILDREN'S HOSPITAL AND MEDICAL CENTER HELISTOP

REGULATORY ASPECTS

The regulations which currently exist are inadequate to ensure safe operations from the proposed helistop. The Federal Aviation Administration has yet to establish the unique standards required for safe EMS operations. The guidelines proposed by several helicopter groups for EMS operations are just that - guidelines. They can be disregarded at the whim of the operator.

The pilot qualifications currently used by Airlift Northwest are the minimum acceptable for safe operation into the helistop. However, there are no regulations that restrict the use of the helistop to Airlift Northwest. Under the proposal, any helicopter transporting a patient could land at the helistop regardless of helicopter type or the skill (ratings) of the pilot. There are no regulations which require a training landing, even for Airlift Northwest pilots, before operations are permitted under actual conditions. As currently proposed a pilot who meets the minimum Federal Aviation Administration licensing requirements for carrying passengers, flying a single engine helicopter, can operate into the pad under conditions of reduced visibility without ever having seen the pad before. This is not safe.

While there is no single system to gather detailed statistics on EMS aviation accidents/incidents, most data sources agree that 85-90% of all EMS accidents since 1980 can be attributed to "human error". This is generally accepted as meaning error on the part of the pilot as opposed to an accident caused by failure of an aircraft component. There are a number of ways to reduce "human error". Many are within the sole purview of the operator and depend on the operators approach to safety, training program and hiring practices. However, one way is directly controllable by state/local agencies - The establishment of standards for qualification and training of the personnel involved in operations permitted to use the helistop. Operations requiring the use of helicopters into restricted sites, within residential neighborhoods, must be controlled for the safety of the helicopter passengers as well as the areas residents. Allowing unrestricted use of the helistop, by any helicopter flying a patient, is asking for an accident. Not every pilot, nor every helicopter, can safely operate from the proposed helistop.

For safe operations it is mandatory that operations into the helistop be restricted to operators whose equipment and crews meet minimum standards. These minimum standards must include the requirements for pilots to possess an instrument rating and receive a minimum number of landings at the site under training. Additionally, because of the nature of the landing site, only multi-engine helicopters with single engine climb capability should be allowed to operate into the helistop.

Many EMS accidents occur when the flight crew attempts to continue a flight when conditions are unsafe. This is a natural tendency when attempting to save a life or reduce suffering. It is particularly true when children are involved. The Impact Statement does not address the need for operational procedures, established by the hospital, to respond to the situation when a helicopter arrives and cannot safely land at the helistop. Unless standard

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operating procedures have been established the pressure will be on the pilots to attempt the landing when it is unsafe. No operations from the helistop should be permitted until the hospital has developed and tested such a plan.

It is very easy to say that the pilot has the final decision on whether to continue the flight, however, reports are still received that pilots involved in EMS operations have been released for failure to complete a flight. This cannot be prevented by regulation, however, any contract pertaining to EMS helicopter operations must not contain financial, or any other considerations, for completing flights.

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CHILDREN'S HOSPITAL AND MEDICAL CENTER HELISTOP

REGIONAL EMERGENCY MEDICAL SERVICES CONSIDERATIONS

The proposed helistop can only be adequately viewed as a part of a regional emergency medical transportation system. Before permitting routine helicopter operations into a residential area, their absolute necessity must be established. This has not been done in the case of the proposed helistop. The Impact Statement does not adequately address the medical implications of the lack of a helistop at the hospital.

Construction of the helistop will encourage transport of patients by helicopter when surface transport to a closer facility would be adequate. The tendency will be to use the helicopter in any questionable case to prevent suit at a later time for failure to utilize the fastest possible mode. Additionally, in the absence of a regional plan, EMS helicopters will be encouraged to use the helistop at Children's Hospital when a safer landing at an alternate facility should have been available.

Worrying about one destabilizing move of a patient at one end of the transport seems ludicrous if you don't worry about the number of moves made to get him in the helicopter at the point of initial loading. The only way that this point can be addressed is via a regional analysis of EMS transport requirements and development of a regional plan.

The proposal to construct a helistop at Children's Hospital should be held in abeyance until a regional analysis can be completed and a plan developed.

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The EMS Safety Dilemma: A Matter Of Maturity

The expanding helicopter aeromedical industry finds ill side effects to dramatic growth and a critical safety problem is prompting an eager search for a cure.

By David Harvey and David Jensen

PERHAPS IT IS characteristic of all ripening aviation industries. Like awkward adolescence, well into a rapid-growth stage, there is a tendency to be accident prone.

Regardless, many believe the safety record of today's emergency-medical-service (EMS) market has become critical, as mishaps over the previous few years have broken out like a bad case of acne. As a result, groups like the American Society of Hospital Based Emergency Air Medical Services (ASHBEAMS) and National EMS Pilots Association (NEMSPA), along with hospital administrators and government agencies, are seriously examining ways to help the industry grow out of this stage. Their efforts in cleaning up the EMS industry's record and reputation will not be small.

How bad is it?

"In terms of pure numbers, the situation is alarming," says Tom Guterl, senior vice president of the United States Aviation Underwriters, a group understandably concerned about safety problems. "The average accident rate for EMS helicopters is now running at a rate of 20.7 accidents per 100,000 flight hours—about five times the accident rate for commercial helicopters." The fatality rate is also higher, running 6.5 lives per 100,000 hours, according to the Aviation Safety Institute, in Columbus, Ohio.

(Guterl's figures compare but don't exactly match those from other sources keeping tabs on EMS safety. This punctuates the fact that there is no official central source for such information.)

Gabriel Martyak, assistant director of Geisinger Medical Center's Life Flight program, in Danville, Pa., says there have been 16 major EMS accidents since 1980, resulting in 47 fatalities and six injuries. An additional 17 accidents were classified as "substantial" and accounted for 51 injuries.

Ten people lost their lives last year due to EMS-helicopter accidents. By October 16 incidents involving EMS helicopters were recorded for 1986 and, with winter coming on, industry officials were anticipating still more bad news before year's end.

Referring to an unofficial survey he conducted, Martyak reports that EMS programs in the U.S. today fly some seven million miles annually. "We estimate [these programs] are now carrying between 6,500 and 7,000 patients a year," he adds. "That's an achievement that shows how significant EMS is becoming. But since 1980, 50% of the EMS programs in this country have experienced some kind of accident or serious incident."

What factors feed such a record?

Human error

There are indications, Martyak replies, that 89% of the EMS accidents since 1980 were due to human error. The remainder could largely be attributed to engine failure. The term "human error" invariably translates into "pilot error" and that points to factors ranging from crew-rest time to assessment of what makes a good EMS pilot.

Don Wright and Tom Einhorn, founders of the two-year-old NEMSPA, say fatigue and stress caused partly by understaffing have contributed significantly to the safety problem. They believe a four-pilot team should accompany each EMS helicopter pulling 24-hour duty. Too often, they claim, such programs employ three or even only two pilots.

Human error in EMS operations frequently begins with decisions to fly at night or during adverse weather conditions. Martyak's survey reveals that 78% of the EMS mishaps occurred during such conditions. This no doubt accounts for the fact that about 75% of the accidents took place while the helicopters were en route.

"The issues boil down to: pilot, night flying, and weather," says Martyak. "In some places, for instance, we have VFR-trained pilots flying in IFR conditions. We have got to approach zero on this kind of problem."

"That's all good," counters NEMSPA's Tom Einhorn, "but we're continuing to hear from members who are getting fired for refusing to fly missions under certain conditions."

Also, even without pressures from program management and/or medical staff, EMS pilots have been known to be their own worst taskmasters. Humanitarian instincts too often take over from good judgment and thus they fly when they shouldn't. They simply don't know how to say, no.

"We pay people to say, no, when it has to be said," says John Heiskell, director of operations-medical group for Rocky Mountain



For night flights like this one being completed by a Bell LongRanger, the insurance industry proposes minimums of 1,000 feet and three miles visibility.

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Helicopters Inc. (RMH), "but it is often hard to say."

But not all responsibility lies in the pilot's lap. Tom Guterl claims the insurance industry "feels strongly that safety is a management problem, not a pilot one.

"We need to have things like weekly, formal safety meetings," he adds, "and this is an area where management should be increasing its visibility.

"Also, management can play a big part in reducing stress. One immediate solution would be to mandate two-crewmember operations for all night flying."

Einhorn believes good EMS-program management means involving the pilots as well. They can frequently identify safety problems, he points out, "but often have no authority to make changes. If we don't get the pilots more directly involved in part of the

(Continued on Next Page)

The insurance factor

An industry's troublesome safety record is invariably followed by the shadow of insurance woes and the EMS field is no exception. For the about 150 programs in the United States, there is the growing threat of escalating insurance premiums or, worse, insurance cancellation.

Tom Guterl, senior vice president with United States Aviation Underwriters, describes the EMS industry's current situation as "disastrous" and elaborates by saying, "Liability payments are outrunning at three times the premiums taken in.

"If you combine hull and liability over the past five years, losses have been outrunning premiums by a factor of 2.5 to one." The situation is aggravated, he adds, by the fact that accidents have occurred at the same time the insurance industry has been hit by payouts arising from claims made in 1985, the worst year yet for the aviation-insurance industry.

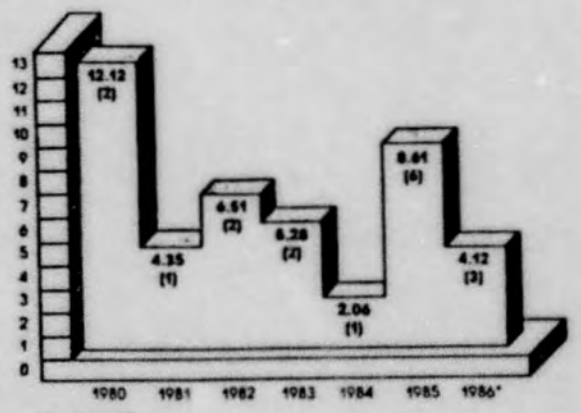
"At the start of EMS programs a few years ago, we actually reduced insurance premiums for operators," Guterl recalls. "Then 1983 hit. That forced a lot of insurers out of the market. The London [insurance] market began pricing itself out of carrying insurance for U.S. programs. There was some recovery in 1984, then came 1985, which eclipsed 1983."

So now the insurance dollars for coverage have dwindled. "EMS has to compete for those dollars like everyone else," says Guterl. "But the supply is down and in some cases, not there at all."

He explains that coverage for programs will be considered "on a case-by-case basis. We'll try and work with existing clients, albeit at a higher price. A lot will depend on the individual record."

Guterl doesn't believe all news is gloomy, however. The insurance industry sees an optimistic trend toward twin-engine helicopters and, he perceives, "there is a shared realization that something has to be done."

Fatal Accidents Per 100,000 Patient Transports



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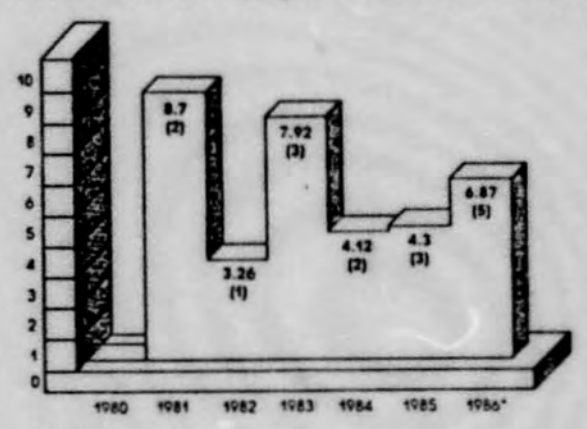
Injury Accidents Per 100,000 Patient Transports



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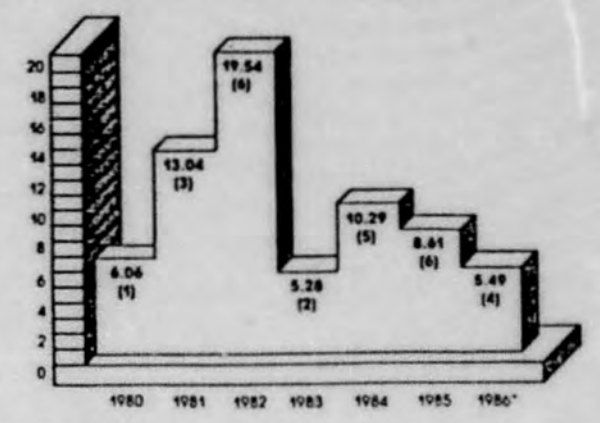
Damage Accidents Per 100,000 Transports



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management loop, the accident rate is going to increase."

Recruiting the right stuff

Despite management's role, the focus of EMS safety remains clearly on the pilot, which presses the question: are there unique characteristics that should be looked for when recruiting EMS pilots?

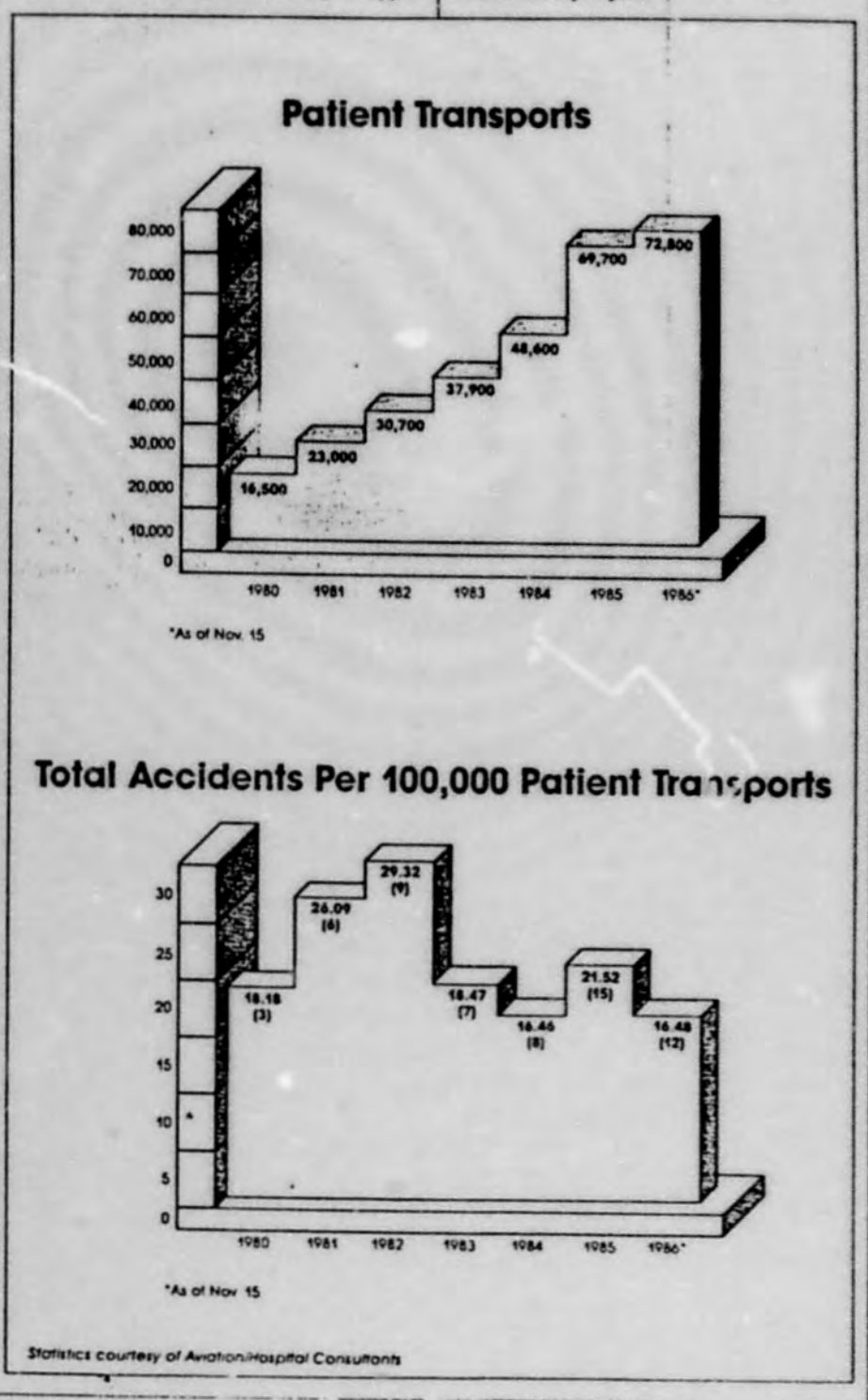
Some say, yes; others disagree.

An industry spokesman who says, yes, comments that, "Pilot error begins in the interview process."

Some people in the industry propose going beyond extensive interviews with pilot applicants and administering psychological testing. "In the near future, I see us going into some sort of personality testing," says RMH's Heiskell.

An aeromedical pilot should "have a personality that fits into the hospital environment," he explains. "Adaptation is important because you go from a controlled area, in the hospital, to a situation with little control.

"Many pilots [applying for EMS jobs] have a lot of flying time but not in a variety of work," adds Heiskell, who claims RMH hired 60 to 70 pilots over a recent six month period. "It's better to hire a lower-time pilot who has done a variety of jobs."



Talk of pilot adaptability brings to issue the hiring of civil-trained or former-military pilots. Some EMS-industry officials argue that military training can make a pilot too rigid and unable to adjust to the extremely varied situations EMS missions present. They also claim military aviators are used to flying dual pilot and most EMS programs haven't the luxury of a left-seat crewman.

But others in the industry fervently argue that EMS pilots should not be deemed different from other helicopter pilots, be they civil- or military-trained. "I keep hearing about how different the EMS pilot is," says an official of an operator with EMS contracts. "The only difference is the emotion of the job. Outside of that, it's the same."

Another industry spokesman agrees. "Whether he flies an EMS helicopter or whatever, the pilot doesn't have that many decisions to make," the spokesman comments. "He has to takeoff and land, and do so within certain confines."

Critics also disagree that dual-pilot experience is a handicap in the single-pilot EMS world. "It's not bad that your experience is mainly dual-pilot," says a spokesman. "In fact, that pilot has been observed. He's been flying with another person looking over his shoulder."

Industry standards

Whether right-seat occupants of EMS helicopters represent a unique breed of pilot or not will no doubt remain in debate. But the fact that they often fly at night or in adverse weather and sometimes land in streets and other unprepared landing areas makes their mission undeniably unique. Recognizing this uniqueness, some in the industry have decided some nationwide standards must be drawn up.

While stressing that the insurance industry "does not intend to become a policeman," Tom Guterl says it has established standards because "the operational situation [during an EMS mission] is one that adds stress to an already stressful situation.

"The [insurance] industry believes that standard minimums should be a 500-foot ceiling with two miles visibility during day VFR and 1,000 feet and three miles at night," he recites. "Three hundred feet and one mile is, in our view, totally unrealistic."

The Federal Aviation Administration (FAA) has yet to establish standards unique to EMS operations but the agency's Southwest Region has begun to take action. In mid-November, all helicopter inspectors in that five-state region gathered to discuss the EMS safety problem and possible solutions.

"We're not going out on a witch hunt," an FAA official quickly notes. "We want to get as much continuity between us and the operators as we can."

He adds that standards resulting from the November meeting won't evolve into a separate FAA regulation but, through cooperation with, say the Helicopter Association International (HAI), "they will hopefully reach the national level."

On top of operating standards, an aggregate of safety suggestions for the EMS industry includes crewmen wearing helmets, initiating safety programs, using shoulder

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Lessons from an oil company

Can lessons from an oil company's successful helicopter operation be transferred to the still-emerging EMS industry? Jack Piehl, president of Sentinel Aviation Systems, recounts his experiences with Shell Oil's aviation department.

He recalls serious safety problems in the oil industry at one time and, as a result, hammering out a long-term plan to tackle those problems at the source. That plan turned "an-accident-a-week" situation into one in which Shell could fly nearly a half million hours without "injuring an employee."

When Piehl looked at the company's safety problem, he was aided by a contractor who "went through the business from top to bottom." Also, company advisors conducted a survey of Shell Aviation helicopter pilots. They found that maintenance ranked No. 1 as an issue of concern and unreasonable bad-weather standards ranked No. 2.

Landing platform/heliports posed another problem. Many of Shell's facilities were in remote areas, as far as 150 nm off the Gulf coast, and some platforms were unmanned.

"It was a situation where the pilot felt he was completely on his own," says Piehl, summing up the complaints. "He also felt pressure to perform and some pilots were told, 'hey, if you don't want to do the job, we can easily find someone who will.'"

Armed with this information, Piehl and his colleagues set out to establish a five-year program, concentrating on the operation's weak areas. "We found that 50 heliports were in need of serious attention. We started looking at the weather standards and set new and more reasonable ones. We also set up programs to evaluate the contractors who were vending the helicopter services to us, to see what they were doing in terms of their pilot relations."

Another scheme involved establishing roving maintenance teams, which would periodically visit each heliport. Shell also set up operating standards, so pilots could rightfully decline flights they deemed unsafe. In addition, Shell officials combed through years of malfunction reports, to determine which items are most likely to fail. Operators were also asked to supply comprehensive hazard reports.

Shell's safety policy took shape but, Piehl stressed, it all took time. "This took about five years by the time we published an operations manual that was helping standardize operations. We met a lot of resistance from within the oil industry, which was afraid this would cut into profits and result in 'North Sea rules' that would regulate aviation from a central point. Finally, it was a full 11 years before we managed to get our own heliport design guide approved."

Was it successful? Piehl believes it was, not just because the safety rate eventually reached over 400,000 accident-free miles but it helped "take the surprises" out of helicopter operations.

Piehl believes more and more events will be judged on what are known as "prudent man" rules. He explains that these aren't just legal standards but standards adopted by an industry as a whole.

"The standard must be the way the industry does it, not what the FAA says it is," he concludes. "It's up to industry to fix its own problems and to set the higher levels of standards." ■



Aeromedical helicopters like this Alouette III must often operate in confined areas.

harnesses, establishing protocol for "combative patients," addressing the two-pilot issue, and debriefing after flights.

Industry officials also believe there is a need for anonymous incident reporting. Gabriel Martyak goes further by advocating a nationwide information center, which can absorb and dispense EMS-incident data.

Resemblance to offshore

"In the U.S., there is no central point from which information flows," he exclaims. "The problem is, and remains, gathering the necessary data."

One operator in the Gulf of Mexico likened the EMS safety problem today with a similar situation in the late 1970s, when the offshore-support market was entering its adolescent stage. It was a time when oil activity was at its highest and the market was being swamped by new entrants.

"We all got together at that point and decided enough was enough," he recalls. "We needed safety standards."

The Gulf-coast spokesman believes EMS operators have reached that point, when safety standards must be established. "But they've got to want it to happen first." ■

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John Doan
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Dear John,

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I hope it helps. If you need anything
more, please call.

Anita Francis
524-9340

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One Baylor Plaza
Texas Medical Center
Houston, Texas 77030

Kenneth L. Mattox, M.D.
Associate Professor
Department of Surgery
(713) 799-4557

September 17, 1986

Mr. Jerry B. Schneider
Ms. Liz Anderson
5003 45th N.E.
Seattle, Washington 98105

Dear Mr. Schneider and Ms. Anderson:

Thank you for your letter of August 28, 1986, concerning helicopter air ambulance services. As you requested, I have enclosed the editorial published EMERGENCY MEDICINE. I have also enclosed a copy of an article published in the AMA News, September 5, 1986.

While I feel that air ambulance operations are being massively overused and that by my own count perhaps 80% of the patients presently transported by air ambulance could have been conveyed just as expeditiously by ground ambulance, I do not wish these contentions to be interpreted that I am totally opposed to this form of transportation. My thesis is that is should be used only for those appropriate medical cases and should not be used merely as an expensive marketing ploy for a hospital.

In these days of cost containment when we are being asked to provide equal or better medical services at decreased costs, (i.e., an equally effective but less expensive antibiotic,) hospital administrators and regional planners should apply this same logic to prehospital transport.

As the American Medical News article points out, hospital based aeromedical helicopters have the worst accident rate in modern aviation history. The reasons for this are numerous. The double tragedy occurs when an unnecessary death secondary to the crash occurs and close analysis reveals that the mission was not required or the patient's conditions was such that air ambulance transport was either unnecessary or contraindicated.

Sincerely,

Kenneth L. Mattox, M.D.
Professor of Surgery

KLM/m

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Viewpoint

Kenneth L. Mattox, M.D.

Standards for EMS Helicopter Transport



Currently, over 100 hospital-based air ambulance services are in use in the United States and they represent a multimillion dollar industry. The cost of purchasing a helicopter ranges from $700,000 to $1.5 million and the annual operating budget is in excess of $1 million per helicopter. The cost of an air ambulance ride ranges from $200 to $1800, with the national average close to $1000; an ambulance ride on the ground averages $100 to $120.

Responsible spending of the health care dollar is now mandated by DRG regulations. The same logic that decrees the in-hospital use of less expensive but equally effective antibiotics should be applied to prehospital transport. One must question the percentage of helicopter-transported patients who have medical conditions that, on close scrutiny, do not even require the use of a basic life support ground ambulance. Urban time-distance studies have shown that a ground ambulance 35 miles from a hospital can deliver a patient just as fast as an air ambulance with comparable advanced life support personnel on board—and perhaps achieve greater patient stability. Therefore, from 50 to 80% of patients transported by air ambulance could be transported just as efficiently and at considerably less expense by ground ambulance.

Air ambulance flights may actually be detrimental to some patients. The tight cabin space prevents effective interventions during flight. According to some neonatologists, a helicopter flight for a premature infant almost guarantees an intracerebral hemorrhage.

In some cities, air wars just short of blazing guns are waged between helicopters from competing hospitals and the helicopter crew that wins will transport the patient to their hospital even if a quality medical center lies closer to the emergency center or site of accident. Investigation of some recent helicopter accidents revealed that in more than one incident, the patients being transported did not have conditions that warranted air ambulance transport, nor was the distance great enough to require such an expensive and risky vehicle.

The helicopter can be a valuable transport modality when used appropriately. To reduce the possibility of misuse, national standards for air ambulance transport are long overdue. I would like to propose four basic standards:

1. Air ambulances should be limited to patient care activities; they should not be regional multipurpose helicopters used for weather, traffic control, police, and other activities as well.
2. Air ambulances should be used only for patients who require advanced life support.
3. The use and dispatch of an air ambulance service, whether public or private, should be under the direction of the regional EMS director who supervises regional ground ambular tivities.
4. An advisory panel composed of indi who have no financial interest in the hos hospitals that own a helicopter should re review the necessity, effectiveness, and r economic impact of air ambulance oper

Through implementation of such star the true value of air ambulance operatic be preserved and misuse for marke strictly competitive purposes will be elim

Am is pr dire cral *...rd, Dr. Mattox ...f Medicine and Ben Taub Gen-*

NEGATIVE effect of helicopter on "Premies"

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Department of Surgery
(713) 799-4557

Kenneth L. Mattox, M.D.
Professor

January 6, 1986

Ms. Liz Anderson
Citizens Concerned About
Helicopter Transport
4746 45th N.E.
Seattle, Washington 98105

Dear Ms. Anderson:

I read your letter of December 10, the report of Doctor Nicola of December 4 to Beatrice Ryan, as well as the supportive letters and documents in Doctor Nicola's report. The issues are actually limited to just three: 1) What is the appropriate use of helicopter ambulance service? 2) What is the number of patients requiring this appropriate use, as defined by the University Hospital and the Children's Hospital? 3) Where should the helipad or helipads be built?

There is no clear indication about the appropriate use of air ambulance operations, especially for distances less than 35 miles, or in the case of your report, 70 miles. Without question, many helicopter ambulance services transport numerous patients who could have been transported just as efficiently by ground ambulance, taxi or even automobile. The numbers in Doctor Nicola's report likewise suggest numbers of critically ill or injured children and adults which would be shared by the Air Life Northwest consortium which would not justify the expense of the air ambulance operation. According to my local helicopter sources, at least one hospital admission per day is needed to recoup the expenses of running an air ambulance operation. If the patients do not exist to justify the air ambulance operation, then there is either a concomitant increase in individual patient charge or an overuse of the service. There is ample material in Doctor Nicola's report to justify both fixed wing and helicopter flights for distances greater than 75 miles from Seattle. Of course, many of the patients on long distance flights would be stable prior to transport.

The second issue of numbers is extremely difficult to analyze. Your letter, indicating that there is one flight per day landing at the grassy knoll at the Children's Hospitals, would indicate that Doctor Nicola's numbers of ten/month needing such services are already an overusage.

In page three of your letter you indicate that even if the helipad is built at the Children's Hospital it would require a 75 yard secondary transport to the emergency room. That is 3/4 length of the football field; by my calculations it require almost the same three minute time frame to push the patient as it would be required if the helicopter landed at the neutral territory on the soccer field.

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The suggestion of Doctor Nicola to Mrs. Ryan to analyze the current usage or the anticipated usage during a short time period seems germane. In that the helicopter is presently landing at the grassy knoll at Children's Hospital at the rate of one per day (your numbers), it does not seem necessary or prudent at this point to build a helipad until this controversy has been solved. By March or April, 1986, there would be enough data for a group of disinterested evaluators to assess the real need for a permanent helipad. The building of a permanent helipad is, therefore, not necessary to solve the local political issue.

At the current time frame, the use of air ambulances is somewhat of a fad and public relation instrument. It is my firm conviction that within a year or so the massive expenditures of dollars for patients whose conditions do not warrant such flights will come under the same tight scrutiny as currently is applied to hospital admissions and the overuse of expensive antibiotics when a less expensive, but equally effective, one would have been just as good. DRG's hopefully will be applied across the board to ambulance services, helicopter services, hospital admissions, operations, and home health care services.

Mattox's relevant point

Locally, my neonatology consultants indicate their extremely strong feelings that high risk infants and neonates, especially low birth weight neonates, should not be transported by helicopter. Such a procedure almost guarantees that an intracerebal hemorrhage will occur. From the material you sent, it apparent that the trauma cases which are unstable are being transported to Harbor View Hospital, and do not require a helipad at Children's Hospital. When one subtracts the infants and the neonates who might suffer damage from intracerebral bleeding because of the vibration of the helicopter, the Doctor Nicola's suggested numbers which could benefit from air ambulance transport to Children's Hospital become less than ten.

I wish you well in trying to bring order to an extremely volatile, emotional and obviously big business situation. I, too, have read all of the references which were listed in Doctor Nicola's letter. I agree with you and him that they contain virtually no scientific information which supports the theses of those who strongly endorse air ambulance operations (especially for distances less than 35 miles).

Sincerely,

Kenneth L. Mattox, M.D.
Professor of Surgery

KLM/m
cc: R.M. Nicola, M.D., M.H.S.A.

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Pilot group calls for safety standards

Hospital chopper crash rate aviation's worst

Continued from: page 1

lost per 100,000 flying hours. That is nearly triple that of commercial helicopters in general, which suffered 2.2 lost lives per 100,000 flying hours.

There have been 21 hospital helicopter accidents so far this year, including one in June near Birmingham, Ala., that killed a pilot and two flight nurses (*AMN*, June 13, 1986). "It's a miracle that more of the accidents this year didn't result in fatalities," said John B. Galipault, president of the aviation institute. Last year, 10 people were killed in hospital helicopter accidents.

Einhorn said that "the one threat to the survivability of aeromedical EMS in this country is the issue of safety." He cited several factors that have contributed to the string of accidents. They are:



Photos: Ryan Ver Berkmoes/AMN

Pilots Don Wright (pictured at right in photo at left) and Tom Einhorn head National EMS Pilots Assn., which wants standards that would improve hospital helicopter safety statistics.

- Stress and fatigue. Don Wright, president of the helicopter pilots' association, said that too many hospitals are trying to run their aeromedical program with only two pilots. This means that each pilot must work at least 12 hours a day, seven days a week, to provide around-the-clock coverage. Wright said that pilots had confessed to him that they had fallen asleep at the controls due to fatigue.

Einhorn noted that flying a helicopter requires far more pilot concentration than does flying a regular airplane. Hospital helicopter pilots also must be on the lookout for wires and obstructions, navigate with street maps, and at the same time, communicate with air traffic controllers and emergency service dispatchers, he said.

- Training. Most EMS pilots have military and commercial backgrounds that do not prepare them for the challenges of aeromedical flying, where they must frequently land by expressways, in the middle of subdivisions, or in populated areas that aren't prepared for helicopter landings. Problems are compounded when the pilot flies at night or in bad weather. A large number of crashes resulted after the helicopter struck an unseen electric or telephone wire. Presently, there are no national training standards for aeromedical pilots, and as a result, the quality of training given to pilots varies widely from program to program.

- Equipment. In order to economize, many aeromedical EMS programs operate with helicopters that have only one engine, as opposed to the preferable two, and that don't have all the instruments and equipment needed for some flights.

- Operating standards. There are no nationally accepted operating standards for aeromedical programs that would govern when conditions are suitable and unsuitable for flight. Presently, Einhorn says that all too often, a heroic "save the patient" attitude exists, causing flights to be made in conditions that are unsafe.

In addition to questions of safety, questions regarding the very need for hospital helicopters were raised. Wright said that too often a hospital starts a program for financial, and not medical reasons. "The administrators may have seen the studies that show that patients brought in by helicopter are overall better insured and tend to stay in the hospital three times longer than average patients."

In addition, Wright said that administrators may be swayed by the 150-mile radius of coverage a helicopter will give a hospital, and the vast amount of free publicity it provides. "TV news shows love shots of helicopters whisking injured patients away from accident scenes," he said, adding, "Too often a hospital in a city will start an aeromedical program, and that in turn will spark other hospitals in the area to start their own. This happens in cities that can't even support the first one."

Dr. Stewart said that data is "sparse" to support air over ground transport of patients to hospitals. "We are not certain that air transport improves patients' outcomes; preliminary data suggests that it may be detrimental."

Dr. Stewart cited a study that showed that cardiovascular patients, who make up a high percentage of those transported by helicopters, had a greater incidence of problems when transported by air instead of by ambulance. Kenneth W. Kizer, MD, the director of the California Dept. of Health Services concurred with the studies saying, "It's not surprising that a heart patient who finds himself loaded aboard a cramped machine with whirling rotors would have problems."

Those who spoke at the conference stressed the need for studies of the need for aeromedical programs, and the results of those operating so far. They also stressed the need for coordination in communities that already have competing programs. Dr. Kizer explained the situation he had found in the Los Angeles area. "Any or all of 31 helicopters could respond to a patient. Before they started trying to cooperate, they stopped just short of air-to-air missiles in competing for patients."

Wright and Einhorn said the pilot's association was calling immediately for a minimum standard of four pilots per aeromedical helicopter to alleviate the problems of fatigue. They also are working to develop operating procedures and standards, and minimum weather requirements for flight. —**Ryan Ver Berkmoes**

Stewart is identified in article on next page

> In Los Angeles, before the 31 hospital helicopters began coordinating which would respond to a patient, 'They stopped just short of air-to-air missiles in competing for patients.'
>
> —Kenneth W. Kizer, MD, director of the California Dept. of Health Services

Group aims to put 'medical' back in EMS

Seeking to increase physician involvement in emergency medical services (EMS), a new cross-specialty organization, the National Assn. of EMS Physicians, defined its goals and approved its constitution at its second annual meeting in San Diego in August.

"We want to put the 'medical' back in EMS," said Ronald D. Stewart, MD, the founder and first president of the association.

"Our major job," Dr. Stewart said, "is to educate the public and officials that emergency medical care must be as good as in-hospital care, with the same standards, procedure guidelines, and review." The organization seeks to cross specialty lines and involve not only emergency physicians, but others in emergency medical care, such as anesthesiologists, surgeons, internists, nurses, aeromedical pilots, and others.

In the preamble to its constitution, the association states, "With the documented efficiency of physician-extender personnel in the prehospital setting, EMS systems have developed rapidly over the past 10 years. While the original systems were closely controlled by the physician organizers and subject to medical scrutiny and continuing evaluation, the widespread growth of the various forms and systems of EMS has made medical supervision and accountability more difficult. As a result, costly EMS systems have evolved which have not necessarily improved prehospital survival. A broad spectrum of prehospital care has developed; from the expensive ride to the hospital to elaborate, well-meaning but medically unwarranted attempts at field stabilization which could lead to deleterious delays in definitive care.

"The situation in poorly controlled medical systems has led to criticism of the EMT [emergency medical technician] and paramedic, rather than the examination of the root cause of the present problems — lack of responsible, competent physician involvement and inadequate accountability in EMS systems. The recognition that both on-line EMS physicians and medical directors need to maintain — or even regain — medical authority over patient-care systems prompts the need for an association to give voice to this principle, as well as support those physicians who are responsible for medical standards and other aspects of medical care."

THE FORMATION of the association stems from a conversation Dr. Stewart had with several other physicians at an EMS meeting in South Carolina almost two years ago. They saw the need for a cross-specialty organization devoted to EMS, and to this end they contacted physicians in the field across the country, which resulted in an initial meeting, held last year, to form the association.

"Our goal for the first year was to build liaisons with other specialty organizations. We knew we had to do that to ensure our survival," Dr. Stewart said. "Some of the other specialties were at first skittish of us. However, after talking with them, they realized that we would complement them rather than compete with them."

In fact, support and acceptance of the organization has become widespread. *Annals of Emergency Medicine*, the publication of the American College of Emergency Physicians and the University Assn. for Emergency Medicine, published an editorial earlier this year that said in part: "Rarely do we take the opportunity to write an editorial about an organization. But the recently organized National Assn. of EMS Physicians (NAEMSP) already has generated so much spontaneous enthusiasm and a promise of academic potential that it deserves our acknowledgement. Not only does the NAEMSP offer an open forum for the many talented specialists wishing to improve the practice of medicine in the prehospital setting, but it also meshes perfectly with the stated goals and objectives of both our sponsoring organizations."

About 150 people attended the conference out of a total membership of 200. Eventually, Dr. Stewart expects membership to reach 300. "These are the same people we kept seeing at EMS meetings for the past few years," he said.

With the adoption of a constitution, the association plans to devote the next year to organizing its committees, including executive, research, education, legal affairs, membership, conference, fiscal affairs, and standards and clinical practice.

Initially, the association is headquartered at the Lowcountry Regional EMS Council in Charleston, S.C., which has agreed to provide logistical and office support services. A national resource center of EMS data and scientific information will be located at the U. of Pittsburgh, where Dr. Stewart is a professor. —**Ryan Ver Berkmoes**



Ronald D. Stewart, MD
...group seeks specialty liaisons.

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American Medical
NEWS
SEPTEMBER 5, 1986



John Irwin/Chicago Tribune

Hospital helicopter accidents such as this one in Chicago in April have led experts to voice serious safety concerns.

Air rescue threatened by chopper crash rate

Hospital-based helicopters crash far more frequently than other helicopters or civil fixed wing aircraft, according to aeromedical experts at a meeting of emergency medical personnel in San Diego.

The efficacy of hospital-based helicopters also was questioned at the conference, with some expressing doubt that the popular aeromedical rescue teams are any more effective at saving lives than ground ambulance crews.

New group for EMS MDs.—page 33

"We have a long way to go in justifying the need for these programs in terms of patient outcome cost, and, most importantly, safety," said Ronald D. Stewart, MD, the president of the conference's sponsor, the National Assn. of EMS Physicians. Dr. Stewart is also a professor at the U. of Pittsburgh, and president and director of the Center for Emergency Medicine of Western Pennsylvania.

The use of hospital helicopters has grown quickly in the past 10 years. There are now 150 hospital aeromedical programs, and some predict that there will be 500 by 1996.

A stinging indictment of hospital helicopter safety came from Tom Einhorn, vice president of a recently formed association of hospital helicopter pilots, the National EMS Pilots Assn. "Hospital-based aeromedical helicopters have the worst accident rate in modern aviation history," Einhorn said.

According to the private, Columbus, Ohio-based Aviation Safety Institute, through 1985, the fatal accident rate for aeromedical flights was 6.5 lives

Continued on page 33

Easing the bite

MDs must re-examine investments to avoid higher taxes under reforms

Physicians who have used tax shelters in the past to protect their earnings will have to retool their investments if they want to outwit the taxman under reforms now pending before Congress.

That is the message from attorneys and investment counselors who say physicians, as well as other high wage earners who have relied on various tax preferences to reduce the bounty they pay to the federal government, must begin now to restructure their financial strategies.



3 of 4 MDs would owe more taxes. —scenarios, page 9.

"People who have tried to take advantage of tax deductions in the past will have to do some scrambling," said Carl G. Gargula, JD, tax principal of Arthur Young and Co. in Chicago.

The provisions that are forcing physicians to take a long, hard look at their personal finances are contained in a package that economists and lawmakers alike are heralding as the most sweeping revision of the tax code since the inception of the federal income tax in 1913.

THE LANGUAGE, still in tentative form, is expected to be passed by both houses of Congress this month. In general, the bill would:

- Shift $20 billion of the federal tax burden from individuals to corporations and expand the tax base by more than $800 billion, primarily through a curb on tax deductions.
- Scrap the nation's 14 tax brackets (including an existing 50% maximum rate) in favor of a structure that includes two lower basic rates, 15% and 28% scheduled to be totally phased in by

Continued on page 10

Ophthalmologists targeted for first Medicare cuts

As expected, ophthalmologists will be the first victims of new Medicare rules aimed at reducing payment for procedures that program officials regard as "overpriced."

Under rules proposed in the Aug 15 *Federal Register*, Medicare would limit payments for cataract extractions with an intraocular lens implant to only 10% more than payment for cataract removal alone. The plan would be phased in with the limit set at 20% in 1987 and at 15% in 1988, before falling to 10% in 1989 and thereafter. Public comments will be accepted on the plan until Sept. 15 and unless convinced otherwise or forced to abandon the proposal by Congress, officials in the Health Care Financing Administration (HCFA) expect the plan to take effect Jan. 1, 1987.

The proposal would make cataract extraction the first procedure singled out for national price controls under new regulations extending the use of Medicare's requirement that charges be "inherently reasonable" (*AMN*, Aug. 22/29, 1986). Its impact will vary drastically from state to state but some physicians would lose more than $1,000 a case or $200,000 a

Continued on page 45

MDs at risk also, court rules

Payers can be held liable for care limits

Third-party payers can be held liable for cost containment decisions that deprive patients of needed care, a California appellate court has ruled.

The opinion, written by Judge Barnet Cooperman of the Second Appellate District Court in Los Angeles, also warns physicians that they will be held liable if, against their medical judgment, they comply without protest with limits imposed by third-party payers.

The decision is believed to be the first court ruling to put third-party payers on notice that they may be held legally accountable for decisions that are detrimental to patients and to warn physicians that they may be liable if they do not protest.

Legal observers consider the opinion important nationally because courts in other states often find opinions written by the California courts to be persuasive.

The case involves Lois J. Wickline, a Medi-Cal beneficiary who alleged that Medi-Cal's failure to approve a requested extension of her hospital stay led to complications that resulted in amputation of her leg. Medi-Cal is the name of California's Medicaid program.

A superior court jury awarded Wickline $500,000, but Cooperman overturned the award on the grounds that, in this instance, the denial of an extension was within the "standard of care." Wickline's attorney plans to appeal the decision to the California Supreme Court.

In deciding *Lois J. Wickline v. State of California*, Cooperman said that the court recognized that this case "appears to be the first attempt to tie a health care payer into the medical malpractice causation chain" and therefore deals with "issues of profound importance" to the health care community.

Kirk Johnson, general counsel of the American Medical Association, said the decision offers a "very valuable lesson" for physicians. When a third-party payer has a cost containment program that requires preauthorization for a non-elective hospital admission, a continuing hospital stay, or other procedures, and the physician's medical judgment runs counter to the reviewer's recommendation, "you have to protest strongly or you can be held liable," Johnson said.

The other important point "is the court's recognition that prior authorization programs will be held liable if they

Continued on page 43

NEWS
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OCT 17 1986
DEPT. OF CONSTRUCTION & LAND USE
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4217 51 Ave. N.E.
Seattle, WA 98105-4930
October 16, 1986

Holly Miller
Director, Dept. of Construction and Land Use
Municipal Building
Seattle, WA 98104

Dear Ms. Miller:

I am writing about the proposed helipad at Children's Hospital. I am a pediatrician and on the staff of Children's Hospital, so I am not unsympathetic to the need for efficient and effective transportation of sick children. However, I believe that the current plan proposed by the hospital is insufficient and does not contain adequate safeguards for either the patients or the community.

Regarding the patients, while it may seem intuitively obvious that faster transport will enhance survival, this is not necessarily the case and should be documented with good scientific studies. Judging by Dr. Nicola's recent excellent review of the literature on this issue, there are none. A possibly analagous example of the misuse of technology is the situation with monitoring of near-term fetuses, where the use of electronic monitors increases the rate of Cesarean sections but does not necessarily enhance rates of survival of infants. Ground transportation has advantages over air transportation. The only way to resolve situations in which such uncertainty [illegible] perform proper comparisons of the available methods on appropriate [illegible] aw some during last nts in I think that ify the use and society strictly tal? What rt for all irlift ty suffer ? What it is er litany of ge that this spitals

John— in this letter of DR Bell's there are 2 points relevant to helicopter use:

1. He agrees with us, + DR Nicola that there are no ~~scientific~~ scientific studies showing that helicopter transport is better

2. "Intuitively obvious" notions are not necessarily correct— his example of fetal monitoring, which he has researched very carefully, is but one example that could be given of medical procedures that seemed to be a good idea + later turned out to be useless or even harmful.

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Unneeded medical care bloating bills, says report

Chicago Tribune

CHICAGO — In an unusually sharp criticism of doctors, a report in the Journal of the American Medical Association says unnecessary tests and procedures by physicians are a major factor adding to the nation's skyrocketing health-care bill.

Far from being beneficial, much of the medical care in this country is unnecessary — by which I mean that (it) is of no demonstrated value to those getting it — and some of it is harmful," said Dr. Marcia Angell, deputy editor of the New England Journal of Medicine, in the JAMA report released yesterday.

Among the unnecessary procedures, she said, are one-fourth of all the 200,000 coronary-artery bypass operations performed each year, at a cost of $4 billion.

Although waste in medicine has been criticized for years and has provoked the recent federal cost-cutting in Medicare and Medicaid, Angell's article is perhaps the most critical report on medical practice to appear in JAMA, said Dr. George Lundberg, JAMA editor.

JAMA is the world's most widely distributed medical journal, with a circulation of more than [illegible] copies weekly.

The nation's soaring bill for health care has generated increasing pressures to ration health care as a means of curbing costs.

NB

An example of the fallibility of medical opinion when it is not backed up by research.

Also — this is another type of harm that can come about through unwarranted use of helicopters — ie, the harm of unneeded medical care raising cost

sorry I don't have a date on this — it is fairly recent, tho. 1987 or 1988 JAMA

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John: this is the report I mentioned to you over the phone recently. His research report has not been published yet.

Wall Street Journal - 10-21-87

WSJ 10-21-87

Report Finds High Risks With Medical Helicopters

By a WALL STREET JOURNAL Staff Reporter

The risk of being killed or injured in an emergency medical helicopter is at least 30 times greater than in emergency ground transportation, according to a study done at Johns Hopkins School of Public Health.

The study's author, Erich Daub of the school's Center for Injury Prevention, said the emergency air-evacuation system already is "demonstrably dangerous" and called on the federal government to promptly tighten safety rules.

The Federal Aviation Administration has been studying the industry. Currently, medical helicopters operate under the general rules for helicopters. There are 199 air-emergency programs in the country, many of them run by private companies.

Mr. Daub presented his findings yesterday to the annual meeting of the American Public Health Association in New Orleans. He said that the crash and injury rate for medical helicopters for the past six years is 100 times that of private planes and five times that of helicopters in general.

An official for Helicopters Association International, a trade group that opposes more government controls, said Mr. Daub's figures overstate the accident rate for emergency helicopters.

30X Higher Risk of accident with EMS helicopter than with ground ambulance.

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AMERICAN PUBLIC HLTH ASSOC. NEW ORLEANS 10/16-22/87

Linda V. Degg, Th.D., Jane Knapp, M.D., Children's Mercy Hospital and Adele Eberhart, M.S., University of Missouri - Kansas City

BEHAVIORAL CORRELATES OF INJURY IN CHILDREN

Accidents are the number one killer of children under age 18. Identifying children most at risk for accidental injuries is essential to the development of prevention strategies. Studies have implicated hyperactivity as a child characteristic correlated with accidental injuries and "accident prone children". This study was an attempt to identify behavioral correlates of injury in children. A Conners Abbreviated Symptom Questionnaire (CASQ) (screening tool for hyperactivity) was administered to 376 parents or caretakers of children brought to a children's hospital emergency room during a 3-week period. Children were categorized as trauma or nontrauma by chart review. The 90 trauma patients were matched by age and sex to 90 nontrauma patients and mean scores on CASQ were compared. Children with repeat visits to the emergency room were identified by using the University of Missouri-Kansas City Argus CHARTS Injury Surveillance System. Repeaters' mean CASQ scores were compared to mean scores for trauma and nontrauma patients. Preliminary results indicate that trauma patients and repeat patients score higher on the CASQ than nontrauma patients. Thus an important behavioral correlate of accidents (injury may be hyperactivity.

Audrey Galizia, M.A., M.S. ; Biostatistician, NYC Poison Control Center, NYC Department of Health
Richard Wilson, Pharm. D. ; Director, NYC Poison Control Center, NYC Department of Health
Leslie Fisher, M.P.H., Director, Injury Prevention Unit, Injury Control Program, NYS Health Department

ANALYSIS OF COST BENEFIT OF THE NEW YORK STATE REGIONAL POISON CONTROL CENTERS

An analysis of the cost savings resulting from the operation of regional Poison Control Centers in New York State demonstrates a substantial savings in the cost of health care for poisoning. In 1985, a total of 151,756 calls were reported to Poison Control Centers in New York State. If all these calls were to be treated in an Emergency Service with an average annual total cost of care (both direct and indirect costs) of $150 per visit (patient not admitted) then the estimated projected cost of care would have been $22,763,400 (151,756 x $150). Since not all callers to a Poison Center require a hospital visit we can look at the total number of callers where an emergency services visit was not necessary and estimate the cost savings. These total 128,149 calls and result in a annual savings of $19,222,350 (128,149 x $150) in preventing unnecessary cases from going to the Emergency Services. It is necessary to take into account that the estimated operating costs of the regional Poison Centers was about $2.7 million in the year 1985. Therefore the New York State Poison Centers reduced the cost of care for poisoning by 72% ($16,522,350/$22,763,400) which resulted in an estimated savings of $16.6 million ($19,222,350 - $2,600,000) in the year 1985. This means that for every dollar spent in 1985 approximately $6.24 was saved. These regional centers reach only 50% of the state population thereby rendering the potential for expansion and for substantially higher savings due to the operations of such centers despite ever increasing operational expenditures.

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Ellen J. MacKenzie, Ph.D., Sam Shapiro, B.A., David Salkever, Ph.D., Johns Hopkins University, School of Hygiene & Public Health and John Siegel, M.D., University of Maryland

THE ECONOMIC IMPACT OF INJURY

Estimates of the economic impact of injury (totaling $83 billion) have largely been based on broad assumptions and data derived from multiple sources. Further, it is not known who ultimately pays for costs incurred. This study was designed to provide better estimates of the costs associated with non-fatal injuries on a per episode basis and to examine more closely the relationship between costs and type, severity and cause of injury. 498 study patients were interviewed at discharge from acute care and at 6 and 12 months post-discharge. Information was obtained about the use of health services, the associated costs and expected source of payment. Providers and third party payers were contacted to supplement respondent information. Estimates of direct 1 year expenditures are presented by type of service and by type, severity and cause of injury. Percent expenditures paid by patient, Medicaid and other insurers is also examined. Estimates of foregone earnings are also provided. Implications for deriving population based estimates of the economic impact of non-fatal injury are discussed in light of the results.

A. Woolf, K. Helsing, C. Azzara, S. Gallagher, S. Fish, & F. Lovejoy. Massachusetts Poison Control System & Dept. of Public Health, Boston, MA

POISONING HOSPITALIZATIONS IN MASSACHUSETTS: A POPULATION BASED STUDY OF PRODUCT TYPE AND INJURY SEVERITY

We analyzed 11,571 primary discharge diagnoses related to poisonings and toxic effects for all ages recorded in the Massachusetts Uniform Hospital Discharge Data Set (UHDDS) for the fiscal years 1982 and 1983. Results showed the overall hospitalization rate to be 100.8/ 100,000 population. Although prescription medications were the most frequent cause of hospitalization accounting for more than 50% of the total cases non-prescription (over-the-counter) medications also resulted for over 1500 hospitalizations during the period studied (13% of the total). Lead was the most frequent reason for hospitalization among younger children; aspirin, alcohols, anti-depressants, and benzodiazepines predominated among adolescents and adults. Poisoning with over-the-counter medication was twice as common among females as males and, for both sexes, resulted in an average hospital length of stay of 3.94 days. Our results suggest hospitalization data can identify unexpected causes of serious poisonin to high risk groups. Such data should be used by Poison Centers to supplement telephone call data in planning educational and other interventional objectives.

Trudy Karlson, Ph.D. and Jerry Rose, MBA, Center for Health Systems Research and Analysis, University of Wisconsin-Madison

SURVIVAL OF TRAUMA PATIENTS TRANSPORTED BY HELICOPTER AND LAND AMBULANCE

In an evaluation of a helicopter transport service, the authors compared survival of trauma patients transported by helicopter and by land ambulance from April, 1985 to April, 1986. Each group was restricted to patients transferred between hospitals, within the same mileage range, and with a select group of life-threatening trauma diagnoses. We used three measures for severity of injury--Trauma Score (TS), Wisconsin Multiple Trauma Severity Index (MTSI) and the Injury Severity Score (ISS). Comparisons of survival rates differed by the method used to classify severity. Survival rates of helicopter patients in the high severity groups were: ISS - 70% (31/44); MTSI 60% (24/40); and TS - 52% (17/33). For land ambulance patients, survival rates were ISS - 70% (7/10); MTSI - 38% (3/8) and TS - 20% (1/5). Improvements in survival rates were not statistically significant (p≥.20). Our findings are suggestive of possible improvement in survival associated with helicopter transport but further research with a larger land ambulance population is necessary.

Karen A. Halupke, BSN, Ed.M., and Howard S. Schwartz, MD, JD, Office of Emergency Health Services, and Leah Z. Ziskin, MD, MS, Assistant Commissioner, New Jersey State Department of Health, Trenton, NJ

trauma cases - survival rates by helicopter vs ground transport were not statistically significantly better.

le intensive care services
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vival rates were compared
lts will be presented.

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Erich M. Daub, The Johns Hopkins School of Hygiene & Public Health & The Johns Hopkins Injury Prevention Center.

POLICY IMPLICATIONS OF 37 FATAL EMERGENCY MEDICAL SERVICES HELICOPTER CRASHES.

The epidemiology of fatal and non-fatal EMS helicopter crashes in the U.S. will be discussed. Recent research indicates a rise in the mortality rate (1985 = 2.4/10,000 flights vs. 1986 = 2.8/10,000), as well as an increasing case fatality rate, regardless of the measure of exposure chosen. The crash ratio for EMS helicopters vs. all other non-military helicopters is 2:1; vs. small airplanes it is 2.5:1. The increase in hospital-based EMS helicopter programs in the last 9 years was 37 fold. The operational elements unique to EMS helicopter services will be reviewed, as well as factors likely to contribute to death and injury. Evidence supporting the clinical contributions of such transport systems in reducing motality and severity of injury will be reviewed and the policy implications (economic, preventive, clinical) of this transport mechanism will be presented.

← another version of Daub's article. His research report has not been published yet.

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Aerospace Medical Association, Washington, DC

Medical Helicopters: Carbon Monoxide Risk?

THOMAS J. POULTON, M.D.

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Carbon monoxide exposure of medical personnel working beneath the turning rotor of a medical helicopter appeared to cause mild clinical illness. We measured the carbon monoxide levels found in various locations beneath the rotor of a jet helicopter under two different conditions. Carbon monoxide levels ranged from 8-76 ppm depending on location of sampling and speed of operation of the engine. This level of carbon monoxide is potentially a problem, as is the inhalation of jet fuel vapor, when working beneath the rotors of an operating helicopter.

THERE ARE CURRENTLY nearly 100 hospital-based helicopter medical transport programs in the continental United States (1). Although these programs may benefit selected patients (2,3), they do present certain risks to those who use them. These hazards are similar to those of ground transportation for critically ill and injured patients and include crashes, injuries from either main- or tail-rotor strikes, noise exposure, injury to bystanders or medical personnel from flying debris, and exposure to extreme wind chill factors in the rotor downdraft (4).

In some circumstances, patients may be moved into and out of helicopters while the engine is running and the rotors turning. When this is done, an additional hazard may exist. Especially when the helicopter has landed in a closed area, such as the bottom of a narrow valley or between tall buildings, carbon monoxide levels might accumulate significantly as the engine exhaust is blown beneath the rotors.

Our flight program's helicopter was summoned to the site of an industrial accident beside the loading dock of a warehouse in an urban area. The landing area, a parking lot approximately 200 ft long and 80 ft wide (60 × 25 m) was surrounded on three sides by 2- and 3-story buildings. The fourth side opened onto a heavily traveled five-lane street. The ambient temperature was 76° with a relative humidity of 85%. Winds were calm. The helicopter landed and sat with the engine running for approximately 6 min while both medical crew members worked to stabilize and load the patient.

Because of the patient's large size and the nature of his injuries, it took approximately 3 min to position and load him under the turning rotors. Both flight crew members and ground rescue personnel and the pilot experienced tearing and burning of the eyes. The medical crew members, who spent approximately 3 min longer under the rotor than ground personnel, also experienced mild nausea, headache, lightheadedness, and continued burning of the eyes. By the time the patient was unloaded and further treated at the receiving hospital, 20 min had elapsed, and both crew members were experiencing only mild nausea and burning of the eyes, both of which were gone 1 h later. Because symptoms were mild and improving, no medical evaluation or treatment took place.

Since most of the flight crew symptoms were consistent with carbon monoxide exposure, we designed a study to evaluate the potential for significant carbon monoxide exposure of personnel working in the downdraft of helicopters sitting on the ground with the engine running.

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We sampled carbon monoxide levels in the environment around our Bell 206L LongRanger single-engine jet turbine helicopter. This is the helicopter used most widely in recent years for emergency medical services applications (5).

MATERIALS AND METHODS

We used a Wilkes Miran Specific Vapor Analyzer (Model 103—Foxboro Analytical Co., South Norwalk, CT) to continuously measure the carbon monoxide levels in parts per million (ppm) on the downwind side of our helicopter while it ran under two conditions: idling with flat pitch on the rotor blade and with just enough pitch applied to the rotor to take a small amount of weight off the skids. Measurements were made on the downwind side of the aircraft as it sat on a relatively open urban helipad with one tall building on the downwind side and the other three sides of the helipad widely exposed. The wind was blowing at 6-7 mph (9.6-11.2 kmh) at the time of testing. Sampling was done at several points beside the aircraft, including beside the skid (where a patient might be placed on the ground prior to lifting for loading), at the level of the cargo door (where supplies might be retrieved), and approximately 15 other random locations within 10 ft of the aircraft itself.

RESULTS

With the engine idling, carbon monoxide levels varied from as low as 8 ppm to as high as 43 ppm, depending on the location of sampling. With the engine at full speed and pitch applied to the rotor, peak levels of 76 ppm were recorded in several locations. We found the peak levels could be located consistently by placing the sensor at those locations where the heat from the engine exhaust could be felt maximally in the downdraft. These locations varied somewhat from moment to moment, but were always within 5–6 ft of the aircraft.

DISCUSSION

Our single-engine jet turbine helicopter consumes approximately 0.15 gal (0.56 L) of fuel per minute while sitting on the ground. Twin-engine helicopters, many of which are used in EMS applications, consume nearly twice this amount of fuel.

Jet turbine helicopters use JP4 jet fuel, a mixture of 65% kerosene and 35% aviation gasoline (5). The latter is a 115–145 octane petroleum distillate fuel used in pure form for reciprocating aircraft engines. Both kerosene and aviation gasoline, as well as the JP4 mixture of the two, are toxic. The vapors of JP4 are narcotic and can cause CNS impairment. Direct contact with JP4 can cause severe skin irritation. In addition, prolonged exposure, as from spillage on clothing, can lead to significant systemic uptake.

Aviation gasoline fumes are also a known upper respiratory irritant and produce tearing, rhinorrhea, and coughing. Prolonged exposure to high concentrations of the fumes has caused death. The exhaust from the helicopter smells strongly of JP4, which has an unmistakable hydrocarbon odor. It is possible that some of the symptoms of our medical personnel may have been from the inhalation of and exposure to JP4 fumes rather than to carbon monoxide alone, since combustion in the jet turbine engine is incomplete and significant amounts of JP4 fuel may appear in the exhaust as a vapor.

The level of carbon monoxide in jet engine exhaust itself is approximately 10,000 ppm (5). In reciprocating engines, the exhaust may contain almost 100,000 ppm (i.e. nearly 10% carbon monoxide) at take-off power settings. At idle settings, the carbon monoxide levels will be approximately one-third this level or up to 30,000 ppm in reciprocating engines and up to 3–4,000 ppm for jet engines. Further dilution of exhaust gases by ambient air ought to reduce carbon monoxide concentrations rapidly as a function of distance from the exhaust port.

Are the levels of carbon monoxide documented in this study dangerous? Three frequently quoted guidelines for acceptable levels of carbon monoxide in breathing air exist. The Occupational Safety and Health Administration (OSHA) forbids time-weighted average levels greater than 50 ppm during an 8-h period (6). The National Institute for Occupational Safety and Health (NIOSH) recommends that permissible exposure limits not exceed 35 ppm (6). At that level, carboxyhemoglobin levels of up to 10% may occur after an 8-h exposure. This guideline further directs workers to immediately leave any area in which carbon monoxide levels exceed 200 ppm.

The United States Environmental Protection Agency publishes "danger levels" for carbon monoxide. These prescribe a 1-h mean maximum of 35 ppm and an 8-h mean not to exceed 9 ppm. These exposures are calculated to keep CHB levels of the nonsmoking general public at less than 2% (7).

The levels of carbon monoxide documented in our investigation exceed the levels permissible for prolonged exposure in a workplace. Nonetheless, the duration of exposure in any reasonably imaginable operational situation with a civilian helicopter would be less than 6-8 min. It is easy to imagine that, with a more enclosed landing site and calm wind conditions, much higher levels of carbon monoxide might build up quickly. A mere three-fold increase over the level measured in our relatively open-field testing with a significant prevailing wind would result in levels exceeding permissible standards for even brief exposures (200 ppm). At the same time, JP4 vapor levels would also be expected to rise rapidly.

We encourage all personnel involved with EMS helicopter operations to be aware of this potential hazard. Although carbon monoxide is odorless and not detectable without specific measuring equipment, it is reasonable to assume that its levels near the aircraft will parallel those of the easily perceived JP4 vapor. Thus, when medical personnel or rescue personnel are working under or very near a helicopter whose engine is running, they must be aware of the additional potential hazard of exposure to these toxic substances. If such personnel find that they are significantly bothered by the effects of fumes in such a setting, and the exposure is likely to last more than a very few minutes, they should discuss with the pilot the advisability of

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shutting the engine down. The pilot might also be affected by the fumes and carbon monoxide with possible impairment of performance.

Shutting down the engine of a jet turbine helicopter requires a cool-down period of approximately 3 min and a subsequent warm-up period of 1-2 min. Thus, the departure of the aircraft would be delayed 4-5 min under the most adverse circumstances. Since the work of evaluating and stabilizing the patient can proceed while the cool-down takes place, the delay in departure from the scene would ordinarily be less than 3 min. It is probably quite rare that a departure delay of this duration would have a clinically significant impact on patient outcome.

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ORIGINAL CONTRIBUTION
emergency medical services, pediatrics,
pediatrics, prehospital care and

Advanced Prehospital Care for Pediatric Emergencies

During an 18-month study period, the mobile intensive care unit (MICU) in Jerusalem responded to 307 pediatric emergencies, representing 5% of the total MICU case load. The most common medical problems were seizures, diagnosed in 100 cases (32%), and conditions related to trauma, diagnosed in 77 cases (23%). Forty-one cases (13%) were cardiac arrests. Nineteen patients were pronounced dead with a resuscitation attempt; resuscitation was attempted in 22 patients. Four patients were stabilized for admission to the hospital, but there were no long-term survivors. Eighteen cardiac arrest patients (82%) were found in asystole, and most had previous serious medical problems. Based on our experience children are less likely to require or benefit from advanced levels of prehospital care compared to the adult population. When resources for advanced care are limited, priority should be given to adult emergencies. [Applebaum D: Advanced prehospital care for pediatric emergencies. Ann Emerg Med July 1985;14:656-659.]

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INTRODUCTION

Prehospital emergency medical services (EMS) systems are designed to deliver life-saving medical care directly at the scene of emergencies. Studies have demonstrated the benefit of EMS for cardiac arrests and traumatic emergencies in adults,[1-3] yet few studies have addressed the use and benefit of EMS for children. This report describes the experience of a mobile intensive care unit (MICU) in treating pediatric emergencies during an 18-month period.

MATERIALS AND METHODS

In Jerusalem a physician- and paramedic-staffed MICU provides services for a population of about 450,000 people. Thirty-six percent of the population (165,000) are under age 15. The MICU responds to an average of 350 calls per month; all calls are identified by a dispatcher as requiring advanced emergency care. The criteria for sending the MICU are such symptom-related key words as unconsciousness, chest pain, severe shortness of breath, seizures, and severe trauma. For less critical emergencies, ambulances staffed with an emergency medical technician (EMT) are dispatched.

The MICU physicians are licensed to practice medicine and surgery by the Israel Ministry of Health, and have met requirements similar to those for advanced cardiac life support certification.

All children under age 15 receiving treatment by the Jerusalem MICU from October 1982 through March 1984 were included in the study. Demographic and treatment data were taken from the paramedic's run sheet, and diagnostic data were taken from the physician's medical report. For patients delivered or referred to a hospital emergency department (ED), outcome of the ED visit was taken from the ED registration book. For patients not referred to an ED, telephone follow-up was carried out two days after the MICU visit.

Differences between subgroups of patients were examined with the help of an SPSS computer program and were tested for statistical significance by chi square or t tests.

RESULTS

During the study period, the MICU responded to 307 pediatric cases (5%

John - I'm not sure this is really relevant - they're not discussing helicopters here - but, it is an interesting question, especially in view of CHMC's extremely high mortality rate for helicopter-transported children - anita

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of total MICU cases). One hundred eighty-three patients (59.6%) were boys. Age and sex distribution are shown (Table 1).

The most commonly encountered emergency was seizures, accounting for 32.6% of cases (Table 2). The second most common emergency was trauma (25%). In 52 patients (66%) trauma was related to motor vehicle accidents and was considered minor injuries.

Forty-one patients (13.4%) were pulseless when the MICU arrived. Of this group, 19 patients were pronounced dead without a resuscitation attempt; nine patients suffered sudden infant death syndrome (SIDS); six cases involved trauma (three motor vehicle accidents, two injuries suffered in a collapsed building, and one drowning). Four patients were chronically ill (two were severely mentally retarded, one had Tay-Sachs disease, and one had Down's syndrome).

Cardiac arrest victims for whom a resuscitation was attempted are listed according to etiology, age, and cardiac rhythm on arrival of the MICU at the scene of the arrest (Table 3). Of 22 resuscitation efforts, four patients regained pulse and blood pressure and were admitted to the hospital, but there were no long-term survivors. Thirteen patients (59.1%) were less than one year old. Almost all patients were found in asystole (one patient was in ventricular fibrillation, two were in severe bradycardia). Twelve of 18 patients (66%) not in the SIDS category had previous medical problems that may have been related to the cardiac arrest (Table 3).

We examined the time elapsed between receipt of the call and arrival of the MICU on the scene in the following three patient groups: 1) no cardiac arrest (n = 266); 2) cardiac arrest with no resuscitation attempt (n = 19); and 3) attempted resuscitation (n = 22). The times were 6.2, 7.3, and 6.5 minutes, respectively, and the differences were not statistically significant.

Medications were used in 11.1% of all cases (Table 4). The most commonly used drugs were diazepam (17 patients [5.5%]) and epinephrine (10 patients [3.2%]). Steroids and sodium bicarbonate were each used in seven cases (2.3%). Glucose, lidocaine, atropine, and calcium were each used once.

More than 75% of the pediatric emergencies were referred to a hospital ED: 111 (36.1%) by MICU transport, 85 (27.7%) by EMT transport, and 39 (12.7%) by private transportation. Forty-five patients (14.7% of total) were treated definitively in the prehospital phase and were not referred to an ED. Twenty-six patients were pronounced dead (19 without resuscitation, seven after resuscitation was terminated). One patient refused treatment.

Of 229 patients referred to an ED, follow-up information was available in the ED registration books in 200 cases. Of these cases 134 (67%) were admitted to the hospital, 11 (5.5%) were pronounced dead in the ED, and 55 (27.5%) were discharged home.

TABLE 1. *Age and sex distribution of pediatric patients receiving advanced prehospital care*

Age	No. Boys	No. Girls	Total	%
<1	31	14	45	14.7
1-2	41	32	73	23.8
3-5	40	20	60	29.5
6-9	33	22	55	17.9
10-14	38	36	74	24.1
Total	183 (59.6%)	124 (40.4%)	307	100

TABLE 2. *Diagnoses of pediatric emergencies attended by the MICU*

Diagnosis	No. (%)
Seizures	100 (32.6)
Accidents	77 (25.1)
Motor vehicle accidents 52	
Other 25	
Cardiac arrest	41 (13.4)
Apnea	14 (4.6)
Syncope	11 (3.6)
Gas inhalation	10 (3.3)
Dyspnea	5 (1.6)
Foreign body aspiration	4 (1.3)
Hypoglycemia	4 (1.3)
Asthma	4 (1.3)
Anxiety reaction	4 (1.3)
Coma	3 (1.0)
Aspiration	2 (1.0)
Other	28 (9.1)
Total	307

DISCUSSION

The use of MICU services is low in the pediatric age group. Children make up 36% of our community, yet constitute only 5% of MICU cases.

The most common pediatric situation confronting our MICU was seizures. Although exact etiologic data are not available, most of the seizures were first episodes of febrile convulsions, and the seizure ended before the MICU arrived. Medical intervention was initiated in only 16 of 100 seizure

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TABLE 3. *Characteristics of cardiac arrest victims for whom resuscitation was attempted*

Patient No.	Age	Etiology	Rhythm on Arrival of MICU
1	1 mo	SIDS	Asystole
2	2 mo	SIDS	Asystole
3	2 mo	Negligence*	Asystole
4	3 mo	Untreated fever	Asystole
5	3 mo	Down's syndrome	Asystole
6	4 mo	SIDS	Asystole
7	5 mo	Negligence*	Asystole
8	6 mo	Fever, diarrhea	Asystole
9	6 mo	Unknown	Asystole
10	8 mo	SIDS	Asystole
11	9 mo	Drowning	Asystole†
12	1 yr	Aspiration	Bradycardia
13	1 yr	Foreign body aspiration	Asystole†
14	2 yr	Untreated fever	Asystole
15	2 yr	Congenital heart disease	VF
16	2 yr	Cerebral palsy	Asystole
17	3 yr	Familial dysautonomia	Asystole
18	3 yr	Unknown	Asystole†
19	4 yr	Hydrocephalus	Bradycardia†
20	5 yr	Barbiturate overdose	Asystole
21	13 yr	Motor vehicle accident	Bradycardia
22	13 yr	Congential heart disease	Asystole

*Patient was found in cardiac arrest after being left unattended.
†Patient was admitted to the hospital after stabilization, but died during hospitalization.

TABLE 4. *Treatment interventions for pediatric emergencies in the prehospital phase*

Treatment	Frequency (%)
IV line	50 (16.3)
Oxygen	39 (12.7)
IV/IM drugs	34 (11.1)
CPR	22 (7.2)
Immobilization of fracture	13 (4.2)
Endotracheal intubation	8 (2.6)
Defibrillation	2 (0.7)

patients, and always in the form of parenteral diazepam. (One patient also received 50% dextrose solution.) While treatment may have been indicated clinically in several cases, prehospital medication probably was not necessary to bring about a favorable outcome. None of these patients required intubation or ventilation.

Accidents contribute significantly to childhood morbidity and mortality.[4,5] In our experience accidents were responsible for 27% of MICU calls. Two-thirds of these cases were motor vehicle accidents. While some of these injuries were potentially life threatening, interventions needed in the prehospital phase generally were conservative; intravenous fluids were administered to ten, fractures were immobilized in 13, analgesics were offered to only one, and basic cardiopulmonary resuscitation (CPR) was performed on two accident victims. Six additional patients with cardiac arrest secondary to trauma were pronounced dead without a resuscitation attempt because of their extensive injuries.

We responded to 41 cases of pediatric cardiac arrest. In 19, CPR was not initiated. In 22 cases, resuscitation attempts were unsuccessful. Response times for the two groups were not different. The group for whom CPR was not initiated consisted of patients suffering from SIDS, severe trauma, or chronic illness, making cardiac arrest not unexpected. All were in asystole when the ambulance arrived. In contrast, the group for whom CPR was started also consisted of patients with unexpected cardiac arrest resulting from drug overdose, foreign body aspiration, and what appeared to be routine illness.

The decision to initiate CPR is a difficult one, with irreversible consequences. There is an overwhelming tendency to err in favor of preserving life, no matter how remote the chances. Frequently parents bring an unconscious child outside to wait for the ambulance. In such cases the decision to proceed with CPR is dictated by circumstances more than by patient salvageability.

By comparison our experience with adult cardiac arrest is very different. Of 683 adult cardiac arrests during the same period, CPR was attempted for 401 patients. Forty-six patients (11.5%) were long-term survivors. Response times did not differ from those in the pediatric cardiac arrest group.

Eisenberg and colleagues[6] concluded that the likelihood of successful pediatric resuscitation, although lower than that in adults, is high enough to warrant vigorous efforts. We had no long-term survivors from 22 attempted resuscitations. It is difficult to identify accurately the reasons for the poor results in pediatric cardiac arrests. Our physicians are not trained extensively in pediatrics, and they are less comfortable with han-

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dling pediatric arrests than adult arrests. This is shown by the fact that endotracheal intubation was carried out in only eight pediatric patients, while it was achieved in almost 100% of adult patients. Although personnel are trained in pediatric resuscitation techniques, there is no substitute for cumulative experience. Because pediatric cardiac arrest is a relatively rare occurrence, it is difficult to accumulate such experience.

The physicians' inexperience, however, does not seem to be responsible for these results. We found, as did Eisenberg,[6] that almost all patients were in asystole. In Eisenberg's group of eight successfully resuscitated children, four were near-drowning victims and two were in anaphylaxis. He reported no cases of discharged cardiac arrest in patients less than 15 months old. Furthermore Eisenberg's series failed to demonstrate a significant advantage for advanced-paramedic prehospital care over basic EMT care. One of 17 cardiac arrest patients (6%) treated by EMTs were discharged, compared to seven of 102 patients (7%) treated with advanced paramedic care. In our study group, there was one drowning, no cases of anaphylaxis, and 13 patients less than 15 months old.

We have found two extremes in our pediatric emergencies attended by the MICU. At one extreme we treated emergencies that did not require advanced prehospital care, as indicated by the few medical interventions needed before arrival at the hospital. At the other extreme the most severe cases were not likely to benefit from our care.

CONCLUSION

In a two-level EMS system such as ours, the physician- and paramedic-attended MICU is a scarce resource, and its efficiency must be maximized by reserving it for life-threatening situations for which advanced prehospital care might favorably influence outcome. While the MICU may play a role in pediatric emergencies and vigorous efforts at pediatric resuscitation should be made, it seems prudent to give first priority to adult emergencies, for which advanced care is more likely to contribute to a favorable outcome.

The author thanks Paul Slater, MD, for his valuable assistance in analyzing the patient data.

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two articles on safety of EMS helicopters
plus you have the report by Paul Russell
in which he points out what an unsafe
landing site Children's Hosp. has — especially
compared with the UW soccer field. (Harborview
Hosp. site would be even better, of course.)

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The EMS Safety Dilemma: A Matter Of Maturity

The expanding helicopter aeromedical industry finds ill side effects to dramatic growth and a critical safety problem is prompting an eager search for a cure.

By David Harvey and David Jensen

PERHAPS IT IS characteristic of all ripening aviation industries. Like awkward adolescence, well into a rapid-growth stage, there is a tendency to be accident prone.

Regardless, many believe the safety record of today's emergency-medical-service (EMS) market has become critical, as mishaps over the previous few years have broken out like a bad case of acne. As a result, groups like the American Society of Hospital Based Emergency Air Medical Services (ASHBEAMS) and National EMS Pilots Association (NEMSPA), along with hospital administrators and government agencies, are seriously examining ways to help the industry grow out of this stage. Their efforts in cleaning up the EMS industry's record and reputation will not be small.

How bad is it?

"In terms of pure numbers, the situation is alarming," says Tom Guterl, senior vice president of the United States Aviation Underwriters, a group understandably concerned about safety problems. "The average accident rate for EMS helicopters is now running at a rate of 20.7 accidents per 100,000 flight hours—about five times the accident rate for commercial helicopters." The fatality rate is also higher, running 6.5 lives per 100,000 hours, according to the Aviation Safety Institute, in Columbus, Ohio.

(Guterl's figures compare but don't exactly match those from other sources keeping tabs on EMS safety. This punctuates the fact that there is no official central source for such information.)

Gabriel Martyak, assistant director of Geisinger Medical Center's Life Flight program, in Danville, Pa., says there have been 16 major EMS accidents since 1980, resulting in 47 fatalities and six injuries. An additional 17 accidents were classified as "substantial" and accounted for 51 injuries.

Ten people lost their lives last year due to EMS-helicopter accidents. By October, 16 incidents involving EMS helicopters were recorded for 1986 and, with winter coming on, industry officials were anticipating still more bad news before year's end.

Referring to an unofficial survey he conducted, Martyak reports that EMS programs in the U.S. today fly some seven million miles annually. "We estimate [these programs] are now carrying between 6,500 and 7,000 patients a year," he adds. "That's an achievement that shows how significant EMS is becoming. But since 1980, 50% of the EMS programs in this country have experienced some kind of accident or serious incident."

What factors feed such a record?

Human error

There are indications, Martyak replies, that 89% of the EMS accidents since 1980 were due to human error. The remainder could largely be attributed to engine failure. The term "human error" invariably translates into "pilot error" and that points to factors ranging from crew-rest time to assessment of what makes a good EMS pilot.

Don Wright and Tom Einhorn, founders of the two-year-old NEMSPA, say fatigue and stress caused partly by understaffing have contributed significantly to the safety problem. They believe a four-pilot team should accompany each EMS helicopter pulling 24-hour duty. Too often, they claim, such programs employ three or even only two pilots.

Human error in EMS operations frequently begins with decisions to fly at night or during adverse weather conditions. Martyak's survey reveals that 78% of the EMS mishaps occurred during such conditions. This no doubt accounts for the fact that about 75% of the accidents took place while the helicopters were en route.

"The issues boil down to: pilot, night flying, and weather," says Martyak. "In some places, for instance, we have VFR-trained pilots flying in IFR conditions. We have got to approach zero on this kind of problem."

"That's all good," counters NEMSPA's Tom Einhorn, "but we're continuing to hear from members who are getting fired for refusing to fly missions under certain conditions."

Also, even without pressures from program management and/or medical staff, EMS pilots have been known to be their own worst taskmasters. Humanitarian instincts too often take over from good judgment and thus they fly when they shouldn't. They simply don't know how to say, no.

"We pay people to say, no, when it has to be said," says John Heiskell, director of operations-medical group for Rocky Mountain



For night flights like this one being completed by a Bell LongRanger, the insurance industry proposes minimums of 1,000 feet and three miles visibility.

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Helicopters Inc. (RMH), "but it is often hard to say."

But not all responsibility lies in the pilot's lap. Tom Guterl claims the insurance industry "feels strongly that safety is a management problem, not a pilot one.

"We need to have things like weekly, formal safety meetings," he adds, "and this is an area where management should be increasing its visibility.

"Also, management can play a big part in reducing stress. One immediate solution would be to mandate two-crewmember operations for all night flying."

Einhorn believes good EMS-program management means involving the pilots as well. They can frequently identify safety problems, he points out, "but often have no authority to make changes. If we don't get the pilots more directly involved in part of the

(Continued on Next Page)

The insurance factor

An industry's troublesome safety record is invariably followed by the shadow of insurance woes and the EMS field is no exception. For the about 150 programs in the United States, there is the growing threat of escalating insurance premiums or, worse, insurance cancellation.

Tom Guterl, senior vice president with United States Aviation Underwriters, describes the EMS industry's current situation as "disastrous" and elaborates by saying, "Liability payments are outrunning at three times the premiums taken in.

"If you combine hull and liability over the past five years, losses have been outrunning premiums by a factor of 2.5 to one." The situation is aggravated, he adds, by the fact that accidents have occurred at the same time the insurance industry has been hit by payouts arising from claims made in 1985, the worst year yet for the aviation-insurance industry.

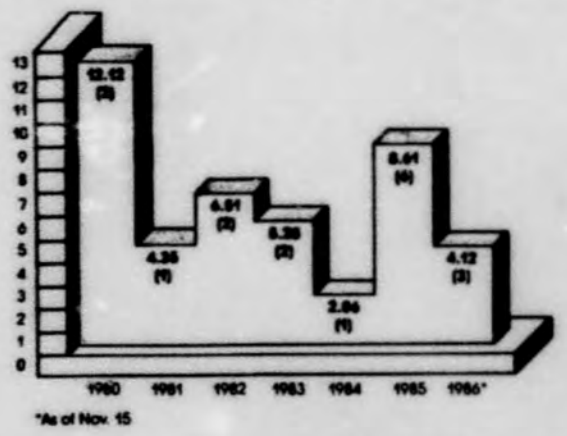
"At the start of EMS programs a few years ago, we actually reduced insurance premiums for operators," Guterl recalls. "Then 1983 hit. That forced a lot of insurers out of the market. The London [insurance] market began pricing itself out of carrying insurance for U.S. programs. There was some recovery in 1984, then came 1985, which eclipsed 1983."

So now the insurance dollars for coverage have dwindled. "EMS has to compete for those dollars like everyone else," says Guterl. "But the supply is down and in some cases, not there at all."

He explains that coverage for programs will be considered "on a case-by-case basis. We'll try and work with existing clients, albeit at a higher price. A lot will depend on the individual record."

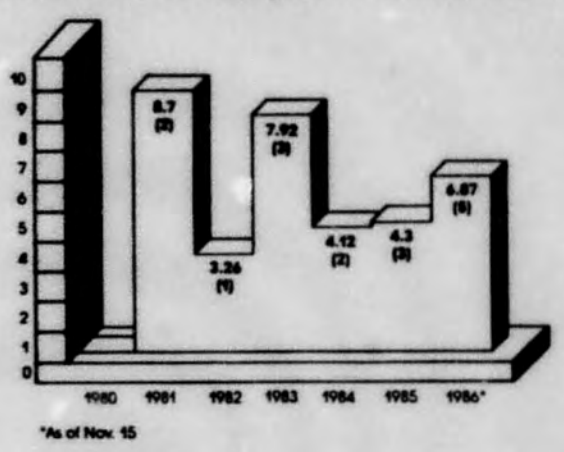
Guterl doesn't believe all news is gloomy, however. The insurance industry sees an optimistic trend toward twin-engine helicopters and, he perceives, "there is a shared realization that something has to be done."

Fatal Accidents Per 100,000 Patient Transports



*As of Nov. 15

Injury Accidents Per 100,000 Patient Transports



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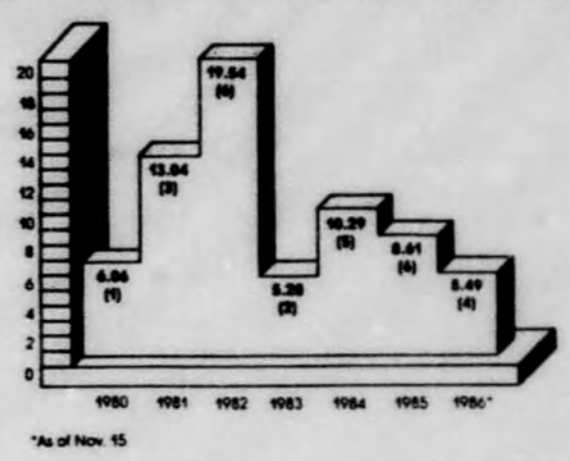
Damage Accidents Per 100,000 Transports



*As of Nov. 15

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management loop, the accident rate is going to increase."

Recruiting the right stuff

Despite management's role, the focus of EMS safety remains clearly on the pilot, which presses the question: are there unique characteristics that should be looked for when recruiting EMS pilots?

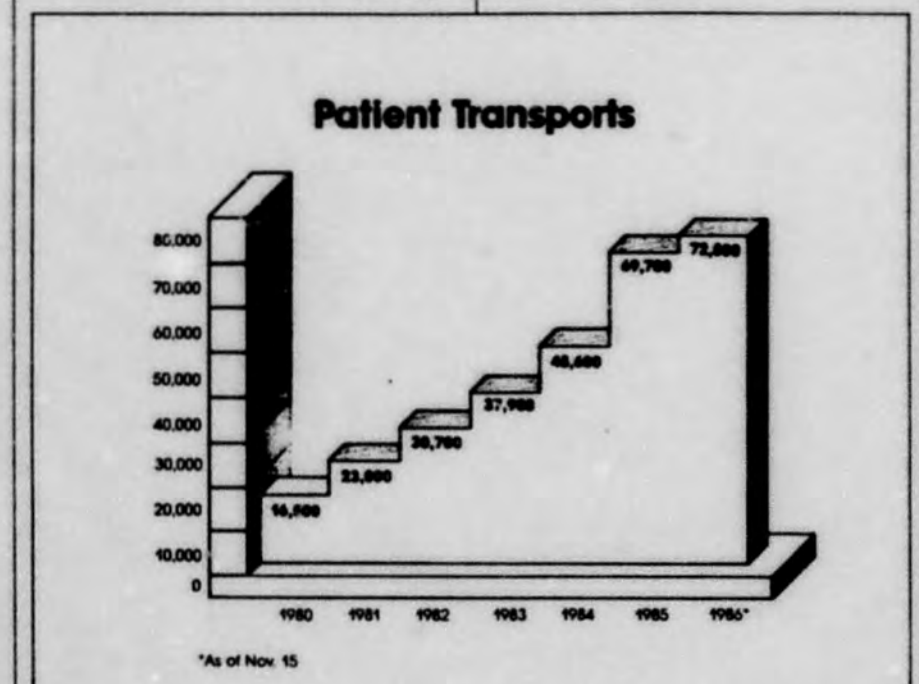
Some say, yes; others disagree.

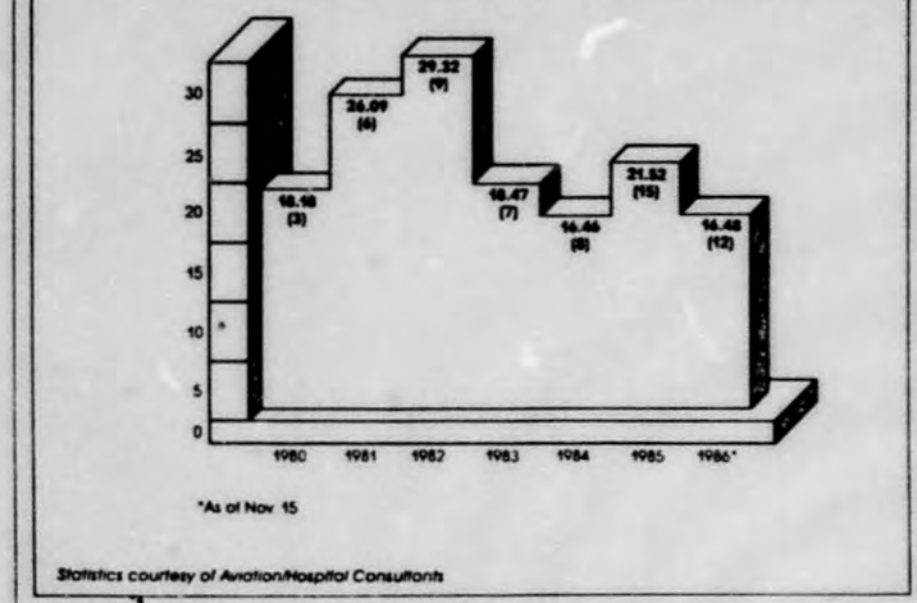
An industry spokesman who says, yes, comments that, "Pilot error begins in the interview process."

Some people in the industry propose going beyond extensive interviews with pilot applicants and administering psychological testing. "In the near future, I see us going into some sort of personality testing," says RMH's Heiskell.

An aeromedical pilot should "have a personality that fits into the hospital environment," he explains. "Adaptation is important because you go from a controlled area, in the hospital, to a situation with little control.

"Many pilots [applying for EMS jobs] have a lot of flying time but not in a variety of work," adds Heiskell, who claims RMH hired 60 to 70 pilots over a recent six-month period. "It's better to hire a lower-time pilot who has done a variety of jobs."





Statistics courtesy of Aviation/Hospital Consultants

Talk of pilot adaptability brings to issue the hiring of civil-trained or former-military pilots. Some EMS-industry officials argue that military training can make a pilot too rigid and unable to adjust to the extremely varied situations EMS missions present. They also claim military aviators are used to flying dual pilot and most EMS programs haven't the luxury of a left-seat crewman.

But others in the industry fervently argue that EMS pilots should not be deemed different from other helicopter pilots, be they civil- or military-trained. "I keep hearing about how different the EMS pilot is," says an official of an operator with EMS contracts. "The only difference is the emotion of the job. Outside of that, it's the same."

Another industry spokesman agrees. "Whether he flies an EMS helicopter or whatever, the pilot doesn't have that many decisions to make," the spokesman comments. "He has to takeoff and land, and do so within certain confines."

Critics also disagree that dual-pilot experience is a handicap in the single-pilot EMS world. "It's not bad that your experience is mainly dual-pilot," says a spokesman. "In fact, that pilot has been observed. He's been flying with another person looking over his shoulder."

Industry standards

Whether right-seat occupants of EMS helicopters represent a unique breed of pilot or not will no doubt remain in debate. But the fact that they often fly at night or in adverse weather and sometimes land in streets and other unprepared landing areas makes their mission undeniably unique. Recognizing this uniqueness, some in the industry have decided some nationwide standards must be drawn up.

While stressing that the insurance industry "does not intend to become a policeman," Tom Guterl says it has established standards because "the operational situation [during an EMS mission] is one that adds stress to an already stressful situation.

"The [insurance] industry believes that standard minimums should be a 500-foot ceiling with two miles visibility during day VFR and 1,000 feet and three miles at night," he recites. "Three hundred feet and one mile is, in our view, totally unrealistic."

The Federal Aviation Administration (FAA) has yet to establish standards unique to EMS operations but the agency's Southwest Region has begun to take action. In mid-November, all helicopter inspectors in that five-state region gathered to discuss the EMS safety problem and possible solutions.

"We're not going out on a witch hunt," an FAA official quickly notes. "We want to get as much continuity between us and the operators as we can."

He adds that standards resulting from the November meeting won't evolve into a separate FAA regulation but, through cooperation with, say, the Helicopter Association International (HAI), "they will hopefully reach the national level."

On top of operating standards, an aggregate of safety suggestions for the EMS industry includes crewmen wearing helmets, initiating safety programs, using shoulder

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Lessons from an oil company

Can lessons from an oil company's successful helicopter operation be transferred to the still-emerging EMS industry? Jack Piehl, president of Sentinel Aviation Systems, recounts his experiences with Shell Oil's aviation department.

He recalls serious safety problems in the oil industry at one time and, as a result, hammering out a long-term plan to tackle those problems at the source. That plan turned "an-accident-a-week" situation into one in which Shell could fly nearly a half million hours without "injuring an employee."

When Piehl looked at the company's safety problem, he was aided by a contractor who "went through the business from top to bottom." Also, company advisors conducted a survey of Shell Aviation helicopter pilots. They found that maintenance ranked No. 1 as an issue of concern and unreasonable bad-weather standards ranked No. 2.

Landing platform/heliports posed another problem. Many of Shell's facilities were in remote areas, as far as 150 nm off the Gulf coast, and some platforms were unmanned.

"It was a situation where the pilot felt he was completely on his own," says Piehl, summing up the complaints. "He also felt pressure to perform and some pilots were told, 'hey, if you don't want to do the job, we can easily find someone who will.'"

Armed with this information, Piehl and his colleagues set out to establish a five-year program, concentrating on the operation's weak areas. "We found that 50 heliports were in need of serious attention. We started looking at the weather standards and set new and more reasonable ones. We also set up programs to evaluate the contractors who were vending the helicopter services to us, to see what they were doing in terms of their pilot relations."

Another scheme involved establishing roving maintenance teams, which would periodically visit each heliport. Shell also set up operating standards, so pilots could rightfully decline flights they deemed unsafe. In addition, Shell officials combed through years of malfunction reports, to determine which items are most likely to fail. Operators were also asked to supply comprehensive hazard reports.

Shell's safety policy took shape but, Piehl stressed, it all took time. "This took about five years by the time we published an operations manual that was helping standardize operations. We met a lot of resistance from within the oil industry, which was afraid this would cut into profits and result in 'North Sea rules' that would regulate aviation from a central point. Finally, it was a full 11 years before we managed to get our own heliport design guide approved."

Was it successful? Piehl believes it was, not just because the safety rate eventually reached over 400,000 accident-free miles but it helped "take the surprises" out of helicopter operations.

Piehl believes more and more events will be judged on what are known as "prudent man" rules. He explains that these aren't just legal standards but standards adopted by an industry as a whole.

"The standard must be the way the industry does it, not what the FAA says it is," he concludes. "It's up to industry to fix its own problems and to set the higher levels of standards."



Aeromedical helicopters like this Alouette III must often operate in confined areas.

harnesses, establishing protocol for "combative patients," addressing the two-pilot issue, and debriefing after flights.

Industry officials also believe there is a need for anonymous incident reporting. Gabriel Martyak goes further by advocating a nationwide information center, which can absorb and dispense EMS-incident data.

Resemblance to offshore

"In the U.S., there is no central point from which information flows," he exclaims. "The problem is, and remains, gathering the necessary data."

One operator in the Gulf of Mexico likened the EMS safety problem today with a similar situation in the late 1970s, when the offshore-support market was entering its adolescent stage. It was a time when oil activity was at its highest and the market was being swamped by new entrants.

"We all got together at that point and decided enough was enough," he recalls. "We needed safety standards."

The Gulf-coast spokesman believes EMS operators have reached that point, when safety standards must be established. "But they've got to want it to happen first." ■

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Aeromedical Aircraft Accidents Register Sharp Increase in 1987

By Paul Proctor

Washington—Recent crashes near Great Falls, Mont., Saginaw, Mich., and at Bridgeport, Calif., have brought the number of fatalities resulting from commercial aeromedical aircraft accidents this year to 19, just two fewer than in all of 1986.

Ten commercial aeromedical aircraft have been involved in serious accidents in 1987, including four fixed wing aircraft and six helicopters. Last year there were 28 serious aeromedical accidents, all of them involving helicopters. Overall, the aeromedical accident rate for 1986 was almost three times that of other U.S. commercial helicopters.

Only one of this year's accidents, occurring near Greenville, N.C., involved the death of a patient. The majority of those killed in last year's accidents were also either pilots or on-board medical crew.

Increased Activity

The rising number of fatalities reflects increasing aeromedical aircraft activity in the U.S., with 100,000 patient transfers expected by year-end. In 1986, U.S. commercial aeromedical aircraft flew approximately 85,000 patients and had a fatal accident rate of 5.88 per 100,000 patient transports. In 1985 that rate was 8.35, with a total of 71,831 patients flown.

The use of fixed wing aeromedical aircraft, as well as the associated accidents, is also influencing statistics as doctors and hospitals are finding them a reliable and rapid means of transporting patients and critical organs to distant specialized care facilities. Fixed wing aircraft have been responsible for 40% of the accidents and over 30% of all aeromedical fatalities so far this year.

Suspected Causes

The Great Falls crash, which occurred on June 5, involved a Bell 206L LongRanger single turbine helicopter and killed four, including two doctors, the pilot and a flight nurse. Weather was possibly a factor in that accident. Mechanical failure is suspected in the crash of a twinengine Messerschmitt-Boelkow-Blohm BO. 105 helicopter north of Saginaw two days later. That accident killed the pilot and a flight nurse and injured a paramedic. The aircraft had just taken off for a training demonstration at a local fire department when control was lost.

The crash at Bridgeport occurred as a Rockwell Turbo Commander 690 fixed wing aircraft approached the airport at night to pick up a patient. The twin turboprop aircraft apparently experienced an engine failure during its approach to the field. Both the pilot and a flight nurse were killed.

As a result of the rising aeromedical accident rate, the Federal Aviation Adminstration in March began a special two-month safety surveillance of the approximately 166 U.S. commercial aeromedical operators. The agency plans to issue an advisory circular containing recommendations and guidance for operators on aeromedical crew rest and duty times and other safety criteria, possibly as soon as this month. If ineffective, it may be backed with new regulations (AW&ST June 8, p. 24).

The FAA surveillance program was partially spurred by complaints by the National Emergency Medical Services Pilots Assn. (NEMSPA). Formed in August, 1984, the group is concerned with flight safety problems including extended pilot duty shifts, inadequate program staffing and training, and minimal aircraft safety equipment. NEMSPA does not address wage and salary issues and cannot legally bargain in behalf of pilots.

Over the past decade bad weather, poor visibility and pilot fatigue have been cited as factors in as many as 90% of all commercial aeromedical helicopter crashes. This pattern appears to be continuing in the 10 fatal aeromedical aircraft accidents so far this year, according to Thomas Einhorn, NEMSPA vice president.

Of concern to the pilots association is the industry practice of 24- to 72-hr. pilot duty assignments, often combined with rotating shifts. Such work schedules result in chronic pilot fatigue, according to the group. "It's really a quality of life issue. Fatigue, stress and emotion are all interrelated . . . the first thing to go is your judgment-making ability," Einhorn said.

Draft versions of the proposed FAA advisory circular essentially limit pilot duty times to include 10 hr. of rest in any 24-hr. period, according to Part 135.267 of the Federal Aviation Regulations. Aeromedical pilots can only fly life or death emergency medical evacuation flights with less rest under FAR Part 135.271.

The draft circular also addresses weather and visibility hazards and recommends

Plastic Media Paint Stripping Hangar In Operation at Duncan Aviation



First dedicated plastic media paint stripping hangar for business jets has been opened at Duncan Aviation, Lincoln, Neb. The process removes aircraft paint by spraying a plastic media, similar in size and shape to sand granules and borne by 30-40 psi. compressed air at metal aircraft surfaces. The process helps solve hazardous waste disposal problems associated with conventional paint stripping operations. It is already in use by some airlines and at Hill AFB.

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aeromedical helicopter operations allow local daytime sorties only if cloud ceilings are 500 ft. or higher and visibility is greater than 1 mi.

Minimums for daytime cross-country flights should be 800 ft. ceilings and 2 mi. visibility, the agency said, with nighttime local standards set at 800 ft. with 2 mi. visibility and 1,000 ft. and 3 mi. visibility for longer trips.

Although not directly or extensively addressed in the advisory circular, both NEMSPA and the American Society of Hosptial Based Emergency Aeromedical Systems, which represents aeromedical helicopter operators, have suggested minimum experience and initial and recurrent training requirements for aeromedical pilots and staff. NEMSPA would like to see four crews assigned to all single helicopter aeromedical programs to assure adequate pilot rest and time off.

Initial pilot experience standards are not considered a problem. Aeromedical pilots are generally high time pilots, many with military flying backgrounds.

Other methods to improve aeromedical flight safety include requiring pilot qualification and currency in instrument flight conditions. Many aeromedical helicopters are equipped to fly only in visual weather conditions owing to equipment cost and the use of uninstrumented landing sites. Another problem arises from typically low helicopter operating altitudes. Often take-off site and destination weather conditions are clear but pilots encounter unforecast weather or ground fog in between.

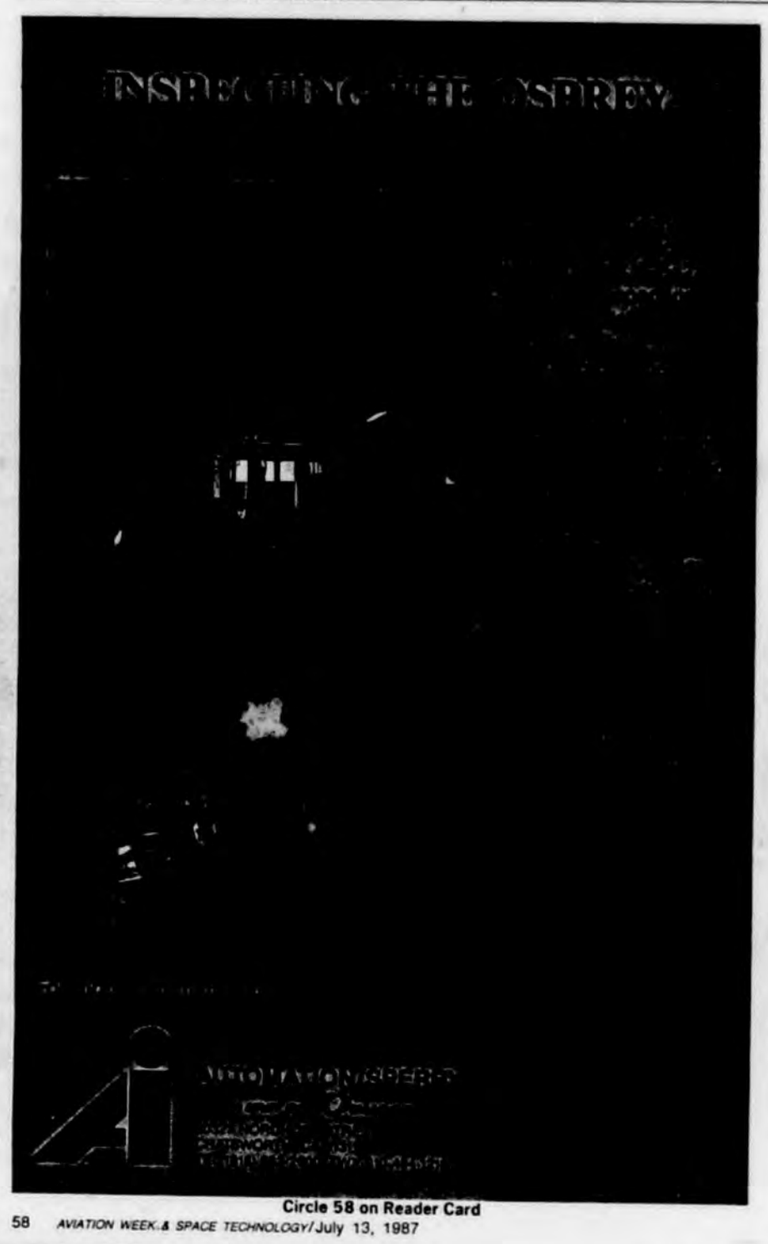
A recent nationwide survey indicated most aeromedical pilots have experienced inadvertent flight into potentially dangerous instrument weather conditions at least once annually.

Use of a two-pilot flight crew is another alternative to enhance safety. At least two U. S. aeromedical operations are now flying with two-pilot crews, and a third plans to require two pilots at night. Twin-engine aircraft are also an option.

Other significant commercial aeromedical aircraft accidents in 1987 include:

- The Jan. 8 crash of a Bell Long-Ranger near Greenville, N. C., which killed four. The aircraft was en route at night.
- The loss of a Cessna Conquest twin turboprop fixed wing aircraft near Phoenix, Ariz. The Feb. 20 accident was fatal to two and occurred at night in bad weather.
- The crash of an Ypsilanti, Mich.-based Learjet 23 business jet en route to a patient at night in marginal weather. The accident killed three.
- The crash of a Bell Model 222A helicopter near Tyler, Tex., which killed two on Apr. 15. The accident occurred in the en route phase of flight during daylight conditions. □

(Editorial coverage continues on p. 111)



Aeritalia Seeks Investors For P86 Trainer Production

Naples—Italy's main aerospace company, Aeritalia, is seeking private investors to become involved in production of the single-engine P86 Mosquito civilian basic trainer developed by the Partenavia general aviation division.

Aeritalia officials said the P86 is too small an aircraft to be produced in a cost-effective manner by Partenavia. Therefore, the company is looking for other participants interested in P86 production. A decision on whether to go ahead with manufacture of the aircraft could be made later this year, officials said.

The P86 is a high-wing, twin-tail aircraft developed as a relatively inexpensive trainer.

The government-backed Italian Aero Club has expressed an interest in purchasing the aircraft if it is committed to production.

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These 3 articles examine research conducted to see if helicopter transport helps trauma cases — most of the helicopter patients did not do better than ambulance cases, except for 10% of the worst trauma case.

There were problems with comparability of the two groups in the study.

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Original Contributions

JAMA
THE JOURNAL of the American Medical Association
June 10, 1983 Vol 249, No. 22

The Impact of a Rotorcraft Aeromedical Emergency Care Service on Trauma Mortality

William G. Baxt, MD; Peggy Moody, RN

The mortality of 150 consecutive trauma patients treated at the site of injury and transported to a trauma center by standard land prehospital care services was compared with that of 150 consecutive trauma patients treated at the site of injury and transported to the same trauma center by a rotorcraft aeromedical service staffed by a physician and nurse. A statistical analysis designed to predict mortality based on injury severity revealed that the mortality of the land group was statistically no different from that of a large index trauma patient population treated at a major trauma center. There was a 52% reduction in predicted mortality of the aeromedical group, which was highly significant. (*JAMA* 1983;249:3047-3051)

A REPORT in 1966 by the National Academy of Science termed accidental injury "the neglected disease of modern society."[1] This report led to a generalized realization that the medical care of trauma, both at the prehospital and hospital levels, was in need of change. The passage of the National Highway Safety Act and other federal legislation paved the way for the eventual upgrading of prehospital care by the funding of emergency medical technician (EMT) and paramedic training programs and the improvement of hospital trauma care by funding systematized and regionalized trauma care systems.

For editorial comment see p 3074.

In the ensuing years, most major population centers have obtained paramedic or EMT prehospital care services, and many areas have developed formalized regional trauma care systems. Today, however, trauma remains the third leading cause of death and the leading cause of death between the ages of 1 and 35 years. Because of these persisting, grim statistics, there have been recent attempts to upgrade the national approach to the treatment of trauma. To this end, there has been a reemphasis on improving prehospital care and extending organized regional hospital trauma care systems. One recent development has been the use of hospital-based rotorcraft staffed with advanced medical treatment crews that respond directly to the actual site of injured patients and provide major semidefinitive interventive care. This work is devoted to an analysis of the effect of such a system on patient mortality.

The first major use of rotorcraft as an adjunct to medical care took place during the Korean conflict. Although it has been said that the pronounced drop in mortality from 4.5 deaths per 100 casualties in World War II to 2.5 deaths per 100 casualties in the Korean conflict was partly due to the rapid treatment afforded casualties by use of rotorcraft,[2] this is difficult to confirm in view of the advancements in clinical expertise between these years and the important introduction of front-line surgical hospitals. The use of rotorcraft was further developed during the Vietnam War, when casualties were moved inside the craft and treated en route to definitive care. Mortality fell to less than one death per 100 casualties,[3] but again, with improved trauma care, it is impossible to totally attribute this to the utilization of rotorcraft. The use of rotorcraft for patient care in the civilian sector began in the late 1960s, when rotorcraft were utilized in dual-purpose law-enforcement systems that had a limited commitment to medical response.[4] Although helicopters were first dedicated totally to patient care in Europe in the mid-1960s,[5] it was not until 1972 that rotorcraft were put into such service in the United States.[6] These craft were based at hospitals and responded within minutes with physician and/or nurse medical crews who were trained in advanced life support. They responded both to the scene of ill or injured patients and to other hospitals to transport patients rapidly to more advanced treatment centers. These services brought about several radical changes in prehospital care: (1) A higher level of medical expertise was rapidly brought to the patient at the site of injury or illness over a broad geographic area; the acute care crews were trained to place endotracheal tubes, central access intravenous catheters, and thoracostomy tubes. They were also certified to

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Reprint requests to Emergency Medical Services, University of California Medical Center, 225 Dickinson St, San Diego, CA 92103 (Dr Baxt).

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administer all medications used in the hospital. None of these interventions had traditionally been practiced by existing prehospital care systems. (2) Critically ill and injured patients were transported at speeds two to three times faster than land ambulances. (3) The services could gain access to patients who either could not be reached at all by ground transportation or who would be forced to wait an inordinate amount of time for land emergency medical services (EMS) response.

Since the inception of rotorcraft services, numerous similar systems have emerged throughout the world. To date, only five studies have attempted to evaluate the impact of such service on patient mortality.[1-5] Since none of these studies statistically analyzed their data or compared the outcome of their patient group with a control group of patients treated by standard land care and transport services, the potential advantage of aeromedical care service could not be appreciated. Since these programs are extremely costly, it seems appropriate to examine this question.

Until recently, it has been virtually impossible to compare the outcome of injured patients treated at different medical facilities. With the development of a severity scoring system for acute head trauma by Teasdale and Jennett,[6] the mortality and morbidity of patients who suffered major head trauma could be compared among different medical centers. Although similar types of indexing systems for generalized trauma were developed, a statistically sound system was not derived until the development of the Trauma Score (TS).[7,8] The TS has been applied to a large number of patients and has been shown to be a reliable predictor of patient outcome. In addition, the predictability of survival (P,), derived from the TS by regression analysis of a large index population of trauma patients, provided a specific way in which patient outcome at one treatment facility could be compared with that at another center. Recently, Champion et al further refined this approach by using the Injury Severity Score (ISS)[9] and age as additional variables to compute the probability of survival.[10]

Table 1.—Prehospital Treatment Modalities

Emergency Medical Technician	Paramedic	Aeromedical
CPR*	CPR*	CPR*
Advanced first aid	Advanced first aid	Intravenous therapy
	EOA†	Fluid replacement
	Intravenous therapy	Drugs
	Fluid replacement	MAST suit
	Drugs (limited)	Oral intubation
	MAST suit‡	Nasal intubation
		Cricothyroidotomy
		Open venous catheter placement
		Central venous catheter placement
		Arterial catheter placement
		Transvenous cardiac pacemaker placement
		Transthoracic cardiac pacemaker placement
		Thoracostomy tube placement
		Open thoracotomy
		Open cardiac compression
		Aortic cross-clamp placement

*CPR indicates cardiopulmonary resuscitation.
†EOA indicates esophageal obdurator airway.
‡MAST indicates military antishock trousers.

We used this methodology[10] to compare the mortality of 150 consecutive blunt trauma patients treated by land EMS systems and taken to a trauma center with the mortality of 150 consecutive blunt-trauma patients treated by a rotorcraft aeromedical emergency care system staffed by a physician and nurse and transported by air to the same center.

METHODS

The land EMS system was comprised of ambulances staffed by two EMTs and mobile intensive care units staffed by two paramedics. The rotorcraft system utilized a small cadre of acute-care physicians and nurses trained to perform oral or nasotracheal intubation and to administer a broad spectrum of medications. The medical teams were airborne in an average of four minutes after being requested and traveled at 100 mph to the site of injury. The medical interventions provided at the scene of injury by each of the three potential medical response services are listed in Table 1.

Two groups of patients were compared in this study: 150 consecutive patients who had sustained blunt trauma, were treated at the site of injury, and transported to the study trauma center by land EMS units and 150 consecutive patients who sustained blunt trauma, were treated at the site of injury, and taken to the same trauma unit by the rotorcraft aeromedical service. Only patients who had no spontaneous respiration and pulse at the site of injury and [illegible] whom no resuscitative measures were [illegible] were excluded from the study. [illegible] re no patients in either group [illegible] cardiopulmonary resuscitation on them at any time in course. Mortality was defined as death caused by the original injury or complication of that injury. Patients were followed up to discharge from the hospital. The data of the two patient groups were collected during an identical 30-month period. The rotorcraft aeromedical service could only be utilized if the first public safety unit responding, the patient requested its use. In general, first medical responder units would request the use of the service when patients were injured in rural areas, while patients injured in urban areas were usually treated and transported by the land EMS system.

Trauma Scores were developed blindly on initial physician contact as described previously.[7,8] The TS was developed on land patients in the trauma resuscitation area immediately on arrival and on aeromedical patients on initial contact by the rotorcraft physician. Injury Severity Scores[9] were developed from patient charts and autopsy records at the completion of admission.

The P, was computed as outlined by Champion et al,[10] using the following computations:

$$P_s = 1/(1+e^{-b})$$

where

$$b = b_0 + b_1 (TS) + b_2 (ISS) + b_3 (Age)$$

where b_n are weights for each variable derived through use of the Walker-Duncan regression analysis[11] of a large index population of trauma patients treated at a trauma center[7,10] assumed to be operating at the accepted standard of care. Age was coded as 0 for age younger than 60 years and 1 for age 60 years or older.

The statistical significance of any observed variation in mortality of a [illegible] group from that predicted by the P, was accomplished by using the method of Flora[12] with the following approach:

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$$Z=\frac{D-\Sigma Q}{\sqrt{\Sigma P_i Q_i}} \quad (3)$$

Where Z is the statistic of comparison of predicted to actual survival, P_i is the probability of survival as derived fro... Champion et al,[1] and $Q_i=1-P_i$. D equals the actual number of patients that died in the test study. The significance of the observed variation in mortality between treatment groups was determined by using the Mantel-Haenszel test.[20]

RESULTS

Table 2 summarizes the data of the 150 blunt trauma patients treated and transported to the trauma center by land and the 150 blunt trauma patients treated and transported to the center by aeromedical service. The mean age, sex, association with motor vehicle accidents, and presence of close head trauma were statistically similar in the two groups. More land patients were injured in urban areas while more aeromedical patients were injured in rural areas. More land patients were initially treated by paramedic services, while more aeromedical patients were initially treated by EMT services.

The average medical response time to the two treatment groups is summarized in Table 3. The average response time to the land treated and transported patients was seven minutes. The average time spent at the scene was 18 minutes, and the average transport time to hospital was minutes.

The average response time of the rotorcraft to the aeromedically treated and transported patients was 24 minutes. The actual time from injury to activation of the service was longer than the response time since the rotorcraft service could not be activated only after a first response unit had examined the patient. The approximate response time of these units in this setting was ten minutes. The time interval between injury and initial contact with a physician when the TS was developed was, on the average, 35 minutes for the land patients and 34 minutes for the aeromedical patients.

Table 4 gives an arbitrary stratification of the continuous P_i distribution of the two groups, and Table 5 gives the P_i means of the two groups. The mean P_i for the land group was 0.902. Nineteen of the 150 patients died, whereas 15 patients were predicted to die. The mean P_i of the survivors was 0.965, and the mean P_i of the nonsurvivors was 0.508. The mean P_i for the aeromedical group was 0.865. Ten of the 150 patients died, whereas 21 patients were predicted to d... The mean P_i of the survivors was 0.898, and the mean P_i of the nonsurvivors was 0.360.

Table 5 summarizes the statistics. A 2×6 contingency table χ^2 analysis of the P_i strata of Table 4 revealed $P>.05$ when the land and aeromedical sets were either compared with the standard index trauma patient population or when the two sets were compared with each other. Therefore, there was no significant difference in the distribution of severity among the three data sets. The Z statistic (equation 3) for the land transport group had a $P>.05$. The Z statistic for the aeromedical group had a $P<.001$. The stratification of the P_i as given in Table 4 can also be viewed as multiple data levels as defined by Mantel and Haenszel[20] and subjected to the Mantel-Haenszel test. The statistic obtained by comparing the observed difference in mortality between the land and aeromedical groups by this methodology had a $P<.001$.

Table 2.—Breakdo... ...ma Patients Treated Either by La... ...t Service

	Land	Aeromedical	P*
Age, yr			
Mean	29	29	...
0 to 20	44	59	>.05
21 to 40	81	66	
>41	25	25	
Sex			
M	116	108	>.05
F	34	42	>.05
Associated with motor vehicle accident	131	139	>.05
Associated with closed head trauma	48	66	>.05
Associated with burn	1	1	
Location of injury			
Urban	134	114	<.001
Rural	16	36	
Initial treatment service			
EMT†	11	102	<.001
Paramedic	139	48	

*Obtained by χ^2 (Yates' correction where appropriate).
†EMT indicates Emergency medical technician.

Table 3.—Average Response Times to 300 Blunt Trauma Patients Treated Either by Land or Rotorcraft Service

	Land	Aeromedical
Arrival of first responder	7 min	10 min
Time of first responder on scene	18 min	24 min
Arrival of rotorcraft medical crew		24 min
Time en route to hospital	10 min	24 min
Time to initial physician contact	35 min	34 min
Time from injury to arrival at trauma center	35 min	58 min

COMMENT

Patients treated and transported to the study trauma center showed statistically similar injury severity distributions and mortality rates to patients treated at the index trauma center. Since the study trauma center was operating at the expected standard of trauma care, it is appropriate to compare the mortality of those patients brought to the center by the traditional land EMS system with those brought to the center by the aeromedical service.

Although it would be of interest to derive a direct numerical comparison between the mortality rates of the two treatment groups based on injury severity, such a contrast is fraught with problems because of the nature of this methodology. The most appropriate comparison is gained from reflection on the difference in the number of projected (ΣQ_i) and actual (D_i) deaths within each group. In the land set (Table 4), 15 patients were projected to die, while 19 patients died. In the aeromedical set (Table 4), 21 patients were expected to die, while ten patients died, which represents a 52% reduction in the predicted mortality. A more direct com-

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Table 4.—Summary of Distribution of the Probability of Survival of 300 Blunt Trauma Patients Treated Either by Land or Rotorcraft Service

	Land				Aeromedical			
P_s* Strata	No.	%	D_i (Died)	ΣQ_i (Expected to Die)	No.	%	D_i (Died)	ΣQ_i (Expected to Die)
≥0.95	115	76.6	1	0.79	109	72.0	0	2.73
0.90-0.94	7	4.7	1	0.49	5	3.4	0	0.37
0.75-0.89	9	6.0	1	1.36	12	8.0	1	1.93
0.50-0.74	7	4.7	6	2.77	9	6.0	3	3.63
0.25-0.49	4	2.7	4	2.35	8	5.3	2	4.87
≤0.24	8	5.3	6	7.03	8	5.3	4	7.09
Total	150	100	19	14.79	150	100	10	20.62

*P_s indicates probability of survival.

Table 5.—Probability of Survival Means and Statistical Summary of 300 Blunt Trauma Patients Treated Either by Land or Rotorcraft Service

	Land	Aeromedical	Land v Aeromedical
Means			
Average P_s*	0.902	0.865	
Average P_s, survivors	0.965	0.898	
Average P_s, nonsurvivors	0.508	0.360	
χ^2, P_s strata comparability	>.05	>.05	>.05
Mortality differences			
Z (equation 3)†	>.05	<.001	
Mantel-Haenszel			<.001

*P_s indicates probability of survival.
†Versus P_s strata of index population.

parison would be statistically invalid, in that the distribution of the severity of injury among the two treatment groups was not identical.

The statistical significance of the differences observed in the mortality of the land and aeromedical treatment groups was established by two independent means. The Flora methodology (equation 3) tests the statistical significance of the difference in the observed mortality from the predicted mortality based on the P_s. The Mantel-Haenszel approach tests the statistical significance of the overall observed differences in mortality within the severity stratifications between the treatment groups. The difference between the observed and predicted mortality of the land treatment group was not significant (equation 3, $P>.05$), while the difference between the observed and predicted mortality of the aeromedical treatment group was highly significant (equation 3, $P<.001$). The observed difference in mortality within the [illegible] was [illegible]

[illegible], Jr.

major improvement in the mortality of patients treated and transported by the rotorcraft aeromedical service was in those patients with a $P_s<0.95$ (ten of 42 patients dying when 18 patients were expected to die). Patients who have scores between 0.99 and 0.95 are probably not critical enough to require rotorcraft intervention, and such intervention had less impact on their survival (no deaths when three patients were expected to die).

In addition, Table 5 reveals that the actual nonsurvivors in the land group had a mean P_s of 0.508, whereas the actual nonsurvivors in the aeromedical group had a mean P_s of 0.360. This suggests that not only was survival more likely in aeromedical patients in the more severe injury classifications, but that the aeromedical patients in those classifications who died were dying of more severe injuries than the nonsurvivors in the land group.

The major improvement in survivability occurred in the more severe classification groups, which represent only a fraction of all trauma patients. If the standard population is utilized, these groups represent less than 10% of injured patients brought to that medical center. This suggests that the efficacy of this type of rotorcraft care is appropriate only to a small subset of all trauma patients.

Before any conclusions about the value of the use of rotorcraft in this setting can be made, there are a number of weaknesses in this study that must be taken into consideration. Although the age, sex, nature of trauma, and distribution of the severity of injury of the two patient groups were statistically similar, there were a number of major differences between the two groups: (1) the location of injury (urban v rural), (2) the initial care rendered victims (paramedic v EMT), (3) the care after initial medical intervention, and (4) the route to the trauma center (paramedic v physician), and (4) the possible difference of patient handling after reaching the trauma center.

The difference in the location of injury may have had two effects. Patients injured in rural areas had to wait slightly longer for the arrival of a medical first-response unit. The rural medical first-response units had an average of three minutes longer to reach aeromedical patients than they took the urban medical first-response units to reach the land patients. Patients injured in rural settings also had a longer transit time. On the average, it took 23 minutes longer for the aeromedical patients to reach the trauma center and definitive intervention. Both of these factors could have had a negative impact on the aeromedical patient's outcome.

The difference in the initial level of care rendered to each group may also have been a major factor. As noted previously, land patients were usually injured in urban settings where initial treatment was administered by paramedics, while aeromedical patients were injured in rural settings where initial treatment was usually administered by an EMT service. Due to the higher level of care administered by paramedics, it is conceivable that by the time the land patient reached the trauma center, their condition had been improved by therapy. On the other hand, because of the lack of definitive care given to the aeromedical group, the TS of these patients may have worsened before contact by the aeromedical crew.

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the time of injury, the land patients may have been more severely injured and the aeromedical patients less severely injured than the actual TS indicated. This possible anomaly is partially mitigated by the inclusion of the ISS in the methdology and by the fact that the subset of the aeromedical patients who were treated initially by paramedic level service before contact by the aeromedical team were statistically indistinguishable from the patients treated initially by an EMT service (data not given).

The difference in the care after initial medical contact may also have affected these data. The land group was treated by a variable spectrum of different first responders, while the aeromedical group, after initial intervention, was treated by the same small group of flight nurses and physicians. It is conceivable that the improved mortality of the aeromedical group is not only a reflection of the more advanced modalities of treatment afforded by the aeromedical teams, but also a reflection of the continuity and standardization of care afforded by the highly trained physician-nurse teams. This may have also had a further effect on

...ent after reaching the trauma center. Unlike the treatment teams on the rotorcraft service, the treatment teams in the trauma resuscitation area consisted of rotating physicians and nurses with a moderate turnover. Since the time it took patients in each group to be contacted by these two treatment teams was almost identical, a difference in the medical efficacy with which each respective team operated may also have accounted for the observed results. The aeromedical patients may have been better evaluated and more substantially stabilized, allowing for definitive treatment to have been provided more rapidly than to the land patients.

Due to the aforementioned factors, these data must be viewed with a great deal of caution. The conclusion cannot be made that the reduction in mortality observed in the aeromedical group was due strictly to the use of rotorcraft. It may be conceivable that placing the same physician-nurse teams on urban ambulances may afford similar or greater improvements in patient mortality. What rotorcraft do afford is the ability to move a highly skilled physician-nurse team rapidly over a far wider geographic area than possible by transport, who can quickly sta... and transport patients to defi... care that can be prearranged by ra... before arrival. These results demonstrate that the use of rotorcraf... staffed by a physician and nurse facilitate the provision of semidefinitive trauma care and improve patient mortality when compared with a patient population with similar injuries, at less distance and a longer time from definitive care, treated at the prehospital level by EMTs or paramedics.

In view of these data, it appears that physician-nurse staffed rotorcraft emergency care services may be a valuable adjunct to the prehospital care of patients who have sustained major blunt trauma. It seems warranted to study further the impact of such services.

The rotorcraft crews who made this work possible included James Dunford, MD, Lee Griffith, MD, Steven Guber, MD, David Guss, MD, Tom Neuman, MD; flight nurses Martha Bennett, RN, Mary Anne Bockman, RN, Janet Gill, RN, Catherine Kennedy, RN, Laurinda Martin, RN, Phillip Moomjean, RN; pilots Randall Mains, Joseph Hatley, and Howard Albecker. Charles Berry, PhD, and William Sacco, PhD, helped with the manuscript.

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ORIGINAL CONTRIBUTION
trauma, mortality, effects of helicopter transport;
helicopters, use in transport

Hospital-Based Rotorcraft Aeromedical Emergency Care Services and Trauma Mortality: A Multicenter Study

A group of 1,273 blunt trauma patients who were treated and transported from the site of injury by seven different hospital-based rotorcraft aeromedical emergency care services were studied using a methodology based on injury severity designed to predict the mortality of such patients. The methodology predicted that 241 patients should have died; 191 patients did die. This 21% reduction in expected mortality was highly significant ($P < .001$). Each of the seven rotorcraft services had a reduction in predicted mortality. The reduction was statistically significant ($P < .05$) in five of the seven aeromedical services, or 86% of the total patient cohort. Hospital-based rotorcraft aeromedical emergency care services may reduce the expected mortality of blunt trauma patients treated at the site of injury. [Baxt WG, Moody P, Cleveland HC, Fischer RP, Kyes FN, Leicht MJ, Rouch F, Wiest P: Hospital-based rotorcraft aeromedical emergency care services and trauma mortality: A multicenter study. Ann Emerg Med September 1985; 14:859-864.]

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INTRODUCTION

Rotorcraft have played an increasing role in emergency medical services (EMS) missions since the Korean War.[1-4] They were used initially in dual-purpose public safety systems. Because the rotorcraft crews had limited medical training, these services did not bring a higher level of medical expertise to the field, but rather provided more rapid transport of, and better accessibility to, ill and injured patients. By 1972 rotorcraft were being stationed at hospitals and were dedicated fully to EMS missions. Because these craft were placed directly at hospital sites, their medical flight crews could be culled from the more sophisticated medical personnel available. For the first time, these services made possible the use of such advanced medical techniques as endotracheal and thoracostomy tube placement at the site of patient injury and illness.[5-8]

Although such services have been in operation for more than ten years, until recently it had not been demonstrated that they had a positive impact on patient outcome. It was not until the development of injury indexing systems such as the Glasgow Coma Score (GCS),[9] the Injury Severity Score (ISS),[10] the Trauma Score (TS),[11,12] and the TRISS methodology[13] that it became possible to study this question.

In a recent study using the TRISS methodology in a prospective manner, the mortality rate of 150 blunt trauma patients who were treated and transported by a land EMS system and taken to a trauma center was compared to that of 150 blunt trauma patients treated and transported by a rotorcraft aeromedical emergency care service staffed by a physician and nurse and taken to the same trauma center.[14] Because all patients had been treated and transported directly from the scene of injury to the same trauma center, the only difference was in treatment rendered at the prehospital level. The TRISS methodology allowed for the statistical prediction of mortality. The mortality of patients treated and transported by the land EMS system was not statistically different from that predicted, while there was a statistically significant ($P < .001$) reduction of 52% in the predicted mortality of patients treated and transported by the aeromedical services. These data suggested that the aeromedical service may have helped reduce mortality in patients who had sustained major blunt trauma.

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TABLE 1. *Medical staffing and medical interventions practiced by seven rotorcraft aeromedical emergency care services*

	Medical Staffing				
Service	Staff Physician/Nurse	Housestaff Physician/Nurse	Nurse/ Nurse	Nurse	Nurse/ Paramedic
1	X				
2		X			
3					X
4		X			
5	X				
6				X	
7			X		

	Medical Interventions							
Service	Oral Intubation	Nasal Intubation	Cricothyroidotomy	Open Venous Catheter Placement	Peripheral IV Placement	Central Venous Catheter Placement	MAST Suit Placement	Thoracostomy Tube Placement
1	X	X	X	X	X	X	X	X
2	X	X	X	X	X	X	X	X
3	X	X	X		X	X	X	X
4	X	X	X	X	X	X	X	X
5	X	X	X	X	X	X	X	X
6	X	X	X	X	X	X	X	X
7	X	X	X		X		X	

Although there was no clear cause for the reduction in patient mortality, the authors suggested that the improved patient outcome may have been due to the use of advanced medical interventions at the site of patient injury, followed by rapid transportation of the patient to definitive care that could be arranged prior to arrival. There was no evidence that the aeromedical patients received either prehospital or definitive care more quickly than did the patients treated by the land EMS service.

The first phase of the national multicenter major trauma outcome study (MTOS), which used the TRISS methodology to study 3,133 blunt trauma patients from 45 participating Level I and Level II trauma centers, recently has been reported.[15] This study created a large patient population that represents the treatment experience of a large segment of the country. The outcome of this group of patients now stands as the national norm against which the effect of new and existing modalities of trauma care can be measured. The logistic regression constants derived from this index population can be used with the TRISS methodology to study other populations of trauma patients whose outcome can be compared directly to that of the MTOS cohort.

The most important question raised by the original rotorcraft impact study[14] was whether trauma patients treated and transported by similar rotorcraft aeromedical emergency care services also realize a reduction in predicted mortality. To determine this, a multicenter study of seven hospital-based rotorcraft aeromedical emergency care services was undertaken using the TRISS methodology to study prospectively the mortality of blunt trauma patients treated at the site of injury and transported by these services.

METHODS

The participating hospitals were Allegheny General Hospital, Pittsburgh; Geisinger Medical Center, Danville, Pennsylvania; Hermann Hospital, Houston; Methodist Hospital of Indiana, Indianapolis; St Anthony's Hospital Systems, Denver; University of California, San Diego Medical Center, San Diego; and Valley Hospital Medical Center, Las Vegas.

Patients who had suffered blunt trauma and were contacted directly at the site of injury and transported to the base hospital of each service were included in the study. Patients with no spontaneous respiration and pulse at the site of injury were excluded. The patient inclusion criteria for this and the MTOS[15] were identical. All patients were followed to discharge. Mortality was defined as death caused by the original injury or complication of that injury. The data were collected from March 1981 to March 1983. If information was missing from a patient study record, the patient was not included. A minimum of 50 patients from each participating center was required.

The TS variables were developed by each service on initial medical crew contact after initial medical first-responder treatment was initiated.[13,14] The ISS[10] was developed from patient charts and autopsy records at the completion of admission.

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TABLE 2. *Mean values of 1,273 patients treated and transported by seven rotorcraft aeromedical emergency care services*

Service	No.	Age	TS	ISS	P_s	P_s (Survivors)	P_s (Nonsurvivors)
MTOS*	—	—	—	—	0.94	0.97	0.36
1	370	27	14	18	0.88	0.92	0.33
2	215	27	11	31	0.67	0.81	0.30
3	230	31	14	16	0.87	0.93	0.12
4	113	28	12	27	0.69	0.90	0.21
5	58	30	13	23	0.82	0.89	0.27
6	166	29	13	21	0.85	0.92	0.29
7	121	30	12	20	0.79	0.93	0.24
Totals	1,273	29	13	21	0.81	0.90	0.26

*American College of Surgeons Major Trauma Outcome Study

TABLE 3. *Distribution of probability of survival of 1,273 patients treated and transported by seven rotorcraft aeromedical emergency care services*

	P_s Strata															
	$0.25 < P_s$			$0.25 \leq P_s < 0.50$			$0.50 \leq P_s < 0.75$			$0.75 \leq P_s < 0.90$			$0.90 \leq P_s < 0.95$			$P_s \geq 0.95$		
Service	N	Q_i	D_i	N	Q_i	D_i	N	Q_i	D_i	N	Q_i	D_i	N	Q_i	D_i	N	Q_i	D_i
1	23	20.91	13	13	7.73	4	27	10.12	6	16	2.26	1	17	1.31	0	274	1.55	3
2	53	49.96	36	18	11.33	10	13	4.30	2	15	2.42	4	15	1.18	3	101	1.76	6
3	23	21.97	16	7	4.10	1	3	1.38	1	4	0.72	0	9	0.65	0	184	1.04	1
4	28	27.16	25	5	3.20	2	7	2.18	2	8	1.20	1	4	0.36	0	61	0.40	3
5	7	6.71	5	2	1.16	1	4	1.85	0	2	0.28	0	1	0.09	0	42	0.34	1
6	19	17.27	13	4	2.56	1	7	2.63	1	8	1.13	1	11	0.78	1	117	0.82	2
7	22	20.86	18	3	1.84	2	3	0.98	0	7	1.01	1	7	0.52	0	79	0.71	4
Totals	175	164.84	126	52	31.92	21	64	23.44	12	60	9.02	8	64	4.89	4	858	6.62	20

A collator at each rotorcraft aeromedical emergency care service reported on patient age, sex, mode of injury, nature of injury, morbidity, and mortality, and calculated the TS and ISS on each patient. All services used a standard reporting form for all data.

The probability of survival (P_s) was computed as outlined by Champion and coworkers,[11,12] using the following computations:

$$P_s = 1/(1 + e^{-b}) \quad \text{(Equation 1)}$$

where

$$b = b_0 + b_1(TS) + b_2(ISS) + b_3(age) \quad \text{(Equation 2)}$$

where b_{0-3} are weights for each variable derived through use of the logistic regression analysis[16] of the 3,133 patients collected in the MTOS;[15] where $b_0 = -3.710$, $b_1 = 0.7080$, $b_2 = -0.0925$, and $b_3 = -2.587$. Age was coded as 0 for age younger than 55 years and as 1 for age 55 years or older. By using the MTOS logistic regression constants, the outcome of the concurrent historical MTOS cohort is built into the methodology as the norm against which patient survival is measured.

The statistical significance of an observed variation in mortality of each test group from that predicted by the P_s was accomplished by using the method of Flora[17] with the following approach:

$$Z = \frac{D_i - \Sigma Q_i}{\sqrt{\Sigma P_i Q_i}} \quad \text{(Equation 3)}$$

where Z is the statistic of comparison of predicted to actual survival, P_i is the probability of survival as derived from Equation 1, and $Q_i = 1 - P_i$ (patients predicted to die). D_i equals the actual number of patients who died in the study group. In addition the significance of the observed variation in mortality between each service and between the patients reported in the MTOS[15] was determined further by using the Mantel-Haenszel test.[18]

TABLE 4. *Summary of statistical analysis of 1,273 patients treated and transported by seven rotorcraft aeromedical emergency care services*

Service	N	Q_j	D_j	% Reduction in Expected Mortality	Z*	P	Mantel-Haenszel P
1	370	43.88	27	39	4.27	< .001	< .001
2	215	70.95	61	14	2.62	< .01	< .001
3	230	29.86	19	36	4.17	< .001	< .005
4	113	34.50	33	4	0.66	> .05	> .05
5	58	10.43	7	33	2.21	< .05	> .05
6	166	25.19	19	25	2.43	< .01	< .05
7	121	25.92	25	4	0.44	> .05	> .05
Totals	1,273	240.73	191	21	6.79	$P < .001$	$P < .001$

*Calculated by using Equation 3.

RESULTS

Four services used physician/nurse crews, two services used a nurse crew, and one service used a nurse/paramedic crew. The medical interventions used by each of the services were similar (Table 1). Records of which medical procedures were performed on each patient were not kept; however, all the services operated under identical protocols. All patients had multiple large-bore intravenous lines placed. All patients in shock had military antishock trousers placed and inflated, accompanied by crystalloid fluid replacement. All unconscious patients had endotracheal tubes placed. Cricothyroidotomy, open venous catheterization, central venous catheterization, and thoracostomy tube placement were performed infrequently.

The smallest number of patients submitted by a service was 58; the largest was 370. The means of the study are summarized (Table 2). The mean P_s of all patients studied was 0.81. The mean P_s was 0.90 for survivors and 0.26 for nonsurvivors. These were lower than those values of the MTOS, in which the mean P_s of all patients was 0.94, 0.97, and 0.36, respectively.[15] Additionally the mean P_s of each of the seven aeromedical services' total patients was lower than the respective values of the MTOS.[15]

Patients were divided arbitrarily into six probability-of-survival strata (Table 3). Of the total patients studied, 241 were predicted to die; 191 patients actually died.

The statistical analysis of the reduction in mortality of the seven services is shown (Table 4). Two different approaches were used — the Flora approach (Equation 3) and the Mantel-Haenszel test. The Flora Z statistic of each of five services was $P < .05$. These five services represented 1,094 of the 1,273 patients, or 86% of the total patient cohort. Two services had a Z statistic greater than four standard deviations more than the MTOS mean. The combined patient population had a Z statistic greater than six standard deviations more than the MTOS mean.

The Mantel-Haenszel test compared the differences in expected to realized deaths within each of the six severity strata. In this instance, each of four services had a statistic of $P < .05$. These four services represented 981 patients, 77% of the total patient cohort. Analysis of the total study group compared to the MTOS was $P < .001$.[15]

DISCUSSION

Unlike the original study that reported a reduction in the predicted mortality of blunt trauma patients who had been treated and transported by a rotorcraft aeromedical emergency care service,[14] our study did not use a concurrent internal control group of patients treated and transported by the land EMS services operating at each center. We believed that the MTOS offered a comparable group of patients with whom to compare the patients treated by the aeromedical services. The MTOS data[15] were collected from virtually the same time window as these data, and more than 83% of those patients received their prehospital care from traditional land EMS systems. In addition this large cohort represented the trauma treatment experience of the entire country and the patient outcome realized by that experience. Because the MTOS used the TRISS methodology, the use of the MTOS patient cohort as a control group could be built directly into the TRISS methodology by using the logistic regression[16] constants derived from that study.

There are several criticisms that can be made about our methodology. Poor interrater reliability could have a major effect on the data. The interrater reliability of the TS has been studied and shown to be highly correlated when Navy corpsmen were compared to trained nurse raters. Ninety-two percent of the time there was agreement to within one point, and 62% of the time there was complete agreement.[19] In addition the vital-sign data necessary to determine the TS and the anatomic data necessary to determine the ISS were available for 605 patients. The TS and ISS were recalculated for these patients and there was no statistically significant difference between the original scores and the recalculated scores.

Another criticism that could be made of our approach is that the variation in expected mortality experienced by each of the seven aero-

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medical services is not a reflection of the aeromedical service, but of an overall improvement in performance of the medical center at which the rotorcraft was based. This possibility is unlikely because of the 45 trauma centers in the MTOS, only three had a statistically significant reduction in mortality from the MTOS mean. Four of the centers studied were part of the MTOS, and each center has confirmed that it was not among the three centers whose overall patient mortality was reduced significantly below the MTOS norm.

Our study does have intrinsic problems, as did the original rotorcraft study and the MTOS. Although the age, mode, and nature of injuries were similar in all three studies, the match was only in similarity and not in exactness. Therefore any comparison of the treatment groups must be qualified. It would have been preferable to have designed a randomized, blinded study in which patients were treated either by land EMS systems or by aeromedical services, but this was impractical.

There is one factor that may have reduced the difference between the predicted and realized mortality of the aeromedical patients. A total of 571 patients reported were part of the MTOS cohort. If regression constants are derived from a patient cohort that contains a subpopulation of patients who have a statistically significantly better outcome than the remainder of the cohort, the net effect of the presence of the subpopulation is to bias the derived logistic regression constants as to underpredict mortality. That is, if the MTOS cohort were to be reanalyzed without these 571 patients (representing 17% of the cohort) and new logistic regression constants were derived, the use of these constants in our study would have led to the prediction of a greater number of deaths than reported.

As was observed in the initial rotorcraft mortality impact study,[14] the greatest reduction in predicted mortality occurred in those patients with a $P_s < 0.75$, even though 77% of the patients studied had a $P_s \geq 0.75$. Of the patients with a $P_s < 0.75$, 220 were expected to die and 159 did die. The importance of this repeated observation is that aeromedical services probably will have a positive effect only on patients who have suffered major injuries. To this end, in the field setting such services should be used for the more seriously injured patients. Because such patients represent only a small portion of all trauma patients, a limited number of such services should be necessary.

Of the patients with a $P_s \geq 0.95$, seven were expected to die while 20 patients actually died. It is not clear why more patients died than was predicted. These patients may represent a subpopulation of patients with preexisting severe disease that complicated their chances of survival. This observation deserves further study, however, because the difference observed was statistically significant ($P < .05$) when Equation 3 was used to analyze these data, and the phenomenon was observed in six of the seven services studied. Although it may not be apparent immediately why these patients fared worse, the initial conclusion is that rotorcraft aeromedical emergency care services may be detrimental to this subgroup of patients.

As in the original study,[14] the mean P_s of the aeromedical service nonsurvivors and survivors was lower than that of the MTOS. Thus the aeromedical nonsurvivors died of more serious injuries than did the MTOS nonsurvivors, and the aeromedical survivors survived with more serious injuries than the MTOS survivors.

The exact reason for the observed reduction in mortality in patients who have suffered major blunt trauma is not clear. Two factors must be given serious consideration. Traditionally the level of medical intervention practiced in the prehospital setting has been very limited. With the advent of advanced life support (ALS) systems in the late 1960s, advanced treatment skills were practiced in the prehospital setting. Jacobs and coworkers,[20] using the TS, have reported the improvement in outcome of major trauma patients who were treated by an ALS system, compared to those treated by a basic life support (BLS) system. Fortner and collcagues[21] have reported the improvement in survival of patients who suffered injuries from major falls when an ALS system replaced an existing BLS system. Klauber and coworkers[22] also have reported the sudden decline of the death rate in patients who had sustained serious head injuries in a community after an ALS system replaced an existing BLS system and a rotorcraft aeromedical emergency care service was started.

All of the aeromedical services in our study used more advanced medical skills than those traditionally used in the prehospital setting. One possible explanation for the improvement in patient outcome is that this was in part a result of the use of these advanced skills in the prehospital setting paralleling these findings. The exact number of times each specific advanced medical skill was practiced is not known. It is known, however, that because the rotorcraft medical crews are composed of a small number of individuals who use their skills frequently, they are extremely adept. There was virtually a 100% success rate in the performance of field medical procedures.

The advantage of rotorcraft lies in their ability to move a highly trained medical crew over a wide geographic area. It may be prudent to consider placing such crews on land EMS vehicles to respond to a selected group of seriously injured patients who are too close to definitive care centers to justify aeromedical rotorcraft response.

The second possible explanation is that hospital-based aeromedical services realize a reduction in mortality for the same reason trauma centers realize such a reduction — both are profiting from a timely, organized, and coordinated approach to patient treatment which, as embodied in the "systems" concept of trauma care delivery, has been held responsible for an improved patient outcome in the past.[23] The hospital-based aeromedical service is an active treatment arm of the hospital at which it is based; the regional land EMS service is usually a separate entity. As a result prehospital care administered by the hospital-based aeromedical service is fully integrated into inhospital definitive care. Vitally needed resources can be readied, treatment plans can be formulated, and patient priorities can be set prior to patient arrival, saving precious time before definitive treatment is rendered. In addition, this may not be able to occur as effectively when patients are transported by ground EMS services because there is rarely significant warning time prior to patient arrival. The longer rotorcraft transport times allow for periods during which this preparation can occur.

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CONCLUSION

Our data appear to extend the original observation that a rotorcraft aeromedical emergency care service may reduce the predicted mortality of patients who have suffered major blunt trauma. Of the seven services studied, each experienced a reduction in predicted mortality. Although there are many inherent confounding factors in this study and these data must be viewed with reservation, it appears that hospital-based rotorcraft aeromedical emergency care services, staffed by advanced medical personnel who respond directly to the site of severely injured patients and use advanced medical skills to treat such patients, may have the ability to reduce mortality.

The authors thank Charles Berry, PhD, Kathleen James, and William Sacco, PhD, for their help in preparation of the manuscript.

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ORIGINAL CONTRIBUTION
trauma, regional trauma system, utilization

Utilization of Medical Care in Orange County: The Effect of Implementation of a Regional Trauma System

To determine the effect of implementation of a regional trauma system on utilization of medical care we studied ambulance transports, emergency department (ED) visits, and hospital days for trauma and nontrauma patients before and after system implementation. Serious injury affects approximately one of every 1,000 persons each year and accounts for approximately one of every 250 ED visits, one of every 100 hospital days, and one of every 20 ambulance transports. Following system implementation the trauma hospitals experienced insignificant changes in annual percentage of market share of ED visits and hospital days and in annual rate of growth of ED visits and hospital days. We conclude that implementation of a medically directed regional trauma system has resulted in a predictable redistribution of a small number of seriously injured patients, and has not been associated with significant changes in utilization of EDs or hospitals. [Cales RH, Anderson PG, Heilig RW: Utilization of medical care in Orange County: The effect of implementation of a regional trauma system. Ann Emerg Med September 1985;14:853-858.]

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Received for publication October 16, 1984. Accepted for publication February 13, 1985.

Address for reprints: Richard H Cales, MD, Department of Emergency Medicine, Portland Adventist Medical Center, 10123 SE Market, Portland, Oregon 97216.

INTRODUCTION

Implementation of regional trauma systems has raised questions regarding their effect on care of trauma and nontrauma patients.[1-5]

We previously have reported decreases in the proportion of potentially salvageable deaths and the mortality rate following implementation of such a system.[6,7] The effect of trauma regionalization on emergency department (ED) visits also has been reported.[8]

This report on the experience of Orange County, California, is the first published investigation of utilization of ambulances, EDs, and hospitals by trauma and nontrauma patients before and after implementation of a regional trauma system.

MATERIALS AND METHODS

System Background

Orange County is a 784-square-mile suburban community in southern California with a population of 2 million. Six base station hospitals provide medical direction for the prehospital advanced life support system.

In June 1980 the county implemented a trauma system that provided for transport to one of five designated hospitals. On-line medical direction of care for individual patients is accomplished by emergency physicians using standardized protocols for triage and treatment. Regardless of the final diagnosis, each potential trauma patient triaged to a trauma hospital becomes a designated trauma patient and is included in the trauma registry.[9,10]

Data Collection

Total annual trauma deaths, including nontransported deaths, nondesignated hospital deaths, and trauma hospital deaths, were obtained from the coroner for 1980 through 1983.

Total annual ED visits and total annual hospital days for all patients for each of 35 hospitals were obtained from the state health department for 1976 through 1983.

Total annual ED visits and total annual hospital days for designated trauma patients for each of the five trauma hospitals were obtained from the

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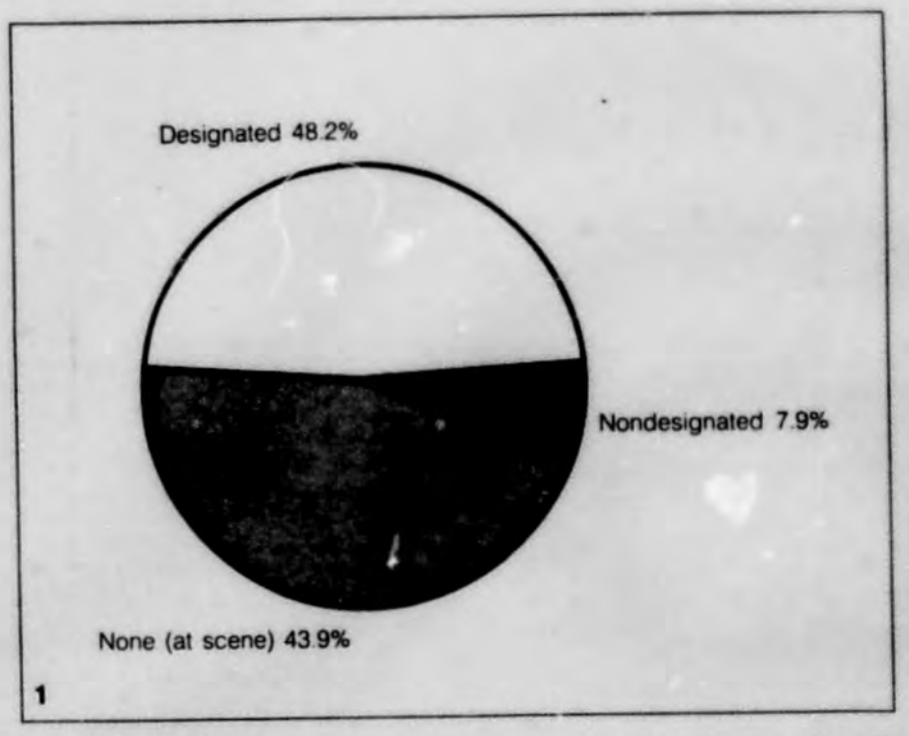
Fig. 1. *1983 trauma deaths by type of hospital.*



trauma registry for 1980 through 1983. Total annual serious injury victims, defined as all deaths and designated patients, also were obtained for this period.

Total annual ambulance transports, defined as paramedic dispatches resulting in ambulance transport, were obtained from the county emergency medical services (EMS) agency for 1980 through 1983.

Data Evaluation

Data evaluation was divided into three parts: the effect of the trauma system on EMS, on ED visits, and on hospital days.

The effect of the trauma system on emergency medical services was determined by calculating the incidence of serious injury based on population, ED visits, hospital days, and ambulance transports. Proportions also were calculated for trauma deaths that occurred at the accident scene, in nondesignated hospitals, and in trauma hospitals.

The effect of the trauma system on ED visits was determined for all patients and nontrauma patients. To determine its effect for all patients, an annual total was obtained for each of the 35 hospitals for 1976 through 1982. To determine its effect for nontrauma patients, the annual totals for 1980 through 1982 for each of the five trauma hospitals were corrected by subtracting the number of designated trauma patients. The resulting values were used to evaluate the percentages of market share and the differences in growth rate following system implementation for nondesignated hospitals and trauma hospitals.

The annual percentage of market share of ED visits for the trauma hospitals was determined by dividing the total number of patients seen in the five trauma hospitals by the total number of patients seen in all 35 hospitals. The percentages for 1976 through 1979, which preceded implementation of the trauma system, were analyzed using linear regression; the percentages expected if no trauma system had existed were projected for 1980, 1981, and 1982 using the standard error of the forecast. Actual and projected percentages for 1980, 1981, and 1982 were compared, and probabilities were calculated.

TABLE 1. *Annual incidence of serious injury*

Compared to:		
Population	0.1%	(1/1,000)
Emergency department visits	0.4%	(1/250)
Hospital days	1%	(1/100)
Ambulance transports	5%	(1/20)

The difference in growth rate of ED visits between the five trauma hospitals and the 30 nondesignated hospitals was determined by calculating the growth rate for each of the 35 hospitals from 1979 through 1982. All 35 hospitals were ranked in descending order, and the probability of difference in rank was calculated using the Mann-Whitney U test.

The effect of trauma system implementation on hospital days was determined for all patients and nontrauma patients. To determine its effect for all patients, an annual total was obtained for each of the 35 hospitals for 1976 through 1982. To determine its effect for nontrauma patients, the annual totals for 1980 through 1982 for each of the five trauma hospitals were corrected by subtracting the number of designated trauma patients. The results were used to evaluate the percentages of market share and the differences in growth rate following implementation for nondesignated hospitals and trauma hospitals.

The annual percentage of market share of hospital days for the trauma hospitals was determined by dividing the total number of hospital days for the five trauma hospitals by the total number of hospital days for all 35 hospitals. The percentages for 1976 through 1979, which preceded implementation, were analyzed using linear regression; the percentages expected if no trauma system had existed were projected for 1980, 1981, and 1982 using the standard error of the forecast. The actual and projected percentages for 1980, 1981, and 1982 were compared, and probabilities were calculated.

The difference in growth rate of

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tals. This volume, which is less than the total annual trauma patient volume projection of one patient per 1,000 population, is calculated by reducing the total volume projection by those patients who die at the accident scene or in nondesignated hospitals.

Following system implementation a retrospective audit should be performed on each trauma patient dying in a nondesignated hospital to document compliance with system criteria. In the event a significant trend of undertriage is identified, the criteria should be modified accordingly.

ED Visits

As competition for patients intensifies, EDs are experiencing increasing pressure from primary care alternatives such as freestanding emergency clinics and from tertiary care systems such as trauma systems.

In the only published study of the effect of freestanding emergency centers on EDs, however, Ferber and Becker concluded that they did not lead to a decline in ED visits in the same service areas.[19]

Concerns also have been expressed regarding the effect of trauma systems on EDs. While trauma regionalization should result in a redistribution of only seriously injured patients, fears persist that it also might result in redistribution of patients with minor injuries or with nontraumatic conditions.[2,4] The latter problem, characterized as a ripple effect, potentially could result from inadequate medical direction of prehospital triage or from inappropriate utilization of trauma hospitals by ambulatory patients.

In the only previously published report on the effect of regionalization on EDs, Metzmaker and Folse concluded that there was no evidence that trauma hospital designation had a significant direct or indirect effect on the number of visits.[8] In this context our findings are of particular interest because they demonstrate that following trauma system implementation, trauma hospitals actually experienced a minor decrease in nontrauma ED patients compared to their projected percentage of market share. In fact, even after inclusion of the designated trauma patients, the trauma hospitals still experienced a slight loss. Possibly ambulatory patients perceive trauma hospital EDs as too busy to provide prompt attention for minor problems.

Hospital Days

Concerns expressed about the potential effect of trauma systems on ED visits, including direct and indirect redistribution of patients, have also been voiced about hospital days.[2,4]

In contrast to our findings regarding ED visits, following trauma system implementation the trauma hospitals experienced a minor increase in hospital days for nontrauma patients compared to their projected percentage of market share. Like the change in ED visits, however, it remained insignificant even after inclusion of the designated trauma patients.

Factors under physician control that might have contributed to this rise include increased numbers of elective nontrauma admissions to trauma hospitals by trauma team physicians who find it difficult to practice in multiple hospitals, and selection of trauma hospitals by new physicians who look for institutions oriented toward acute care. Conversely, a factor under patient control might be voluntary selection of a trauma hospital for elective surgical or nonsurgical care because of its reputation for trauma care.

Although the concurrent findings of a decrease in the trauma hospitals' percentage of market share of ED volume and an increase in their share of hospital days suggest an increase in patient acuity, we were unable to determine whether they were associated with changes in medical or surgical admissions because data on elective and emergency surgeries were unavailable for the period under consideration.

The economic implications of our observations have not been studied.

CONCLUSIONS

Utilization of ambulances, EDs, and hospitals was studied before and after implementation of a regional trauma system. Each year serious injury affects approximately one of every 1,000 persons and accounts for approximately one of every 250 ED visits, one of every 100 hospital days, and one of every 20 ambulance transports. Following system implementation, insignificant short-term changes were observed in utilization of EDs and hospitals. Implementation of a medically directed regional trauma system has been associated with minimal, predictable changes in utilization of medical care. The long-term and economic implications of our observations remain to be studied.

The authors gratefully acknowledge the assistance of Howard Champion, MD, who reviewed the manuscript; of David Phillips, PhD, who reviewed the statistics; of trauma coordinators Terry Aimerito, RN, Linda Baldwin, RN, Margie Murdock, RN, Linda Pierog, RN, and Eileen Whalen, RN; and of Karl Gilbody, RN, and Shirley Jandron, of the Office of Emergency Medical Services.

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King County
Emergency Medical
Services Division

Seattle/King County
Department of Public Health

110 Prefontaine Place S. Suite 500
Seattle, Washington 98104

(206) 344-4293

August 14, 1987

Mr. Glenn Bachman
Project Manager
Shapiro and Associates, Inc.
506 Second Avenue, Suite 1812
Seattle, WA 98104

Dear Glen,

In response to your August 7, 1987 request, here are my responses to Liz Anderson's comments:

#70 -- 1986 Transports to Children's: a total of 183 patients were transported to Children's through referral by King County Medic Units (South King County, Bellevue FD, Shoreline FD, and Evergreen). Thirteen of these transports were by helicopter.

#72 -- The statement that "under no circumstances should there be a delay at the scene waiting for a ride from the helicopter" is intended to reinforce the general policy that there should be no unnecessary delays in transporting patients to the appropriate medical facility. Since air transport is in most circumstances used to move patients to tertiary care facilities in Seattle, paramedic personnel are expected to exercise judgment regarding total transport time to such a facility, As a result, waiting for air transport may be appropriate in some instances if total transport time is still less than ground transport to the same facility.

#75 -- The rationale for directing paramedics not to ask for comparative estimated time of arrival (ETA) for MAST and Airlift Northwest is clear when this protocol is considered in the context of the EMS policy memorandum dated February 12, 1986. As stated in the second paragraph, "The underlying principle that should be considered when ordering air transportation is not so much that the patient gets to a hospital fast, but that it is a rapid method of getting medical help to the patient. Therefore, the primary concern for EMS is to focus on patient care and utilizing the type of service and transport that is most appropriate for the patient. " In other words, the quickest air transport service (shortest ETA) is not alway the most appropriate.

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However, if the first service of choice is not available, then the second helicopter service can be requested.

#82 -- The following physicians provided factual information about their facilities:

Robert Scherz, M.D., President, Medical Affairs, Mary Bridge Children's Health Center
John Coombs, M.D., Vice President, Medical Affairs, Tacoma General Hospital
John Mulligan, M.D., NICU, Mary Bridge Children's Health Center
John Neff, M.D., Medical Director, Children's Hospital and Medical Center

In his letter of October 24, 1985, Dr. Lothar Pinkers provided information about a number of helistop-related issues to Dr. Nicola. A copy of this letter was published the draft EIS. Dr. Nicola also spoke with a number of other physicians about the medical need for a helistop at Children's; these physicians requested anonymity.

I have also reviewed your responses to Anita Francis' comments 16 and 17, and Liz Anderson's comments 71 and 74. They're fine.

In response to your "miscellaneous" questions, I do not believe that Dr. Nicola reviewed the 9/5/86 article you attached, or contacted Dr. Ronald Stewart about his statements on helicopters presenting a risk to the patient. I will pass the article along to him and forward any comments he may have.

If you have any further questions, please call me at 344-4293.

Sincerely,

Steven Call
Manager

cc: Bud Nicola, M.D., Director

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came

September 9, 1987

RECEIVED
SEP 11 1987
DEPT. OF CONSTRUCTION & LAND USE

Mr. John Doan, Director
Dept. of Construction
& Land Use
400 Municipal Bldg.
600 Fourth Ave.
Seattle, WA. 98104

Dear Mr. Doan:

For the past three years I have been in contact with your office and many others and it seems that no one is listening or protecting high-density, residential neighborhoods from helicopter landings.

These landings involve not only individual homes and condominiums but also an elementary school in the case of Children's Hospital.

I know you have the power to recommend against this kind of land use (or abuse). Please so act in favor of the hundreds of lives endangered each landing as evidenced by recorded high incidence of medical helicopter crashes.

Thank you.

Sincerely,

Helen Newman

Helen Newman
4252 N.E. 50th
Seattle, WA. 98105

cc:

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CO14

John

Seattle
Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

September 24, 1987

Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

Dear Ms. Spangler:

Thank you for the letter of September 3, 1987, regarding helicopter landings at Children's Hospital.

I recently replaced Julia Gibb as the Land Use Specialist responsible for preparing the DCLU recommendation on the requested helistop. However, Holly Miller remains the DCLU Director and is ultimately responsible for the final DCLU recommendations to the City Council.

When just assigned to this project, I read the entire file (which occupies an entire file cabinet drawer) in order to understand the concerns previously voiced by neighbors and others writing to the City. I recall reading several letters from you specifically.

In addition to reading through the file, I have also reviewed the many stories that have appeared in the press about EMS helicopters. Although I have not seen a helicopter landing at CHMC, I have seen the area at CHMC where the helistop is proposed and have watched a helicopter land at Harborview Hospital. I know that Holly Miller and Katy Chaney, Director of the Land Use Division, have kept similarly informed on these issues.

We have been working closely with a consultant preparing the Final Environmental Impact Statement (EIS). Because the issues of noise, safety and medical need are so complicated, the EIS has taken quite a while to complete, but it is necessary in order for us, the Hearing Examiner and the City Council to make a sound decision.

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I encourage you to remain interested and informed. If you have any questions please call me at 684-8875.

Sincerely,

HOLLY MILLER,
Director

By
JOHN T. DOAN
Land Use Specialist

JTD:vg

\viv1\mes

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September 8, 1987

Mr. John Doan, Director
Dept. of Construction
& Land Use
400 Municipal Bldg.
600 Fourth Ave.
Seattle, WA. 98104

RECEIVED
SEP 10 1987
DEPT. OF CONSTRUCTION & LAND USE

Dear Mr. Doan:

As newly appointed Director of DCLU, I wish to congratulate you and wish you well.

Since November, 1984 through March, 1987, I have been in correspondence with the directors and others in your office related to helicopter landings in high-density, residential neighborhoods, especially at Children's Hospital -- proposed landing site contiguous to single-family homes as well as Laurelon Terrace Condominiums.

I have these questions at this time to ask you personally:

1) Are you familiar with the whole subject of medical helicopter landings and the records of their high incidence of crashes?

2) Have you visited the proposed site at Children's Hospital, which is currently and frequently used for landings without permit and without landing pad and without concern for the hundreds of lives endangered each landing?

3) Have you read my previous correspondence on the proposed helipad at Children's? Is it still in your files? Please read it carefully. If not available, I will provide you with copies of my previous letters.

Please do all within your power to stop a helipad from being allowed at Children's Hospital, and please stop all flights at this hospital.

Thank you.

Sincerely,
Maryann E. Spangler
Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

cc:

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

5043 sand Point Place N. E.
Seattle, Wa 98105
October 2, 1987

Paul Kraabel
Seattle City Council
600 4th Avenue
Seattle, Wa 98104

RECEIVED
OCT 8 1987
DEPT. OF ... AND USE
... DIVISION

John

Dear Councilman Kraabel:

During the Dedication Ceremony of the Terry Pettus Park, it was stated that you had exhibited strong interest in the preservation of the integrity of neighborhoods within the city of Seattle.

It appears that our neighborhood is in jeopardy in two areas and we are requesting your help in our preservation.

As you are no doubt aware, the Childrens Hospital is seeking permission to construct a Heliport right in our neighborhood.

We strongly believe that such activity in this area would certainly not enhance the neighborhood and in conjunction with that, the personal safety of all the residents is definitely a risk.

We recognize that helicopter service in emergency situations may be a factor in saving a child's life and do appreciate that fact. We do, however, believe that the University Intramural Field has proven very satisfactory in the past as a helicopter landing sight. As it is only 3 minutes away from Childrens Hospital by ambulance, that 3 minutes additional time to the hospital would be of minimal consequence. Also it should be considered that the very poor safety record of Medivac Helicopters is a factor that must be given strong consideration, particularly in view of the density of population surrounding Childrens Hospital. Also it is to be remembered that Laurelhurst Elementary School is within this same area.

The helicopter approach to the University Intramural Field is all over water and would endanger no one.

Also it occurs to us that the University Hospital desires helicopter service and Harborview does have this service. We would question how many other hospitals desire this service also. It would appear that this is the time to control the situation before it sets too much of a precedence.

The thought of the recent helicopter accident at Green Lake certainly gives reason for additional concern. We are thankful that his power failure occurred when he was at 1000 feet altitude and he was able to attain a safe landing in an open area. Had this situation occurred at less than minimum altitude, it is probable that the accident would have had far more ser ious consequences.

We are requesting that you weigh all of these factors and give thought to the fact that the safety of many is being sacrificed to help one person if the Childrens Hospital is allowed to establish a heliport on its ground within the neighborhood.

Thank you for your attention to this matter.

Sincerely,

Harold Pate
Millard Finch

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RECEIVED
JAN 5
DEPT. OF CONSTRUCTION

8415 Roosevelt Way NE
Seattle, WA 98115
December 31, 1987

Department of Construction & Land Use
600 4th Ave.,
Seattle, WA 98104

Dear Sir:

Would it be possible to get a copy of the draft environmental impact statement on the Children's Hospital and Medical Center helistop? I believe this was published in September 1986. I'd be grateful for any help you can give me. Thank you.

Sincerely,

C. H. McClelland

Charles H. McClelland

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8405870 STD

To Katy
cy back to me
do HM SA

King County Executive
TIM HILL

400 King County Courthouse
516 Third Avenue
Seattle, Washington 98104

(206) 344-4040

RECEIVED
FEB 24 1987
DEPT. OF PUBLIC & ENVIR. RSE

February 23, 1987

Ms. Kay E. Stimson
4715 - 45th Avenue N.E.
Seattle, Washington 98105

RE: Helipad at Children's Hospital

Dear Ms. Stimson:

Thank you for your letter of January 26, 1987, regarding the proposed helipad at Children's Hospital. Your letter raises a number of valid concerns about the use of helicopters in dense urban areas.

The City of Seattle is currently reviewing a request for a conditional use permit from the Hospital to build a helipad. Dr. Bud Nicola, Director of the Seattle-King County Department of Public Health, has been asked to comment on Children's Hospital's Environmental Impact Statement. I have shared your letter with Dr. Nicola and am confident he will take your concerns into consideration in his comments.

The King County Board of Health, of which I am a member, held a public hearing on the issue of air ambulance services in early December. At that meeting we endorsed a number of recommendations, including one calling for the State of Washington to plan, and if necessary, to regulate air ambulance services. I support such action by the State and have directed my staff to work to address these issues.

Thank you again for your letter.

Sincerely,

Tim Hill
King County Executive

TH:BN:jm

cc: Holly Miller, Director, Construction and Land Use, City of Seattle
Lois North, Councilmember, King County Council
Cynthia Sullivan, Councilmember, King County Council
Bud Nicola, M.D., Director, Seattle-King County Department of Public Health

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COH 150

Seattle
Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

April 3, 1987

Re: 4800 Sand Point Way Northeast

Joy Scott
4339 Northeast 45th Street
Seattle, Washington 98105

Dear Ms. Scott:

Mayor Royer has asked me to respond to your March 11, 1987 letter about the proposed helistop at Children's Hospital and Medical Center (CHMC).

The hospital has applied to the City for a Council Conditional Use approval to construct and operate a helistop on their property. The Department of Construction and Land Use (DCLU) is the City agency evaluating the hospital's application with the ultimate decision being made by the City Council. We asked CHMC to prepare an Environmental Impact Statement (EIS) addressing factors including noise, safety and cumulative impacts which could result from the helipad. A partial list of landings from August 1985 to June 1986 is included in the Draft EIS. The Draft EIS was out for public review and comment during September, 1986. The Final EIS is now being prepared and will address the comments received on the Draft EIS. It should be released sometime in May. DCLU will then prepare a recommendation on the proposal to the City Hearing Examiner who in turn will make a recommendation to the City Council to make the final decision.

The hospital does not have permission to land helicopters and has been cited for these landings without the appropriate permit. The date for compliance in the Notice of Violation has been extended to April 30, 1987 to allow for the preparation of the EIS and the City Council's decision on the permit application. The extension of the compliance date does not give the hospital permission to land the helicopters, but it does postpone enforcement action on the part of this department until the compliance date is reached.

As with all enforcement actions, we hold the property owner and other responsible parties accountable for compliance with the City ordinances. In the event of an accident, we expect the same rules would apply.

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I hope this addresses your concerns. If you have any further questions, please call Land Use Specialist John Doan at 625-4509.

Sincerely,

Holly Miller

HOLLY MILLER
Director

\mary2\scott1 JD:mr

cc: Paul Kraabel
Joe Garcia
Charles Royer

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MG/LTD

+ Chron
cc: Paul Kraabel

RECEIVED
MAR 23 1987

Business/Asia
4339 NE 45 Street
Seattle. WA 98105
USA

March 11, 1987

DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

RECEIVED
MAR 12 1987
PAUL KRAABEL
SEATTLE CITY COUNCIL

Paul Kraabel, Chairman
Urban Redevelopment
Eleventh Floor
Municipal Building
Seattle, WA 98104

Dear Mr. Kraabel,

This letter of information request and citizen comment is based on two statements in the enclosed February 25, 1987 letter from COH to its neighbors.

1."...the process regarding our request for a conditional land use permit for the helipad,..." (underline mine)

2."...we are in no way assuming the outcome of the conditional land use process."(underline COH)

I request the following information.

1. what is the process regarding the COH request for a conditional land use permit for the helipad?

The above statements from the COH letter indicate that COH has indeed applied for a conditional land use permit, but that, in the meantime, they hardly need to assume the outcome of the request process for they will land helicopters whenever they deem necessary. This is flatly illegal.

2. Who is responsible, in the event of an accident, for the payment of lawsuits that would surely occur in this illegal situation? The hospital? Air Northwest? The City of Seattle?

3. What monitoring arrangement covers the current illegal helicopter landings at COH? That is, is there a public log containing such information as time, number, and documented purpose of each flight?

These questions are only a few of those that must be answered--not only for the enlightenment of the people who live near the hospital but for the acknowledgment by all parties involved of the potentially explosive situation that is created by the illegal landings of helicopters at COH.

I appreciate your time in answering the above questions!

Sincerely,

Enclosure COH letter

Joy Scott

Copy to Charles Royer, Sam Smith, Holly Miller

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Children's
Hospital & Medical Center

4800 Sand Point Way N.E. P.O. Box C5371 Seattle Washington 98105 (206) 526-2000

February 25, 1987

Dear Laurelhurst Neighbor:

I would like to let you know that Children's is altering the landscaping near the present helicopter landing site to ensure the safest temporary landing conditions for all concerned.

At the request of Airlift Northwest pilots, we are altering the site as follows:

1. Four standing lamps that line the walkway to the Emergency Room are being removed and replaced with surface-mounted fixtures on the west wall that leads to the Emergency Room.

2. Three trees on the grounds are being removed: the cypress near the foot of the driveway and two Norway spruce west of the cypress.

Please know that we are acting out of the utmost concern for the safety and welfare of our patients, staff and neighbors. The ongoing, though infrequent, necessity of landing patients near our Emergency Room, coupled with the unanticipated length of the process regarding our request for a conditional land use permit for the helipad, have prompted us to make these alterations. In making these alterations we are in no way assuming the outcome of the conditional land use process. In addition, we remain committed to following through with the process as outlined by the city.

If you have any questions about these plans, please feel free to contact Nancy Greenawalt, Director of Government Affairs, at 526-2505.

Sincerely,

Treuman Katz

Treuman Katz
Chief Executive Officer

nmg

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Children's
Hospital & Medical Center

4800 Sand Point Way N.E. P.O. Box C5371 Seattle, Washington 98105 (206) 526-2000

February 25, 1987

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Please know that we are acting out of the utmost concern for the safety and welfare of our patients, staff and neighbors. The ongoing, though infrequent, necessity of landing patients near our Emergency Room, coupled with the unanticipated length of the process regarding our request for a conditional land use permit for the helipad, have prompted us to make these alterations. In making these alterations we are in no way assuming the outcome of the conditional land use process. In addition, we remain committed to following through with the process as outlined by the city.

If you have any questions about these plans, please feel free to contact Nancy Greenawalt, Director of Government Affairs, at 526-2505.

Sincerely,

Treuman Katz

Treuman Katz
Chief Executive Officer

nmg



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23912 12th Pl. S., 31
Des Moines WA 98198
March 6, 1987

ITO

RECEIVED
MAR 9 1987
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Katy Chaney
Seattle Department of Construction and Land Use
400 Municipal Building
Seattle WA 98104

Dear Katy:

I am a pilot and a reporter for KING-1090 who is incensed about the controversy surrounding the proposed helipad at Childrens' Hospital. However, please accept these comments as from a private citizen, because I don't believe they represent those of the management of KING Broadcasting.

Last week, after yet another story in the paper containing assumpitons, mis-conclusions and erroneous information about helicopters and helicopter ambulance services, I did a little digging and confirmed a few facts about such services which I would like to pass to you.

ITEM: Neighbors of Childrens' who are opposed to the helipad state that, in 1986, there were 31 crashes resulting in 21 fatalities involving helicopter ambulance services.
CONCLUSION: They're not safe.
FACT: The raw numbers don't tell the whole story. Of the 31 crashes, all but one minor accident resulting in property damage only happened either en route or at a remote pick-up site. ALL the fatalities occurred away from the hospitals.

Inasmuch as helicopter ambulances are, by their very nature, called to rugged scenes where unknown hazards can and do lurk unseen, accidents of this nature can be expected from time to time. However, the risk of such are balanced by the benefit of more speedily getting medical care.

Further, any hazards at an approved, established helipad would be identified and indicated by lights and/or alternative red and white stripes.

ITEM: Neighbors are fond of invoking concerns about the children at a school near the hospital.
FACT: The Laurelhurst Elementary School is well east of the hospital. Established approach and departure corridors keep helicopters to the southwest and west of the hospital at all times.
CONCLUSION: The school concern is moot.

That, Katy, leaves noise as the only concern.

My question is: Does not the health and well-being of the children of our community warrant the potential of disturbances two to three times a month, or are the well-heeled people of the Laurelhurst and View Ridge areas exempt from social responsibility because of their social standing?

I respectfully ask you to consider these findings when considering the application for a helipad at Childrens', and I urge you to approve that application.

Sincerely,

Carl R. Dombek

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ARCHITECT JAMES J. CHIARELLI FELLOW AMERICAN INSTITUTE OF ARCHITECTS

February 27, 1987

RECEIVED
MAR 4 1987
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Councilman Paul Kraabel
Seattle City Council
600 Fourth Avenue
Seattle, WA 98104

Re: Helipad for Children's Hospital

Dear Councilman Kraabel:

Regarding the Helipad for Children's Hospital, it is true that helicopters are noisy, but so are fire engines, ambulances and police cars. However, the personnel in each of those noisy machines perform an invaluable service in caring for people during emergencies. One cannot equate the need for a critically ill child to have immediate care with the inconvenience of the noise factor some of Children's neighbors may experience on occasion.

As neighbors of Children's ourselves, we received a letter from Treuman Katz describing changes in landscaping near the present helicopter landing site. These changes are being made to "ensure the safest temporary landing conditions for all concerned." We want to go on record in urging your Council to make it the safest permanent landing site.

We are as near to the hospital as some of the protestants to the helipad, and the whirring sound of the helicopter would be reassuring in knowing that the pilot is delivering a child or baby in a life and death situation to one of the finest children's hospitals on the West Coast.

Sincerely,

James J. Chiarelli

Patricia Chiarelli
Patricia Chiarelli

CC: Nancy Greenawalt

RECEIVED
MAR 03 1987
PAUL KRAABEL
SEATTLE CITY COUNCIL

6500 NORTHEAST WINDERMERE ROAD SEATTLE WASHINGTON 98105 (206) ~~523-4834~~ 527-2225

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8405870

19806 127th Ct. NE
Bothell, WA 98011
March 1, 1987

RECEIVED
MAR 3 1987
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a volunteer worker for the hospital and member a hospital auxiliary and therefore have an opportunity to see the need for such an undertaking. It is vital that babies and children with critical traumas be given the prompt attention that a helistop will provide.

I understand the concerns of those who are objecting, but I have heard the helicopter and do not believe that concerns about noise and safety outweigh the good that will be realized.

Thank you for the opportunity to comment and please convey my opinions to the Seattle City Council.

Sincerely,

Viola N. Meredith
Viola N. Meredith
Treasurer
Cottage Lake Auxiliary

vm

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COH

Jakard

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

February 19, 1987

Delores Hyatt
4614 41st Avenue Northeast
Seattle, Washington 98105

Dear Ms. Hyatt:

Thank you for sending me your thoughts about the proposed helipad at Children's Hospital and Medical Center (CHMC).

The Department of Construction and Land Use (DCLU) is the City agency responsible for evaluating that application, with the ultimate decision being made by the City Council. CHMC has prepared a Draft Environmental Impact Statement (EIS) which addresses factors including noise, safety, and cumulative impacts which could result from the helipad. The EIS has been circulated for public review and comment. DCLU expects to soon publish a final version of the EIS, which will include responses to those public comments.

John Doan of DCLU is working on this issue. He can be reached at 625-4509 if you have further questions about the decision process on the helipad.

I assure you that we will take the concerns of the CHMC neighbors, like yourself, into account when making a decision.

Sincerely,

Charles Royer

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DCLU MAYOR'S RESPONSE DUE 2/13 LOG P5595

RECEIVED
JAN 30 1987
MAYOR'S OFFICE

4614 41st Ave NE
Seattle WA 98105
29 January 1987

Mr. Charles Royer, Mayor
600 - 4th Ave, 5th Floor
Seattle WA 98104

Dear Mr. Mayor,

I strongly urge you to disapprove the construction of a helipad at CH+MC.

Overhead helicopters are very dangerous, very noisy and destroy my sense of well being.

There is a suitable alternate area in the athletic field at the University and could be utilized by both hospitals.

Please disapprove the construction of the proposed helipad at H+MC. Thanks.

Sincerely yours,

Dolores I Hyatt

Dolores I Hyatt
4614 41st Ave NE
Seattle WA 98105

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8405870 4614 - 41st Ave NE
Seattle WA 98105
29 January 1987

Mr. W. Justin, Director
Dept of Construction and Land Use
600 - 4th Ave.
Seattle WA 98104

RECEIVED
JAN 30 1987
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. Justin,

I strongly urge you to disapprove the construction of a helipad at CHoMC. Anchored helicopters are very noisy, very dangerous and destroy my peace of well being.

There is a perfectly suitable alternate area in the University athletic field which can be used by both hospitals.

Please disapprove the construction of the helipad at CHoMC

Thankyou.

Sincerely,
Aubrey A Hyatt

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March 5, 1987

RECEIVED
MAR 9 1987

RECEIVED
MAR 09 1987
PAUL KRAABEL
SEATTLE CITY COUNCIL

Dear

The safety issue of medical helicopters has been and continues to be a prime concern to many in Seattle as well as across the nation. Aviation experts, pilots, the medical profession, and citizens are raising questions as to the advisability of air ambulance helicopter services within city limits.

The enclosed copy of an article in the Seattle Post-Intelligencer, 1-27-87, addresses some of the issues and some of the concerns. It also raises serious questions. May we draw your attention to specific points as follows:

1. "Children's has budgeted for 675 air ambulance transports ...."

   In the draft EIS by Children's, the estimate was 80 flights per month. In their newsletter, 1-87, they changed their estimate to 2 flights per month, which figure was to be incorporated into the final EIS.

   This reduction from 80 to 2 was so great that Children's lost credibility completely in the area of need for a helipad. (COH has refused consistently to comply with requirements for a Certificate of Need review.) We question need based on the estimate of 2 flights, and wihout this review.

2. Significant differences appear as to number of flights and charges for University Hospital, Children's Hospital, and Harborview. In this article, for example: Number of flights: Children's - 675; University - 126; Harborview - 543. Children's has budgeted for more than either of the other two; and, more than the other two hospitals combined!

   "Children's budget indicates it will charge $1,643 per ambulance transport, while University Hospital will charge $3,822 per trip." It is stated that Children's and University do not subsidize air ambulance transports as does Harborview, whose charge is $1,428. What do these differences represent?

   We question who will pay for Children's flights? Who will pay the insurance? What is the amount and kind and extent of coverage of insurance? Liability insurance has limits and thus would not begin to cover adequately lives and property involved.

3. "The helicopter ambulance accident rate is three times that of non-ambulance commercial helicopter services." Lead pilot for Airlift Northwest is quoted: "I think some of the programs are operating marginally. We think the FAA should take a closer look at what everybody is doing."

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Hundreds of lives are endangered for each of the 4 flights per emergency at Children's Hospital, located in a high-density residential neighborhood. Residents in Laurelon Terrace Condominiums contiguous to site where helipad is proposed, residents in adjacent Laurelhurst single-family homes surrounding hospital property, residents in the duplex-triplexes in Windermere Circle, children at Laurelhurst Elementary School a block from site, and patients and personnel at the hospital.

A visit to the proposed site will underscore these proximities and dangers.

4. Another paragraph in this article focuses on an additional issue: "In Spokane, two hospitals that operate competing helicopter ambulance services recently were threatened with fines of $1,000 per day and injunctions from the Washington state Attorney General's office if they continue to subsidize the cost of helicopter transport with fees paid by patients who don't use the service. The hospitals have agreed to stop subsidizing the service."

   Again we question: Who pays for the flights at Children's? Who pays for the insurance? Rising costs for all hospitalization has increased steadily in the past several years and continues to do so. Rising insurance rates reflect these increases. Marketing tools such as helicopters contribute to these increases.

5. No regulations exist to govern number of flights and/or need of helicopter transport to hospitals. Once costly helipads have been installed and services engaged, flights may escalate to help defray expenses as competition among hospitals increases.

Please review this article. Please review the mass of correspondence and public testimony on record regarding opposition to a helicopter site at Children's Hospital. Please stop a tragedy from occurring before it happens!

Thank you.

Sincerely,

Helen Newman

Helen Newman
4252 N.E. 50th Street
Seattle, WA. 98105

Maryann E. Spangler

Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

Copies to:
City Council Members
King County Council Members
Dept. of Construction & Land Use
Ken Jacobsen - Olympia
Concerned Citizens Groups
Other interested individuals

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GILBERT W ARIAS P-I

Dan Davidson, lead pilot for Airlift Northwest, is ready to fly with his helicopter ambulance at Harborview Medical Center. Davidson, who welcomes an FAA investigation, says his service already meets standards well above the FAA's.

FAA to probe helicopter ambulances but Seattle's looks better than most

By Rita Hibbard
P-I Reporter

Airlift Northwest, the air ambulance service operated by a group of Seattle hospitals, is among about 165 emergency medical service helicopter programs nationwide that will be investigated by the Federal Aviation Administration.

But the service, which includes a helicopter and airplane, already meets standards well above those now established by the FAA, said lead pilot Dan Davidson.

Spurred by a high accident rate among helicopter ambulance programs, the FAA this week began a review of all helicopter ambulance programs in the nation. Last year, there were 31 helicopter ambulance accidents that resulted in 21 deaths. So far this year, there have been six deaths from air ambulance crashes, said Seattle FAA spokesman Dick Meyer.

Only one of the accidents occurred in the Pacific Northwest. Last December, a pilot, paramedic and flight nurse were killed when a Pendleton, Ore., medical transport helicopter crashed just west of that city.

The helicopter ambulance accident rate is three times that of non-ambulance commercial helicopter services.

Davidson said he welcomes the FAA investigation.

"I think some of the programs are operating marginally," he said. "We think the FAA should take a closer look at what everybody is doing."

Depending on what the investigations turns up, the FAA could issue new or revised regulations to govern helicopter ambulance programs, Meyer said.

Airlift Northwest's helicopter is twin-engine and equipped for instrument flying in bad weather or darkness, Davidson said. Its pilots must be instrument-rated, and are required to have at least 3,000 hours of flying time experience. Perhaps most importantly, it employs four, full-time helicopter pilots, which means each pilot works

See **FAA**, Page E3

P.I. FEB 27 '87

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FAA: Probe of helicopter ambulances

From Page E1

12-hour shifts, five days on and five days off, Davidson said.

Helicopter ambulances are not required to have twin engines or be instrument-equipped, he said. Most helicopter ambulance services operate with three pilots, who are on duty for 24 hours, then off duty for 24 hours, Davidson said. The FAA requires only that any commercial helicopter pilot have no fewer than 200 hours of flying experience.

The only requirement the FAA makes for helicopter ambulance services that distinguishes them from other sorts of helicopter services is that sleeping quarters be available when the crews are on standby, Meyer said.

Davidson said the Airlift Northwest program is safer than many other helicopter services.

"Our company would like to see the FAA set guidelines that the national EMS (Emergency Medical Service) Pilots Association came out with last summer," said Davidson. Those guidelines call for four pilots and instrument-flight capability.

Instrument-flight capability is important because many air ambulances make night flights, fly in bad weather and land in places not designed for aircraft landings, he said.

Helicopter ambulances have become increasingly popular in recent years, particularly as a marketing tool for hospitals.

In Seattle, the three hospitals that budgeted money for Airlift Northwest this year anticipate making 1,344 air transports in 1987, compared with 455 in 1984. The participating hospitals are Children's Hospital and Medical Center, University Hospital and Harborview Medical Center.

Many people who live near Children's Hospital and Medical Center in Laurelhurst are bitterly opposed to the hospital's plans to build a helipad there, claiming the landings and takeoffs are unsafe in a residential neighborhood. The hospital's permit application to build the helipad is pending before the city Department of Construction and Land Use.

In Spokane, two hospitals that operate competing helicopter ambulance services recently were threatened with fines of $1,000 per day and injunctions from the Washington state Attorney General's office if they continue to subsidize the cost of helicopter transport with fees paid by patients who don't use the service. The hospitals have agreed to stop subsidizing the service.

Harborview also subsidizes air ambulance transports, said state Hospital Commission analyst Tom Muller, although Children's and University do not.

Harborview's budget submitted to the commission indicates that the hospital charges $1,428 per trip, which is about 35 percent short of covering the true cost, Muller said. Harborview, however, received approval to cross-subsidize in several departments because it is facing a loss this year, Muller said.

Children's budget indicates it will charge $1,643 per air ambulance transport, while University Hospital will charge $3,822 per trip.

Muller said the three hospitals show different costs per trip because each anticipates a different number of trips. Children's has budgeted for 675 air ambulance transports, compared with 543 for Harborview and only 126 for University. The costs include both airplane and helicopter transports.

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#405870

Mrs. Stephen J. Brown
16725 - 140th Avenue N. E.
Woodinville, Washington 98072

Julia Gibb
Dept. of Construction and Land Use
400 Municipal Bldg
Seattle, Wa 98104

RECEIVED
FEB 5 1987
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb

I'm writing to urge you to support Children's Orthopedic Hospital + Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I've been a COH supporter for 40 years - have been aware of the tremendous advantages to our whole area's children to have this facility to serve us.

I understand the concerns of those who are objecting but don't believe that noise + safety concerns hold much weight vs. all our children's interests.

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Thank you for this opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely -

Ida May Brown

RECEIVED
FEB 5 1981

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Kay E. Stimson
4715 - 45th Avenue N. E.
Seattle, Washington 98105

January 26, 1987

Dear Mr. Hill,

I live one half block northeast Of Children's Hospital. I have watched the helicopters land and take off for the last year. Recently I read the enclosed article from the AMA News and I must urge you to oppose the proposed helipad at the hospital. This community was here long before Children's Hospital was and the residents have a right to privacy and safety in their community.

Since Children's lobbied against having to prove Certificate of Medical Need in Olympia, I can only assume it is because they can

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can not prove helicopter transport saves lives. Therefore, the only reason they must want this helipad on their campus is to use it for a marketing tool — to make money. At what cost to the community do we allow Children's to make money?

According to the enclosed article, over one half of the accidents in 1986 of medical helicopters occured on take off, landing or hovering, all of which happen over and around this community. The proposed site is surrounded by homes, condos, businesses, churches, schools, trees & powerlines. This is no place for a helipad.

This helicopter service is entirely unregulated and the accident rate is so high, we can not allow this helipad to be constructed in our neighborhood.

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. Please, do not allow Childrens Hospital to build this helipad on their campus for the safety of this community and for the precedent it will set for the safety of other neighborhoods.

Sincerely,
Kay Stimson

C.C. Holly Miller
Lois North
Cynthia Sullivan

Enclosure: page 11 American Medical News
January 9, 1987

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Kay E. Stimson
4715 - 45th Avenue N. E.
Seattle, Washington 98105

March 28, 1987

Dear Ms. North,

Thank you for your response of February 6, 1987 to my letter. Your mention of the proposed legislation, House Bill #65, is encouraging, although from what I understand, this will not affect anyone who has applied or obtained a conditional land use permit for an emergency landing site prior to December 1, 1984. This means the current proposed legislation would not apply to Harborview or Children's Hospital. If these two hospitals are excluded from being regulated by this legislation, then this legislation is basically null and void.

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DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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We need to have this bill cover ~~Everyone~~ who is landing or anticipates landing a helicopter at their facility.

Please, urge this legislature to correct this grave error and make it include everyone that will be operating an emergency medical helicopter in this state.

Thank you,

Sincerely,
Kay Stinson

cc. Cynthia Sullivan
Holly Miller
Jim Hill
Bud Nicola

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Aeromedical helicopter accident rate 'devastating'

The accident rates of aeromedical helicopters showed no signs of improving in 1986, with numerous accidents causing 15 deaths, including seven in one day.

The rate of fatal accidents was seven per 100,000 hours of flight, the same as was recorded in 1985, according to the Aviation Safety Institute (ASI) of Worthington, Ohio. Furthermore, if injuries are included in the accident rate, the ratio soars to 12 per 100,000 hours of flight, a figure ASI calls "devastating."

Tom Einhorn, a co-founder of the National EMS Pilots Assn. (NEMSPA), and an aeromedical helicopter pilot, says: "It is an industry in distress. We are experiencing the worst accident rate in modern aviation history right now."

While aeromedical helicopters are among the newest and fastest growing segment of the health care industry, with close to 150 programs operating currently, their high accident rate is drawing increasing attention and alarm.

WITH THE CRASH of two aeromedical helicopters resulting in seven fatalities, including one patient, on Dec. 3 last year, the problem has received national attention, and several congressmen have called for a congressional investigation.

In a recently released report studying aeromedical crashes since 1975, ASI warns that "unless the aeromedical helicopter community resolves its differences and reaches compromises on how its helicopters should be operated, the Federal Aviation Administration and/or the insurance industry will step in to curtail some aspects of this business."

When the aeromedical helicopter industry trade group, the American Society of Hospital Based Emergency Aeromedical Services (ASHBEAMS), announced that it was going to tighten its safety guidelines after an October meeting, Einhorn of the pilots association was immediately critical.

"Their new guidelines are things we called for two years ago," said Einhorn, adding, "besides, how can a bunch of nurses and administrators decide flight safety when it is the pilots who know it best?"

IN ITS REPORT, ASI cites several causes for the accidents. These include:

- Obstruction strikes. Close to half of all of the accidents AFI studied involved helicopters striking such things as power lines, guy wires, trees, terrain, light poles, and a wind sock. Many of the strikes occurred at night and in the rural areas in which the helicopters frequently operate.
- Meteorological conditions. The study shows a continuing rise in the number of accidents occurring at night and in marginal weather conditions and notes that part of the problem is that pilots are not properly trained for the missions on which they go, and the "incomplete or inaccurate knowledge of weather conditions along the route of flight." Of the two most recent crashes Dec. 3, one happened at night, and the other happened in fog.
- Mechanical failures. One-third of the accidents in the study were due to mechanical problems, with engine failures causing several fatal crashes. Several other accidents were caused by less serious problems such as engine cowlings and doors falling off while the helicopters were flying.

IT IS WIDELY AGREED that another source of accidents is pilot fatigue, which can exacerbate the above causes. This factor is not easily quantified, however. For a long time, the pilots association has been fighting for a four-pilot-per-helicopter minimum standard for the industry. Yet many programs continue to get by with two or sometimes three pilots — the number recommended by ASHBEAMS in its latest standards. This can lead to pilots being on duty more than 80 hours per week.

Einhorn cites a case in Phoenix, Ariz., in which several pilots quit a program because of "fatigue and exhaustion." The program, Samaritan Air Evac, recently announced that it was going to the four-pilot standard and admitted that, before this, pilots were "working a minimum of 55.5 hours per week and often more because of late flights. Under the new staffing arrangement, pilots will work 41.5 scheduled hours per week."

Writing in their association's newsletter, Einhorn and NEMSPA co-founder Don Wright are critical of ASHBEAMS' recent recommendation of only three pilots per helicopter, saying: "This has been an industry-wide recommendation for more than three years," adding, "No hospital in America staffs a full-time position with less than 4.5 full-time equivalents, yet it is an uphill battle to get three pilots on a schedule where fatigue poses a far more serious penalty."

—Ryan Ver Berkmoes

Accidents killed 15 in 1986

Twenty-two medical helicopters were involved in significant accidents in 1986, causing 15 deaths and 18 injuries, as reported by various sources to the National EMS Pilots Assn. and the Aviation Safety Institute. The list does not include a U.S. Coast Guard helicopter on an aeromedical mission when it crashed in Kodiak, Alaska, on Nov. 2, killing six. Locations are where the helicopter was based, not necessarily where the accident occurred.

1. Jan. 19, Baltimore. Crashed into trees, killing two.
2. Jan. 26, Santa Ana, Calif. Struck wires on takeoff. Minor injuries to four.
3. Jan. 27, Missoula, Mont. Struck building on takeoff. No injuries.
4. April 5, Pittsburgh. Power loss on takeoff. No injuries.
5. April 19, Los Angeles. Propeller struck unknown object while hovering. No injuries.
6. April 25, Chicago. Tail rotor struck building on takeoff. No injuries.
7. May 9, San Diego. Power loss at takeoff. One injured.
8. May 22, Norcross, Ga. Power loss in flight. No injuries.
9. June 2, Jackson, Miss. Struck wire, killing three.
10. July 8, Houston. Propeller struck unknown object while hovering. No injuries.
11. July 10, Augusta, Ga. Struck wire at takeoff. No injuries.
12. July 21, Durham, N.C. Power loss in flight. Five minor injuries.
13. July 25, Greenville, N.C. Hydraulic failure in flight. No injuries.
14. Aug. 10, Missoula, Mont. Struck ground at takeoff. Four injuries.
15. Aug. 23, Tyler, Texas. Struck wire at takeoff. No injuries.
16. Aug. 23, Ann Arbor, Mich. Engine failure at takeoff. No injuries.
17. Aug. 29, Pensacola, Fla. Engine failure during landing. No injuries.
18. Sept. 23, Winston-Salem, N.C. Struck ridge in flight, killing three.
19. Nov. 5, Lewistown, Pa. Struck bird in flight. One minor injury.
20. Nov. 7, Billings, Mont. Tail rotor struck unknown object. Three injuries, two serious.
21. Dec. 3, Nashville. Struck ground, killing four.
22. Dec. 3, Pendleton, Ore. Struck ground, killing three.

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EMERGENCY MEDICINE SERVICE
UNIVERSITY HOSPITAL
UNIVERSITY OF WASHINGTON

5/6 COH 170 — Ea. file > yes cc: Katy Chaney

February 5, 1987

RECEIVED
FEB 9 1987
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT OF PUBLIC HEALTH

Bud Nicola, M.D.
Director
Seattle, King County Public Health
400 Yesler Bldg. 7th Floor
Seattle, WA 98104

Dear Bud:

Someone pointed these articles out to me and I thought you might find them of interest. Somehow this death rate (15 people last year) must be figured into the cost/benefit discussions of aeromedical helicopter accidents.

Sincerely,

Richard O. Cummins, M.D., M.P.H., M.Sc.
Associate Professor of Medicine
Department of Medicine

ROC:JP

Enclosures

cc: Mickey Eisenberg, M.D.
Steve Call

University Hospital, RC-02
Seattle, Washington 98195
(206) 548-4000

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American Medical News - Jan 23/30, 1987. p. 3



AP/Wide World Photos

Wreckage of a medical helicopter crash that killed four people in North Carolina.

Helicopter crash kills 4 in N. Carolina

The new year started off badly for aeromedical helicopters with the crash of one 20 miles north of Camp Lejeune, a Marine base in North Carolina. The three people and infant aboard died in the accident, which occurred Jan. 8.

The helicopter crashed into heavy underbrush shortly after the pilot radioed, "Mayday, mayday, we have a fire on board and are going down." Most of the craft was destroyed by fire, and the bodies of the victims were severely burned.

The baby had been suffering uncontrollable epileptic seizures and was being taken from Camp Lejeune Naval Hospital to the pediatric intensive care unit at Pitt County Memorial Hospital, which owned the helicopter. Rescue crews took about an hour to reach the wreckage because they had to cut their way through heavy brush.

Besides the infant, the crash killed pilot Perry Reynolds, and flight nurses Mike McGinnis and Pam Demaree.

Tom Einhorn of the National EMS Pilot's Assn. commented on the crash and said he knew Reynolds. "He was the program's chief pilot and probably about the most safety-conscious pilot around. It's a real loss."

THE NATIONAL Transportation Safety Board and the Federal Aviation Administration are investigating the crash, but so far will not speculate on a cause.

Einhorn, who has flown aeromedical helicopters for several years, said: "A fire in flight is very bad. It could have been caused by a number of things like an oxygen explosion or an electric heater." He noted that the crew had jettisoned the craft's doors before the crash, indicating they may have been hoping to have a survivable landing and then leap to safety.

John B. Galipault of the Aviation Safety Institute said the company the hospital had contracted with to operate the helicopter, Omni Flight, "runs a pretty clean operation" from a safety standpoint.

Officials at the hospital said the crash was the first for the hospital's air ambulance service, which operates in conjunction with the East Carolina U. Medical School.

Dave McRae, hospital senior vice president, said, "Many things will have to be looked at before the hospital decides whether the program will be continued and how. If it is continued, it will have to be restructured because key people were killed."

In another accident the same day in North Carolina, an aeromedical helicopter belonging to the hospital at Duke U. in Durham crashed while on a training flight. Fortunately, the accident occurred while the craft was landing and neither of the two pilots aboard was seriously injured, though the helicopter was damaged.

Last year, 15 people died and 18 others were injured in aeromedical helicopter accidents in the United States.

—Ryan Ver Berkmoes

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EDITORIAL

Efficacy, Cost, and Safety of Hospital-Based Emergency Aeromedical Programs

The number of hospital-based helicopter programs in the United States continues to grow rapidly, the number of helicopters in service even more. Approximately 20 new programs were added this year to the 130 already active, while many programs that started with one helicopter now have two or three in service. Although some states, such as New Jersey, have recently enacted strong legislation designating a limited number of air medical programs for the state, this has been the exception rather than the rule. In most states, government has been more permissive or loopholes have been found that have allowed programs to be started outside of certificate of need (CON) laws. Virtually every large metropolitan area now supports at least one program, and many small, rural cities of 100,000 or less find themselves with competing programs. There are now 31 hospital based helicopters in metropolitan Los Angeles.

Hospital-based aeromedical programs look as if they are here to stay. What do we know about the efficacy, cost, and safety of this flashy new resource being offered by hospitals around the country?

EFFICACY

Persons involved in aeromedical programs are convinced of their value for patient care. Rapid air transport with skilled personnel certainly has the potential to save lives, reduce morbidity, and enhance regionalization of care requiring special resources. Yet proving the efficacy of these programs remains an elusive goal.

In such states as Massachusetts and Wisconsin, which have strong CON procedures requiring programs to show that flights are meeting stipulated criteria for necessity, 90% compliance has been demonstrated for CON review. In a collaborative study in which five university hospital based programs examined more than 1,000 flights on the basis of a score that quantified intensity of services provided patients after transport, approximately 75% of flights were appropriate.[1] Trauma patients transported by helicopter appeared to do better than those transported by ground,[2] and better than expected based on national statistics.[3] Yet, the literature is sparse, and critics are skeptical of the motives and objectivity of the studies, such as these, that have been done.

As with many advances in technology, however, while the skeptics are arguing over whether we should have it at all, its widespread application has led to new and unanticipated uses. Helicopter transport has been used with great effectiveness to transport patients with acute myocardial infarction for treatment with new thrombolytic agents and/or angioplasty, for example, by Duke University and the University of Michigan, among others.[4] It has become the standard of care for the transport of critically ill or injured patients requiring special services not available locally, making regional trauma centers a reality. Ground transport is simply too slow to permit either the safe transport of ventilator- or pressor-dependent patients or, perhaps more importantly, the efficient use of skilled transport teams providing this kind of care.

Moreover, the more one examines aeromedical programs and determines the role that each plays in relation to its hospital's need and its community and regional needs, one is struck by the versatility that is exhibited. This is why it is difficult to generalize about programs in a prescriptive way, what they should do, how they should be staffed, how many there should be. Each may play a somewhat different role, depending on the location and population it serves, the characteristics and resources of the hospital at which it is based, and the availability and expertise of the emergency medical services system in its locale.

PROGRAM COSTS

The current cost of operating a hospital-based aeromedical program is estimated at between $1.0 and $1.3 million per aircraft.[5] Current cost estimates are understated, however, and total program costs can be expected to increase steadily in the next few years. There are a number of reasons for this. There has been a glut in the helicopter market as a result of a collapse in oil exploration, which has used helicopters intensively, and some vendors have been willing to lease aircraft at or below cost. This has encouraged hospitals to start new programs. The cost of obtaining aircraft can be expected to increase as the hospital helicopter market expands and this glut is eliminated. Whether for reasons of safety, convenience, or prestige, many programs are selecting larger aircraft than were in common use few years ago, and this will increase program costs as well.

Costs for personnel have been relatively low because of an excess of pilots, and because benefit packages for pilots are relatively poor compared to other hospital workers. Flight programs are viewed by critical care nurses and paramedics as a relatively glamorous new field to enter, and recruitment has not been difficult. As programs mature, and competition increases, personnel costs can be expected to rise. Finally, until now, availability and cost of insurance has not been a problem. Insurance costs have just now begun to respond to the increasing number of accidents by adjusting their rates upward.

Actual charges to patients also vary widely. In Michigan, for example, aeromedical programs are reimbursed for mileage charges by most payors at the same rate as a ground ambulance. Costs of medical care delivered may or may not be covered, depending on the insurer. In other states, a separate schedule of fees for air transport has been developed by the state agency regulating ambulances. It is also not uncommon for a hospital to help offset program costs by charging a delivery fee to hospitals other than the base hospital that receives patients. But these revenues are not expected to offset operating expenses. The majority of costs, if they are recovered at all, are derived from the inpatient revenues generated by the patient's hospital stay. In most in-

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stances, hospitals appear to be willing to subsidize an medical programs to keep beds occupied, to maintain their referral bases, or to develop new markets in an era of intense competition for patients. A helicopter is a strong and immediately identifiable symbol perceived as having tremendous public relations value.

An alternative means of financing helicopter operations is consortium approach, in which hospitals with different referral bases or specialty services, each of which by itself could not support an aeromedical service, jointly underwrite program costs. All hospitals then may share in the patient delivery and public relations value of the program if it is successful and if all hospitals receive patients.

Aeromedical programs are costly, but they do not seem to be thought of as expensive by the hospitals operating them when compared to overall hospital budgets and to the costs of such other new technologies as lithotripsy and magnetic resonance imaging that hospitals are being pressed to acquire. Just how much helicopter programs are actually adding to overall health care costs is impossible to determine because it is impossible to estimate the savings that might result from their activity as a result of more efficient care, reduced morbidity, and better regionalization of expensive services. Proponents of the competition ethic currently in vogue at many levels of government believe that the marketplace will determine the optimal number of programs. Others, believing this has not worked for any other aspects of the health care system, think the money spent on excess helicopters could be better spent elsewhere, and that more careful scrutiny and regulation are in order.

PROGRAM SAFETY

Recent articles in *The Wall Street Journal* and *American Medical News* have called attention to what appears to be an increasingly poor safety record among emergency air medical programs across the country. The safety record in 1985 was a dismal one, with 14 accidents and 13 fatalities, mostly pilots and medical personnel, reported to the National Transportation Safety Board. These 14 accidents represent 25% of all accidents reported during the last ten years from hospital-based air medical programs. The 13 deaths in 1985 are 28% of the 46 deaths that have occurred in the past ten years. The 1985 accident rate was approximately 20 per 100,000 flying hours, twice the general aviation rate of 9.5 and 100 times the scheduled airline rate of 0.26.

The record in 1986 was not much better, with 21 accidents and 11 deaths reported through October involving EMS helicopters, which include both hospital based and public safety programs.[6]

At the recent meeting of the American Society of Hospital Based Emergency Air Medical Services (ASHBEAMS), a voluntary association of hospitals that operate aeromedical programs, to which virtually all programs belong, safety was a leading topic of discussion by administrators, pilots, nurses, and physicians. A report to the ASHBEAMS Safety Committee by Gabe Martyak, DO, assistant director of the Life Flight program at Geisinger Medical Center in Danville, Pennsylvania, examined structural causes of accidents, such as aircraft type, weather, pilot experience, and time of day. The findings confirmed what most program operations should already know. Most fatal accidents occurred at night, in marginal weather, in unfamiliar terrain, and were attributable to pilot error. Thirty percent resulted from mechanical failures.

Possibly more revealing was an abstract in the scientific session of the same meeting that examined the possible effect on safety of operational policies, such as ceiling and visibility minimums, adherence to written standards and protocols, and working hours.[7] One third of the 84 programs surveyed had had an accident, 13% had had more than one. Most surprising, only 49% of the 84 programs reported using explicit weather minimums, although 80% reported using FAA standards. Thirty-five percent of programs surveyed reported that a go/no go decision regarding weather was not made before ascertaining medical information that might bias judgment. While it is not possible in such a survey to determine the contribution of unmeasurable factors, such as attitudes toward safety and risk, adherence to operational standards and enforcement of policies designed to promote safe operations, programs obviously need to pay attention to such matters.

There are some simple things that every program could do and should consider to improve safety. First, ceiling and visibility minimums should be established for each program that are terrain and weather specific, and should be strictly adhered to regardless of the nature of the request. Second, twin-engine aircraft, which provide a margin of safety over single engine aircraft, should be used for patient care flights. Although you cannot fly for any significant distance when one of the two engines is out, landing with one engine is safer than autorotation. Attempts to gain a competitive edge by flying when your competition is not is foolhardy and dangerous. Third, there should be at least three pilots per aircraft in any 24-hour program. Duty time must be monitored carefully and relief provided so that pilots do not exceed allowable hours of flight time. Busy single-helicopter programs will need four pilots.

Fourth, scene responses at night should be restricted as much as possible if the landing zone is not well illuminated. Search and rescue missions should be left to public safety agencies who practice these full time. Fifth, instrument flight rating (IFR) of pilots should be encouraged. IFR training is helpful during night flying and when unexpectedly poor weather is encountered, because these conditions are similar to IFR conditions.

ASHBEAMS has proposed a new safety standard required of members that would mandate explicit minimums for ceiling and visibility, require a designated safety officer in each program, and assure sufficient pilots and assignment of shift hours to avoid fatigue, among other things. This is a step in the right direction.

COMMENT

For better or worse, aeromedical programs have become an integral part of the medical care system across the country. Are they effective? Clearly they are from the perspective of the hospitals that operate them. Are they from the public

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perspective? Who can say? There are no criteria, and little if any data required of most programs, from which such a judgment can be made. Are they costly? Yes, $150 million this year will be spent on aeromedical operations. Are they safe? Yes, as long as standards of safety are strictly adhered to and enforced.

What then should be our attitude toward aeromedical programs? We can ask of them what we ask of other providers of medical care, that they behave with integrity, that they put the safety of the crew (which guarantees the safety of the patient) first, that they keep accurate medical records, that they open the results of their activity to public scrutiny, that they are truthful in their public pronouncements, and that they demand the highest standards of professionalism from their pilots, nurses, paramedics, and physicians. To do less is to betray the public that they, and the hospitals that support them, purport to serve.

Richard E Burney, MD
Department of Surgery
University of Michigan
Ann Arbor

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4. Kaplan ER, Walsh D, Burney RE. Emergency aeromedical transport of patients with acute myocardial infarction. *Ann Emerg Med* 1987;16:55-57.

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7. Zwart J, Helmers S, Wren J, et al. Aeromedical transport safety: A review of retrospective data 1975 to 1985 and a survey of current policies. Presented at the American Society of Hospital Based Emergency Air Medical Systems, Arlington, Virginia, October 1986.

Addendum: Since this article was written, seven more people, including one patient, have been killed in two helicopter accidents.

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8602396

Seattle
Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

May 14, 1987

Re: Children's Hospital Helistop Proposal

Robert Klug, President
Laurelhurst Community Club
4326 Northeast 42nd Street
Seattle, Washington 98105

Dear Mr. Klug:

Thank you for the letter commenting on Dr. Nicola's revised memo about Medical Need. Because we agree that the issues you raise are important and we have many of the same concerns, we will be following up with Dr. Nicola to determine what additional information is necessary and how it can be obtained. We continue to feel that having answers to the questions in my December 24, 1986 memo is important.

John Doan of my staff will contact you or one of your club members when we receive additional information. If you have any questions, John can be reached at 684-8875.

Sincerely,

Holly Miller

HOLLY MILLER
Director

HM:jdr

mry2\klg

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DEPT. OF CONST. & LAND USE

Holly Miller, Director
Department of Construction and Land Use
Municipal Building
Seattle, Washington 98104

Dear Ms. Miller:

We are disappointed with Dr. Nicola's letter of March 25, 1987, which is an updated response to the request of the Department of Construction and Land Use for an opinion about the medical need for a helipad at Childrens Hospital. The chief problems we note are as follows.

1. Dr. Nicola's review of the medical records of children who had been transported by helicopter to Childrens was a primary basis for his opinion that some cases, though few in number, need to land at the door of the hospital. As he says (page 6), 'There is very little (information)in the (medical research) literature corcerning the interhospital transfer of non-trauma patients." The focus of Children's proposed helicopter service is interhospital transport of non-trauma patients. Since Dr. Nicola's review of cases is a primary source of information for his opinion, it is a serious lapse in his letter that he did not give examples of when the transfer at the field would have been detrimental. Specifically, what were the medical considerations that led to his particular judgements? There are numerous physicians, nurses, medical technicians and other concerned citizens, who would be more likely to be convinced of the correctness of his judgement if he would share the evidence with us. Only pertinent medical facts would be needed and this information should be provided so that reviewers can judge the appropriateness of his conclusions.

2. Dr. Nicola does not address a major issue that has been raised repeatedly, namely, that some of the cases would have received care more promptly at hospitals other than Childrens, hospitals which are fully equipped to care for these patients, according to expert medical opinion. Some physicians, having reviewed the flight log in the Draft Environmental Impact Statement, estimate that about 40% of cases which landed at Childrens could have been cared for at a hospital which was closer to the referral site. If time is such a vital factor that patients cannot be transferred from the UW playing fields merely 5 minutes away, then why aren't they taken to the nearest hospital that can care for them? How can we believe that the use of the service to date has been appropriate, as Dr. Nicola alleges, when so many patients have been flown over an appropriate hospital to a more distant one? Dr. Nicola has not addressed this problem but it is a very important one.

3. Dr. Nicola dismisses the need for scientific data because he's just giving his opinion, he says. Because of the serious nature of this helipad proposal, which involves frequent flights of a dangerous machine over and into a residential neighborhood, the only physician (a public health officer) who is called upon to voice his opinion owes more than that to the people he is called upon to serve. Control of bias is not some arcane bit of scientific mumbo-jumbo. Use of the "scientific" approach requires an application of common sense. Control of bias in this situation means doing such things as

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talking with physicians who have other views than those held by the helipad proponents, weighing the evidence pro and con in an open manner, and reviewing the cases "blind" without knowing where they landed, deciding which landing site would have been appropriate, and then determining how many in fact landed at the appropriate site. An informed opinion, such as Dr. Nicola claims to provide, would seek in these ways to offset the bias inherent in talking mainly with proponents. His opinion, the only possibility we have for objective input from a public official on the medical aspects of this proposal and which for that reason carry an inordinate amount of weight, should be based on a vigorous effort to seek to counter bias. Apparently, Dr. Nicola would agree that his opinion might well be biased in favor of the proponent and therefore must be viewed with much skepticism.

4. In a memorandum from you to Dr. Nicola dated December 24, 1986, a number of questions were asked and points were raised which Dr. Nicola has failed to address. We agree with you that these are important questions and ask that they be addressed. Your questions and our comments are listed here:

Page 1, item 2. "The report should expand upon this information to detail the specifics of the people who were contacted (this could be done by appending a reference section.)" A list of names and identifying institutions is called for here. If there is some reason Dr. Nicola feels he cannot reveal with whom he has conferred, that should be clearly stated and the reasons given. An opinion that is as important as his should not be made without as full disclosure of facts as possible.

Page 3, item 5. "Particularly for those patients within a 70 mile radius identified in the first report, how does one strike a balance between transport time and transport distance?" This is an important item, which Dr. Nicola does not address.

Page 4, item 5. "Has the introduction of helicopter transport of non-traumatized patients, whether pediatric or not, established a new standard of care?" Dr. Nicola did not answer this, but it is an important question in order to consider how much pressure there will be on referring physicians to use helicopter services instead of ground transport to avoid potential malpractice litigation.

Page 4, item 7. "What areas of uncertainty exist in the overall opinion/report?" Not answered by Dr. Nicola, but obviously an important item.

Page 5, item 8. "Do you maintain your recommendation for a review panel? If so, what should their mission be? Who should be represented on the panel?" Not answered by Dr. Nicola but a critically important item that is not easily resolved. A review panel would be needed whether a permit is granted for a helipad at Childrens Hospital or at the UW playing field.

5. In a letter to Ms. Julia Gibb, Department of Construction and Land Use, October 15, 1986, Jay M. Kranz, M.D., Chairman,MAST Coordinating Committee, stated that he reviewed all MAST flights for the past ten years and on only one occasion was it necessary to land an infant directly at the Hospital's door rather than landing at Graves' Field. He queried the Seattle Fire Department and Shapard Ambulance personnel as to whether they knew of any bad outcomes occurring during the transport of pediatric patients from a MAST helicopter at Graves' Field to Childrens Hospital. He states, "Neither activity knew of any bad results at that time." How does Dr. Nicola interpret this long-range historical "data"? It seems very relevant to this debate and yet is totally ignored in Dr. Nicola's reports. (For your reference a copy of Dr. Kranz' letter is enclosed.)

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6. Underlying this entire debate is the fact that the question of medical need here has not been proven. As Dr. Thomas A. Bell, M.D.. M.P.H. (a pediatrician), stated in a letter to you on October 16, 1986 (enclosed), "...while it may seem intuitively obvious that faster transport will enhance survival, this is not necessarily the case and should be documented with good scientific studies. Judging by Dr. Nicola's recent excellent review of the literature on this issue, there are none. A possibly analogous example of the misuse of technology is the situation with monitoring of near-term fetuses, where the use of electronic monitors increases the rate of Cesarean sections but does not necessarily enhance rates of survival of infants. Ground transportation has advantages over air transportation..."

Dr. Bell goes on the say, "Regarding the community, are they being protected from the strictly entrepreneurial interests of Airlift Northwest and Childrens Hospital ? What mechanism is there to prevent the abusive use of helicopter transport for all sorts of medically unnecessary purposes?...Will the city allow the proverbial fox to guard the henhouse? What disinterested party is going to monitor the use of a heliport if it is constructed?..."
We think that Dr. Bell raises some important issues that must be addressed.

Citizens concerned about this issue have been raising the above questions and issues for about two years now and have yet to receive answers. We agree with you that these are important questions and support you in your efforts to obtain answers to them.

Sincerely,

Robert N Klug

Robert Klug
President of
Laurelhurst Comm. Club

Enc.: Kranz, Bell

CC: Seattle City Councilmembers
Mayor Royer
County Councilmember Cynthia Sullivan
Dr. Nicola
Montlake Community Club
University District Comm. Club
Northeast Regional Council

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A RESOLUTION

The following resolution was passed by the Laurelhurst Community Club at its regular meeting on April 13, 1987. This resolution reflects opinion based on the most recent information available regarding helicopter services and Childrens Hospital's proposed helipad.

It is resolved by the Laurelhurst Community Club that the Seattle Department of Construction and Land Use be requested not to approve Childrens Hospital's request for a permit to construct and operate a helipad at the Hospital.

The following information provides support for the position taken in this resolution:

1. The current safety record of the Emergency Medical Services helicopter industry has been found to be the worst in modern aviation history.
2. The primary cause of EMS helicopter accidents is "pilot error".
3. Paul Pussell of Tamjoy Enterprises, a marine and aviation consulting firm, has determined that the Childrens Hospital site is unsafe for the following reasons:
   a. exceedingly tight turn southward over the parking garage;
   b. rising terrain on approach to landing;
   c. helipad is not visible until final moments of descent;
   d. landing site is restricted by existing and proposed buildings;
   e. site located too close to residences.
4. Additional concerns, raised in the Russell report, further question the safety of the Childrens Hospital helipad proposal. These are:
   a. there are no standards or guidelines that apply to this industry;
   b. its safety record is currently under FAA investigation;
   c. Childrens Hospital has no control over aircraft landing at its campus;
   d. there is no radio contact between the helicopter and Childrens Hospital;
   e. there is no weather observer located at Childrens Hospital.
5. According to Jay Kranz, M.D., Chairman, MAST Coordinating Committee, the medical benefits to the patients landing at the Childrens Hospital site do not outweigh the safety risks to the community.

This resolution is further supported by the City Code regarding conditional use permit for a helistop: "The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas".

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John Doan
FYI

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

RECEIVED
JUL 2 - 1987
DEPT. OF CONST. & LAND USE

CAMPUS PLANNING OFFICE -- FJ-05

June 26, 1987

Holly Miller
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Miller:

The University of Washington is in the process of completing a Draft Supplemental Environmental Impact Statement (DSEIS) for the proposed University Hospital Helistop project. The University expects to publish a Draft SEIS in August, 1987.

The Department of Construction and Land Use (DCLU) has indicated previously that the City of Seattle's Land Use Code permits the establishment of a helistop at a major institution like the University as a conditional use, if the City Council finds that a) the helistop is needed to save lives, b) the helistop is located so as to minimize impacts upon surrounding residential property, and c) use of the helistop will be restricted to occurrences involving life-threatening emergencies.

We are aware that in order to evaluate these criteria, DCLU recently requested that the Director of Seattle-King County Public Health, Bud Nicola, review the Childrens Hospital and Medical Center (CHMC) proposal to establish a helistop. As the University Hospital's proposal resembles that of CHMC, we anticipate that a similar review process will be required.

It would be greatly appreciated if your office would respond with a statement as to what the review process will involve and what additional information will be necessary, as well as with instructions on initiating the review.

Thank you for your help in expediting this matter.

Sincerely,

Rolfe P. Kellor

Rolfe P. Kellor
Campus Planning Officer

cc: Helen Shawcroft
Patrick Doherty

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8405870

Patrick
John D.

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

CAMPUS PLANNING OFFICE -- FJ-05

January 28, 1987

RECEIVED
FEB 2 1987
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

To All Interested Agencies and Individuals:

In July, 1986, the University of Washington issued a Scoping Notice to inform the public of its plan to prepare an Environmental Impact Statement (EIS) on the use of a helistop at University Hospital. Comments on the scope of the EIS were requested, and several were received. Among the concerns raised were those relating to an alternative helistop location in the University's East Campus playfield area for helicopters transporting patients destined for Childrens Hospital Medical Center (CHMC) as well as University Hospital.

As a result of these comments, the University considered the potential for a shared helistop and discussed the issue with representatives of CHMC, the community, and the City. Based on these discussions, the University determined that development of a permanent East Campus helistop was feasible for use by both Hospitals when immediate access to helistops at each Hospital was not essential for patient well-being.

The University is now proceeding with the preparation of the EIS on its proposal for two University helistops - one on the roof of the new east wing of University Hospital (Attachment A) and one in the East Campus at the intersection of Clark and Walla Walla Roads (Attachment B). (The Final EIS for the proposed helistop at CHMC is being prepared by CHMC as a separate document.) Shapiro and Assosiates has been hired to prepare the University's EIS, and a document is expected to be available for review by late February. The EIS will address issues of noise and vibration, safety and risk of upset, recreation, wildlife, light and glare, air quality, and land use. In addition, medical need will be assessed as part of the City of Seattle's review for a conditional use permit.

Additional information can be obtained from Sally Marks, Environmental Planner, Campus Planning Office, FJ-05, University of Washington, Seattle, WA 98195, 543-9071.

H.S. Thomson, Director
Campus Planning Office

Attachments

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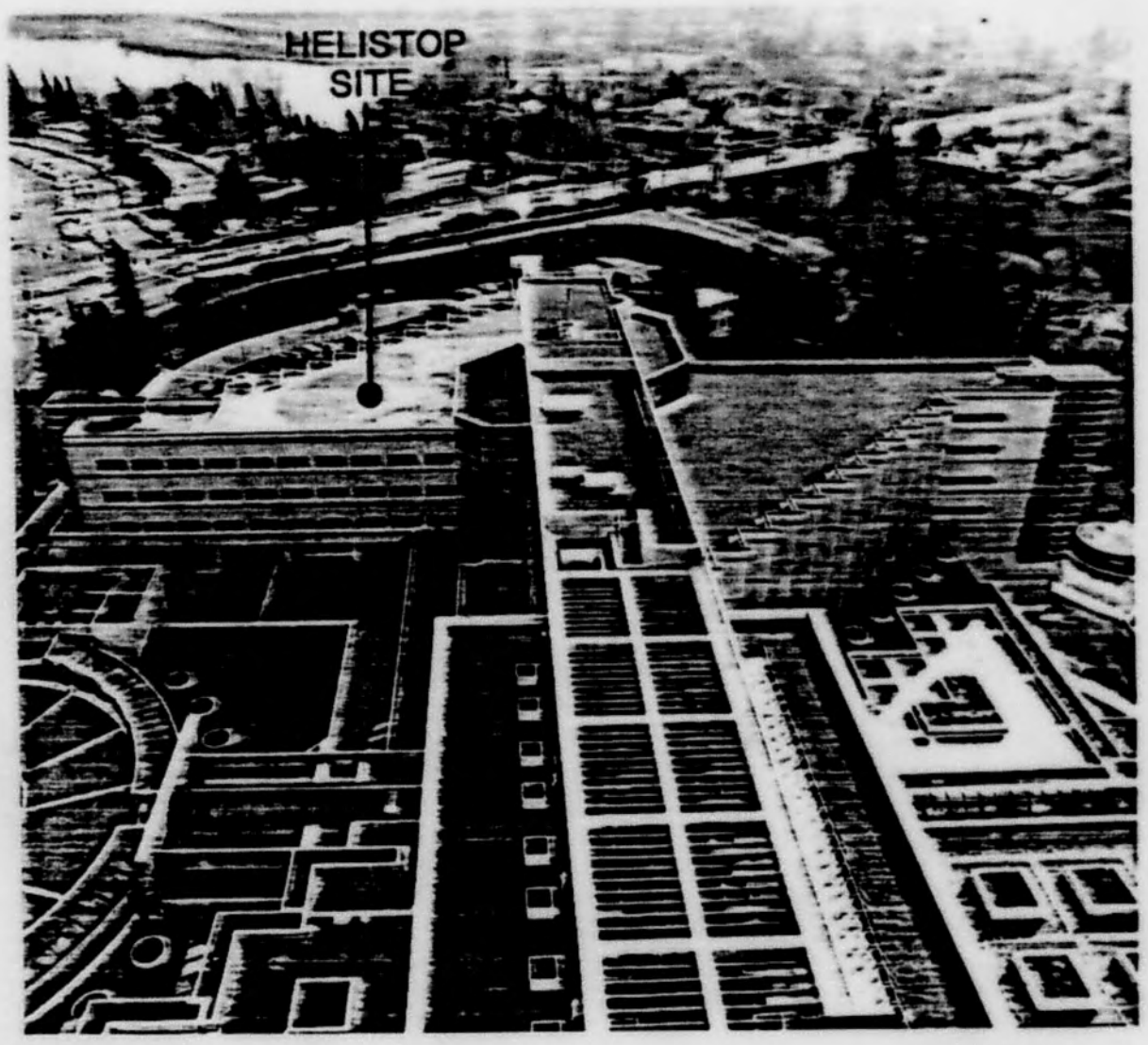

University Hospital Helistop

Attachment A

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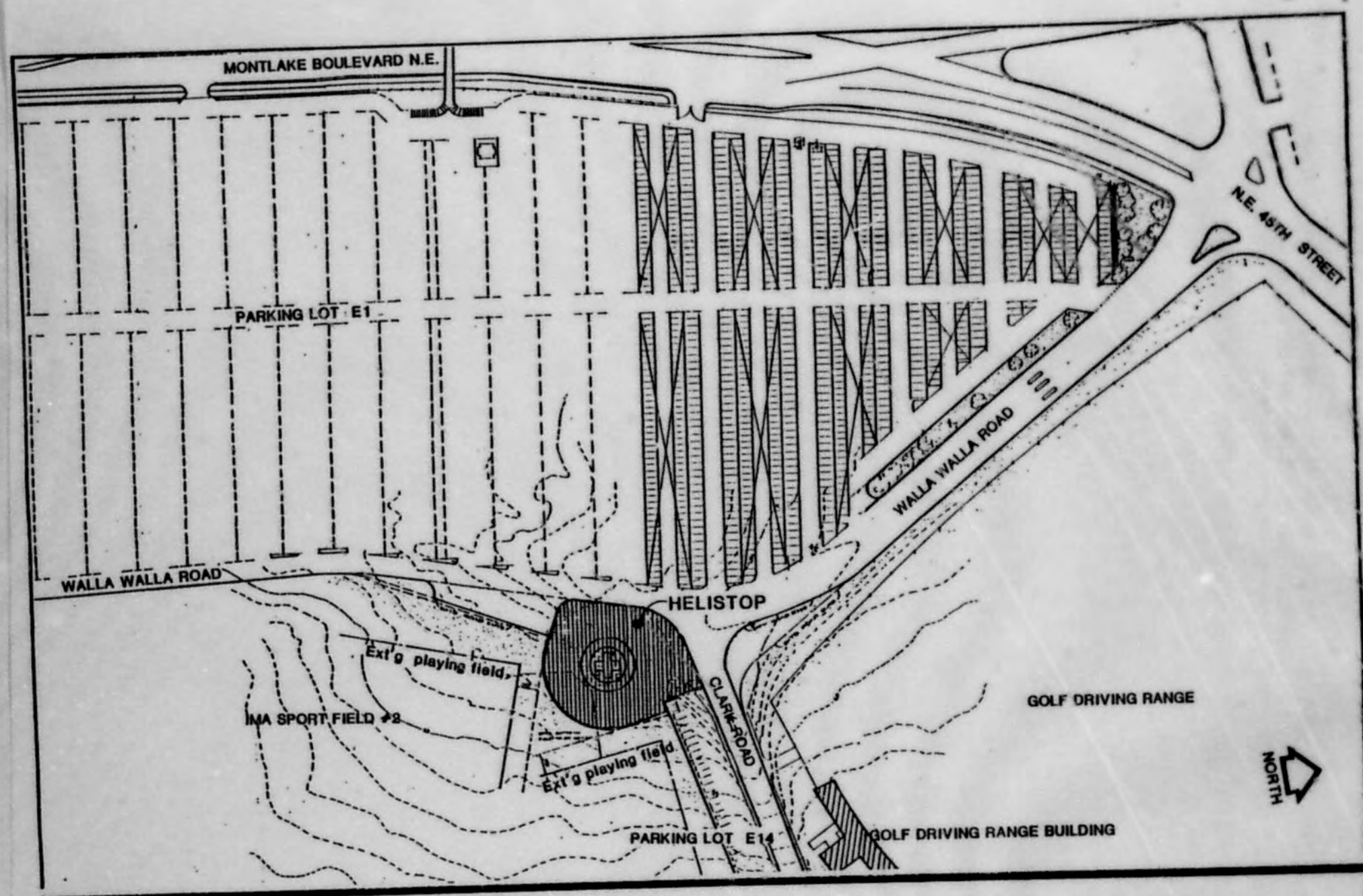

EAST CAMPUS HELISTOP SITE

Attachment B

1986

15

RECEIVED
JAN 31 1986
DEPT. OF CONST. & LAND USE

January 31, 1986

Beatrice Farrar Ryan, Interim Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

RE: Scope of the EIS of Proposed Helistop at 4800 Sand Point Way

Dear Ms. Ryan:

We understand from discussion with Department staff that the EIS for the proposed helistop will cover a minimum of four areas: noise, vibration, safety and alternatives. Further, we understand that the term alternatives is not to be limited to alternative landing sites but that service alternatives will be considered as well. We appreciate the opportunity to comment on the proposed scope.

We ask that two additional areas be addressed: the cumulative impact which can be expected if a permit for the proposed helistop is granted and the effect on air quality.

Establishing a helistop at COH would set a precedent of City approval for onsite landings for interhospital transfers. The precedent can be expected to apply to all hospitals. As you know, the University Hospital is actively preparing a request for approval of a helistop. To compete, other hospitals will have to provide this service also. The areawide implications of an initial approval of onsite helicopter landings are significant.

Helicopters require several times the quantity of air polluting fuel as the alternative ground transportation vehicles. The Council should be aware of the effects of jet exhaust gases on the neighborhoods in making its decision on the helistop proposal.

The validity of the projections of environmental impacts will depend upon the accuracy of the proponent's projections for use. We look to the environmental impact statement for a definition and projection of the proposed use. The project's objective and criteria for use should include a list of limitations which would be imposed and a plan for the monitoring and enforcement of those limitations.

Reasonable limitations might include that the helistop would not be used: for transfer of patients who could be safely transferred by ground; or for transfer flights originating within seventy or outside one hundred and fifty miles of the hospital, or for flights where the origin is closer to another hospital qualified to treat the patient; or for trauma or burn patients which will go to Harborview, or for necnatal cases unless University Hospital beds are not available; or for any purpose other than transport of patients to the hospital; or for landing heavy or inadequately maintained equipment.

The limitations on use must be clarified. The effects on the community of one landing a year are quite different from those of one thousand landings. With the use defined, the number of expected occurrences can be derived from pertinent data on the population and area which would be served. We expect to see that data and the proponent's criteria for use discussed as it relates to the area's land use and environmental policies and to City goals.

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In addition, the validity of the projections of environmental impact is also dependent on the hospital's future growth and program development. For the Council to adequately assess the effect of the proposed helistop, the hospital's five, ten and twenty year plans for development should be included. The environmental consequences would be quite different if projected from a COH plan to return to its original objective of providing for chronically ill children than they would be if the plan is to evolve as a trauma center.

We expect your experienced staff to fully anticipate the needed scope and content requirements. We do have one special request. We would like the analysis to include the potential impacts on the children and staff in the hospital. The quasi-public nature of the hospital's work make this consideration both reasonable and responsible.

We know that you are committed to preparing a professional analysis and unbiased document. If it is appropriate and allowable, we would like a representative from our community present at the scoping meeting. Otherwise, we would like to review minutes of the meeting when they are available.

Sincerely,

Robert N Klug

Robert Klug, President
Laurelhurst Community Club

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Bob Klug
4326 NE 42

July a ✓

LAURELON TERRACE ASSOCIATION
OF APARTMENT OWNERS, INC.

RECEIVED
MAY 20 1986
DEPT. OF CONST. & LAND USE

Ms. Holly Miller, Director
Department of Construction
and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

The following resolution concerning the siting of heliports for emergency medical care is endorsed by the Board of Directors of Laurelon Terrace Association of Apartment Owners, Inc.:

The Board of Trustees of the Laurelhurst Community Club supports the development of a regional plan for the siting of heliports for emergency medical care. This plan should be based on an annalysis of the medical need, the potential adverse impacts on communities, and the costs of helicopter services.

The designation of sites should be limited to the minimum necessary to meet the needs of the region. Where there is choice, the location of the heliports should be limited to sites where overflights and landings will have least impact on residential communities.

Criteria for use must be established in the regional plan so that helicopter service is limited to emergencies. These criteria should define conditions, such as difficulty of access, time constraints, and life-threatening situations, which make helicopter transport the only reasonable choice.

The Hospital's projections for helicopter use and its contract for services with Airlift Northwest indicate the proposal is for a commercial transportation service which is costly, may not be limited to medical emergencies, and includes financial incentives for overuse.

Qualicy emergency care has been satisfactorally provided by helicopter transport to the University's intramural field and Harborview's trauma center. At this time, the Board of Trustees of the Laurelhurst Community Club opposes the approval of a helistop at Children's Orthopedic Hospital until a medical need for the helistop on campus is substantiated.

Patricia Scanlon, President

Michael W. Wilson, Secretary

Otto K. Rombouts, Vice-Pres.

Ed Lewis, Ombudsman

Charles Trzcinski, Treasurer

Maryann E. Spangler, Special Projects

Patricia Ann Wood, Special Projects

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JULIA GIBBS
DCLU
01-04-03

PUGET SOUND HEALTH SYSTEMS AGENCY
Serving The Ten-County Northwest Washington Area
601 Valley Street / Seattle, WA 98109 / (206) 464-6143

LARRY A. THOMPSON
Executive Director

February 21, 1986

Bud Nicola, M.D., M.H.S.A.
Director of Public Health
Seattle-King County Health Department
Seventh Floor
400 Yesler Building
Seattle, Washington 98104

Dear Bud:

Enclosed, as I promised, is a proposal for an intensive planning activity leading to policies which will shape the appropriate development of air ambulance services. Based on our prior discussion, I understood that a detailed proposal turned back around to you quickly was in order given the increasing gravity of the EMS situation and necessary approval lead times.

I do not have addresses for attendees at the February 5 meeting. Could you forward this proposal to them? Also, it was my understanding that you would be responsible for preparing any necessary internal reviews and ordinances. Needless to say, we are quite willing to discuss modifications or other related issues.

As you will note, this proposal has been developed at a very reasonable cost. PSHSA shares the City and County's interest in effectuating an early improvement in the development of this service.

Sincerely,

Larry A. Thompson

Larry A. Thompson
Executive Director

LAT:rs:R
Enclosure

RECEIVED
FEB 24 1986
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT OF PUBLIC HEALTH

Copies sent to: Katie Chaney
Julia Gibbs
Cynthia Sullivan
Jim Kruger
Steve Call

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PROPOSAL FOR THE DEVELOPMENT OF AIR AMBULANCE SERVICES IN KING COUNTY AND THE CITY OF SEATTLE

Puget Sound Health Systems Agency
601 Valley Street
Seattle, Washington 98109
Telephone: (206) 464-6143

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PROPOSAL FOR THE DEVELOPMENT OF AIR AMBULANCE SERVICES IN KING COUNTY AND THE CITY OF SEATTLE

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PROJECT GOALS

To develop a plan and implement strategies which will best assure the rational integration and coordination of air ambulance services with the EMS system of King County and the City of Seattle. The plan is to be developed using the advice, guidance, and involvement of affected parties, and the implementation strategies are to consider region-wide and state-level alternatives and impacts.

PROJECT OBJECTIVES

1. Assess the current status of air ambulance services in King County and describe the development trend of this service in other locations across the nation.

2. Identify and assess current and projected problems and service needs with respect to air ambulance services.

3. Develop goals for development of this service and criteria for evaluation.

4. Identify and assess a series of alternatives to meet identified problems and needs.

5. Evaluate and select from among various policy options available for implementing the plan.

PHASES OF THE PROJECT

Phase I: Preliminary Organization

The first phase of the project will allow the Puget Sound Health Systems Agency (PSHSA) to meet with the County and City to finalize the project work plan including agreed-upon methods for involving affected parties in the execution of this project. The appropriate structure for a project steering committee will be agreed upon. In addition, details of governmental agencies' involvement will be finalized.

Tasks

1-1 Review scope of the project and establish precise definitions for which the plan is being prepared with the sponsors.

1-2 Review and agree upon tasks outlined in the proposal.

1-3 Establish role and membership of steering committee.

1-4 Establish review and comment procedures.

1-5 Clarify relationship between the affected parties, the steering committee, PSHSA as contractor, and the county and city as sponsors.

1-6 Compile an affected parties list and identify liaison persons.

1-7 Recruit and orient steering committee members.

Phase II: Develop Goals and Criteria

The first objective of this phase is to establish a statement of goals for air ambulance services which identifies the general direction and intent of the service. Second, a set of criteria will be developed which operationally defines the intended results described in the goal statement and permits the measurement of effectiveness of the service.

Tasks

2-1 Draft goal statements for air ambulance services.

2-2 Draft a set of criteria to measure the effectiveness of air ambulance services.

2-3 Conduct a review with affected parties.

2-4 Conduct steering committee review, modification and adoptions of the criteria and goals.

Phase III: Conduct Inventory and Analysis

The third phase of the project will establish an inventory of current service providers and baseline information with respect to the air ambulance services.

Tasks

3-1 Identify current service providers including modalities offered and geographic coverage.

3-2 Review transport records to determine patterns of use, numbers and types of transports, costs of service.

3-3 Review transport records from selected locations outside of King County to establish use patterns from outlying areas.

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3-4 Analyze the information gathered through the inventory and establish baseline information on air ambulance services.

Phase IV: Identify Problems and Conduct a Needs Assessment

The first objective of this phase is to identify problems with the current system especially the existing relationships of air ambulance services to the County/City EMS system and the total health care system. Second, a needs assessment to determine the gaps in service will be conducted. To accomplish this objective a review of literature and existing systems throughout the country will be completed. Third, a method to assess the needs of the city and county's population will be developed. Finally, using a "key informant" survey, local key problems and issues will be identified.

Tasks

4-1 Review industry and clinical literature.

4-2 Assess and/or shape local clinical consensus on indications for air transport.

4-3 Develop need projection model and make preliminary estimate of need for services.

4-4 Conduct a key informant survey to identify local problems.

4-5 Using literature review, key informant survey, and needs assessment, develop a listing of key problems and policy issues involving air ambulance services.

4-6 Steering committee review of problems and needs assessment.

Phase V: Development and Analysis of Alternatives

The objective of this phase is to identify a series of policy alternatives which could address the problems and goals identified through earlier casks in this planning process. Examples of such alternatives might include various types of franchising, licensure and certification laws, land use controls and influence over third-party reimbursement.

Alternatives will be analyzed in terms of their probable short and long range impact and in view of their political and technical feasibility. Competing and complementary alternatives will then be screened in view of their desirability as measured by the project's adopted criteria.

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Tasks

5-1 Develop alternatives through discussion with various regulatory and non-regulatory authorities and with affected parties.

5-2 Measure each alternative against the established criteria and analyze the effect of each alternative.

5-3 Steering committee selects desired alternatives.

Phase VI: Develop and Adopt Plan for Air Ambulance Services

The objective of this phase is to bring together in a comprehensive plan all of the information gathered on the current situation and projected needs; the identified problems and potential strategies with policy implications; and the desired alternatives with rationale. Time has been allocated during this phase for review by both the affected parties and the general public.

Tasks

6-1 Combine information and decisions from prior steps in a draft plan.

6-2 Steering committee review of draft plan.

6-3 Release draft plan for public review.

6-4 Conduct public hearing and consider comments received.

6-5 Steering committee approves redrafted plan.

6-6 City and County comment and propose revisions.

6-7 Final adoption by steering committee.

6-8 Plan transmitted to city and county for policy use.

Phase VII: Develop Implementation Action Plan

The objective of this phase is to make specific suggestions about who should be responsible for implementing the plan and what action steps will be needed in order to implement the plan.

Tasks

7-1 Identify organizations which are responsible for implementing each of the principal recommendations in the plan.

7-2 Discuss recommendations with each organization, discuss implementation and suggest assignment of roles for implementing.

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7-3 For each recommendation develop a time line and action steps.

7-4 Present the implementation action plan to the city and county for follow-up and evaluation.

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BUDGET

Professional Fees	Billable Hours	Budget	
Phase I Activities	37	$ 1,387.50	
Phase II Activities	38	1,425.00	
Phase III Activities	140	5,250.00	
Phase IV Activities	306	11,475.00	
Phase V Activities	178	6,675.00	
Phase VI Activities	76	2,850.00	
Phase VII Activities	130	4,875.00	
	Subtotal		$33,937.50

Material Costs*		
Printing/Copying, Postage	$ 860.00	
Public Notices	150.00	
Travel Expenses	250.00	
Computer Time	380.00	
Subtotal		$ 1,640.00
Total		$35,577.50

* The costs shown in this section are extraordinary costs associated with steering committee activity, affected party review, analysis and development of projection method and public review. All other associated project costs are included in the hourly billing rate.

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ASSUMPTIONS MADE IN THE BUDGET

1. PSHSA will coordinate meetings and agendas for six (6) meetings of the Steering Committee. Coordination will include developing and sending the agenda; setting up meeting sites; recording and distributing meeting summaries. It is assumed that there will be between seven (7) and twelve (12) members on the Steering Committee. If PSHSA is asked to conduct additional meetings of the Steering Committee the estimated cost is $560 per meeting.

2. Budget estimates are based on involvement of affected parties during key points in the project. It is assumed that there will be approximately twenty (20) liaison individuals on the affected party list. Affected party reviews will be held three times during the project. Cost of each additional affected party review is approximately $275.

3. Budget estimates include interviews with 20 key informants to assist with problem identification. Additional key informants could be added to the survey at a cost of $87.50 per individual. If desirable a phone survey of community representatives could be included during the problem identification phase; details and costs would have to be discussed.

4. PSHSA will rely on a locally selected Technical Advisory Group (TAG) to develop the local clinical consensus on indicators for air ambulance services. The TAG will meet twice and issue a report to be used by the Steering Committee. Extensive involvement of the TAG in modifications to the report (i.e., additional TAG meetings) will require additional resources. Cost is estimated at $167.50.

5. The need projection model developed in the course of this project is not intended to be used as an air ambulance need method. Therefore the model is not intended to be used, as developed, in the Certificate of Need or regulatory review process. The development of such a need method would involve extensive involvement of the health planning community and is outside the scope of this project. The model would be an essential starting point toward the development of a need method.

6. Budget estimates are based on one (1) public review period of thirty (30) days and one (1) public hearing on the Draft Plan for Air Ambulance Services.

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AIR AMBULANCE SERVICES PROPOSAL PRELIMINARY TIME LINE*

BENCHMARKS IN:	TASKS:	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Phase I: Preliminary Organization															
Project Organization	1-1 thru 1-6	2wks													
Steering Committee Orientation	1-7	2wks													
Phase II: Develop Goals and Criteria															
Drafts Complete	2-1 and 2-2	1wk													
Affected Party Review	2-3		2wks												
Steering Committee Review	2-4		3wks												
Phase III: Conduct Invento.y and Analysis															
Inventory	3-1 thru 3-3			2wks											
Analysis	3-4			1wk											
Phase IV: Identify Problems and Conduct Needs Assessment															
Literature Review	4-1			1wk											
Clinical Indicators	4-2			2wks											
Modeling	4-3				4wks										
Key Informant Survey	4-4				2wks										
Draft Prep and Affected Party Review and Steering Committee Review	4-5 and 4-6						4wks								
Phase V: Development and Analysis of Alternatives															
Draft of Alternatives	5-1 and 5-2							3wks							
Affected Party and Steering Committee Review	5-3									3wks					
Phase VI: Develop and Adopt Plan for Air Ambulance Services															
Draft Plan - Steering Committee Review	6-1 and 6-2										4wks				
Public Review	6-3											4wks			
Final Adoption	6-4 thru 6-8												4wks		
Phase VII: Develop Implementation Action Plan														4wks	
Community Implementation Discussions	7-1 and 7-2														4wks
Timeline/Action Plan Developed	7-3 and 7-4														

*Timeline has been established based on affected party reviews throughout the project and a 30-day public review during Phase III of the project.

3 ✓

391[illegible] 48th Place N.E.
Seattle, Washington 98105
January 17, 1986

Mr. Jim Street
600 - 4th Avenue
11th Floor, Municipal Building
Seattle, Washington 98104

Dear Mr. Street:

As a Laurelhurst property owner, I wish to express my views on the land-use issue to be considered soon by the City Council concerning the construction of a helipad by Children's Orthopedic Hospital and Medical Center.

I urge the council to approve the hospital's request for a conditional land use permit. The concerns which I have heard and read on the part of some Laurelhurst residents seem to focus primarily on noise and safety. It seems to me that a few minutes of helicopter noise occasionally is a minor matter when the life of a child may depend upon the utmost speed. As for safety, I'm sure we face far more danger daily from automobiles, pollution, and criminals than from the possibility of a crash by Airlift Northwest's helicopter.

It is proper and natural for residents of any community to be actively concerned about any proposal which alters zoning and land use. However, this request does not seem out of line. When one buys property near a hospital, one should expect the noise of ambulances, increased traffic and parking problems, and possibly the transport of emergency cases by airplane. I believe that those opposing this request represent a highly vocal minority.

Sincerely,

Carolyn S.R.B. Scott

Carolyn S.R.B. Scott
(Mrs. David R.M. Scott)

David R.M. Scott

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CITY COUNCIL TRANSMITTAL

C. F. #

TO: Beatrice Ryan, Director
DCLU

Date Sent: 1/23/86

Reply Requested By: N/A

FROM: Jim Stuet

Subject: attached letter re: helipad CUP

RECEIVED
JAN 23 1986
DEPT. OF CONSTR. & LAND USE

ACTION — required

	Review and Return File With Your Answer to Sender
	Review and Answer Petitioner, Return File and Copy of Answer to Sender
	Review and Make Recommendations, Return File and Recommendations to Sender ( ) In Duplicate
	Prepare Legislation and Return File to Sender

Additional Information: please add to file

Signature

LDI-410-5002 CS 20.19

18522 NE 186th
Woodinville, Washington 98072
July 6, 1986

RECEIVED
JUL 9 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

As a mother of children that would use Children's Hospital and as a guild member of a guild in Woodinville, I feel that the use of a helicopter by the Hospital is of upmost importance. To be able to transport a critically ill child to the Hospital as quickly and a safely as possible is a vital requirement of a high technological Medical Center. I would hope that such as service would be available to all children that would need it.

I understand the concerns and worries of those who oppose such a service. However, I feel that the Hospital has recognized these concerns and has addressed them with options that would provide workable alternatives, that would alleviate some of the noise and safety questions. The benefit of having the helicopter land at the Hospital far outweights the dangers in my opinion.

Thank you very much for letting me state my opinions and would you please convey them to the rest of the Council.

Sincerely,

Carole McConnell

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Julia

Seattle
Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

May 16, 1986

Anita M. Francis
5003 45th Avenue Northeast
Seattle, Washington 98105

Dear Ms. Francis:

This letter responds to your recent request that Children's Orthopedic Hospital be required to prepare a Master Plan because of the development known as Kids Bowling for Kids.

This development was authorized in February 1982 as part of a Planned Unit Development (PUD) and site plan for the 20-acre site on Sand Point Way Northeast formerly owned by the U. S. Coast Guard. Planning and EIS review took place from 1978 to 1982.

The PUD included Ronald McDonald House, and what was then designated as "Children's Orthopedic Hospital Parent Housing." The latter is currently referred to as Kids Bowling for Kids development.

The following is an excerpt from the 1981 DCLU recommendation on the PUD:

> The Ronald McDonald House and the two COH-Parent Housing buildings must be considered to be hospital uses since these facilities are only available to relatives of the patients of the hospital. Hospital uses are permitted in the zone and may be permitted as a part of the PUD.

The development in question, then, was considered to be a "hospital use" and was approved for development in February 1982.

Although construction of this development occurred in 1985 after the adoption of the Major Institution Code, development was approved at the time of PUD authorization. Thus the development received land use approval and SEPA review before adoption of the Major Institution Code. It would not now be considered as a new development which triggers Section 23.80.30B.2.

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DCLU has determined that Kids Bowling for Kids development does constitute replacement housing under 23.80.30B.3 even though it is an institution-related use. Part of the reasoning for this is that the same code section would allow change of use of a residential structure to institutional housing without triggering a Master Plan. We believe the code requirement for dwelling unit replacement is satisfied with institution-related housing such as Kids Bowling for Kids.

The larger issue of this institution's development plans remains an important one to DCLU. I am discussing the general question of master plan development with Children's Hospital officials in light of the various development actions which COH has proposed within the past several years.

If you have questions, please contact Julia Gibb of my staff at 625-4509.

Sincerely,

Holly Miller

HOLLY MILLER
Director

JG:vg

Same letter mailed to: Jerry Schneider
Liz Anderson
Kate Hemer
5/19/86
vg.

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April 21, 1986

RECEIVED
APR 25 1986
DEPT. OF CONST. & LAND USE

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Bldg.
Seattle, WA 98104

Dear Ms. Miller:

Pursuant to the Seattle Municipal Code mandate for a Master Plan to be prepared when a major institution expands its use within one mile of its boundaries (SMC 23.80.30B2), you are required to direct the Children's Orthopedic Hospital to apply for Master Plan approval.

The institutional development known as Kids Bowling for Kids is a ten-unit plus caretaker project to serve families of patients of the hospital. The facility was processed by the Department under permit number 620878. An examination of your files should clarify that this is an institutional use developed by COH within one mile of the institution's boundaries.

A recent ruling by the Department found that this new institutional facility constitutes replacement housing to allow a change of use from residential to institutional which occurred after the adoption of the Code. Then this facility must also constitute a development which occurred after the adoption of the Code and within one mile of the Institution's boundaries. A Master Plan is required.

Our community recognizes that the purpose of a Master Plan is to analyze existing and future physical development of a major institution, provide community involvement during the preliminary stages of the institution's planning process, and provide predictability for a major institution and its surrounding neighborhood. We look to the development of a plan as a positive and necessary step in assuring a forum for constructive communication with the Hospital of mutual development goals. We look forward to a favorable ruling consistent with the City's policy to encourage Master Plans.

Sincerely,

✓Anita M. Francis 5003 45th NE Seattle 98105
✓Gary B. Ehrmann, 5003 45th Ave NE, Seattle, Wa. 98105
✓Liz Anderson 4746 45th N.E. Seattle Wa 98105
✓Kate W. Hemer 4537 - 55th N.E Seattle WA 98105

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CITY COUNCIL TRANSMITTAL

C. F. # N/A

TO: Beatrice Ryan, Director
DCLU

Date Sent: 2/10/86

Reply Requested By: N/A

FROM: Jim Stutt

Subject: Children's Orthopedic Helipad

RECEIVED
FEB 11 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

ACTION Required

	Review and Return File With Your Answer to Sender
	Review and Answer Petitioner, Return File and Copy of Answer to Sender
	Review and Make Recommendations, Return File and Recommendations to Sender ( ) In Duplicate
	Prepare Legislation and Return File to Sender

Additional Information: Add to file

Karen L Campbell
Signature

LDI-110-5002 CS 20.19

February 3, 1986

Director,
Department of Construction and Land Use
Room 400
Municipal Building
Seattle,Washington 98104

RECEIVED
FEB 6, 1986
JIM STREET
SEATTLE CITY COUNCIL MEMBER

Dear Sirs:

I was pleased to learn that DCLU has ruled that Children's Orthopedic Hospital must file an environmental impact statement before proceeding with plans for a helicopter landing pad at the hospital. This will allow the significant aspects of noise, vibration, safety, alternative sites and shared usage to be explored in detail before a decision is made.

Our house is located approximately two blocks North and one block East of the proposed landing site. On December 6, 1985, the MAST helicopter elected to land at the hospital instead of at Graves Field. Every part of our house shook terribly for several minutes while the helicopter made its approach to the landing site. I can well imagine the structural damage to our house if this were to become a regular practice.

I believe the location of such a helicopter landing site in close proximity to a residential neighborhood and school would severely impact the safety of the surrounding neighborhood. The enclosed article from the Seattle Times (Dec 11, 1985) shows the consequences of a helicopter crash. It is easy to visualize a number of homes in the area of such a crash being demolished, along with the attendant loss of life to people on the ground as well as the flight crew and patient.

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Statistics relating the time between such incidents are typical average values. Also, it is well known that the most critical times for such an incident are during the take-off and landing phase (i.e., near the hospital). The point is that such a crash will happen and cause extensive property damage and loss of life. The question is not "if" it will happen, only "when".

The headlines of an article in the Nov 16, 1985 Seattle Times by Dr. John Neff, Medical Director of COH, posed the question - "If the Helipad saves the life of just one critically ill child, then won't it be worth it?". I would turn the question around and ask - "Is the improvement in life saving capability (compared to the current MAST helicopter/ambulance system) worth subjecting the surrounding community to a sure loss of life and property at some point in time?". The answer, for those of us living under the proposed flight path, is a resounding "NO!".

I strongly urge you to: 1) Consider the shared usage of Graves Intramural Field to serve University and Children's Hospitals and 2) Deny issuance of a helicopter landing permit at COH. If required, the site at Graves Field could be improved to provide an all-weather landing site. In addition, if the facilities aboard the MAST helicopter need upgrading in order to protect infants during transport, then this would be a logical area for improvement. This solution would have minimal impact on single family neighborhoods in Seattle and represent the safest approach to continued helicopter service for both Children's and University Hospitals.

cc: 1) Charles Royer, Mayor
2) Jim Street, Chairman
City Council Land Use
Committee

Very Truly Yours,
Dale Swanson

Dale Swanson
5036 45th Ave N.E.
Seattle Wash 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Pilot and doctor killed in crash of emergency medical copter

Rescue craft flying in dense fog hits tree

ADDISON, Mich. (UPI) — Two people were killed yesterday when an emergency medical helicopter on its way to pick up a traffic-accident victim at a hospital crashed in dense fog just short of its destination yesterday.

The wreckage of the Life Flight helicopter from St. Vincent Medical Center in Toledo, Ohio, was found in a wooded area near Devil's Lake about a mile southeast of Addison in Lenawee County, police said.

The pilot, John Harrison, 39, and doctor, Jean Hollister, 27, both of Toledo, were killed.

The only survivor, flight nurse Julie Miller, 28, also of Toledo, was taken to St. Vincent for surgery.

Hospital officials said the helicopter left Toledo at 3:49 a.m. in rain and fog for the 35-mile flight to Addison Community Hospital to pick up the traffic victim. The patient was taken to Foote Hospital in Jackson, Mich., when the helicopter failed to arrive as scheduled.

The helicoper's last radio transmission was heard at 4:02 a.m. The wreckage was found six hours later.

Deputy Capt. Robert Sinks of the Lenawee County Sheriff's Department said it appeared the pilot was making a banking turn when the helicopter struck a large tree and skidded into the woods.

The first person to see the wreckage was Otis Chatfield, a 71-year-old farmer who heard the helicopter go by and was later told by a neighbor that it had crashed about a mile east of Chatfield's home.

When he saw the wreckage, Chatfield called out, asking if anybody was inside. He said a woman shouted back that she was inside with a broken leg. Chatfield said he found Miller in the center portion of the helicopter.

Hospital officials said the Life Flight service — the only such service in the Toledo area — has flown more than 5,000 missions since 1979 without a serious accident before yesterday's crash.

The Federal Aviation Administration was investigating the cause of the crash.



The wreckage of a relief helicopter rests in dense woods.

United Press International

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18321 NE 191st Ct.
Woodinville, Washington 98072
July 4, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

RECEIVED
JUL 7 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

As a mother of children that would use Children's Hospital and as a guild member of a guild in Woodinville, I feel that the use of a helicopter by the Hospital is of upmost importance. To be able to transport a critically ill child to the Hospital as quickly and a safely as possible is a vital requirement of a high technological Medical Center. I would hope that such as service would be available to all children that would need it.

I understand the concerns and worries of those who oppose such a service. However, I feel that the Hospital has recognized these concerns and has addressed them with options that would provide workable alternatives, that would alleviate some of the noise and safety questions. The benefit of having the helicopter land at the Hospital far outweights the dangers in my opinion.

Thank you very much for letting me state my opinions and would you please convey them to the rest of the Council.

Sincerely,

Ben Kirkland

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MARVIN O. CHRISTMAN

4350 53rd N.E.
Seattle, Washington 98105
206-525-6966

RECEIVED

FEB - 3 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

January 31, 1986

Dear Mrs. Ryan:

In accordance with your recent request for comments from neighbors living adjacent to the Children's Orthopedic Hospital, 4800 Sand Point Way N.E., I have a copy of a recent letter sent to Mr. Robinson of the Seattle Times.

The comments apply as much today as they did or November 13.

I trust you will give the community as much consideration as possible in this most sensitive area.

Thank you.

Sincerely,

M. O. Christman

MOC:bh

Enc.

Director
Department of Construction and Land Use
Room 400, Municipal Building
Seattle, WA 98104

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Evergreen Safety Council

November 13, 1985

Mr. Herb Robinson
Editorial Page Editor
Seattle Times
Seattle, WA. 98111

Subject: Childrens Orthopedic Hospital Heliport

Dear Herb:

My family and I have lived in the Laurelhurst community for 35 years.

We have raised three children, all of whom have been treated at the Childrens Orthopedic Hospital.

My wife and I have raised money for COH, we have worked in auctions, I have spoken in behalf of the Orthopedic (I drive by the hospital complex five to six times daily), have held meetings in their auditorium, a grandson spent two weeks in intensive car; Tom Young, Sr., the senior partner of the architectural firm who designed Childrens Orthopedic to be a small, well integrated, but complimentary to the neighborhood facility, was a three-door neighbor, and an early director, Dr. Doctor, was a four-door neighbor.

I guess what I am saying is that the Orthopedic Hospital has been a close and good neighbor of my family.

Therefore, I take issue with the Childrens Orthopedic Hospital's Heliport plan.

I have an 85 year old mother, who lives in the shadow of Childrens Orthopedic, in the Laurelon condominium. She is extremely hard of hearing but can feel and hear the vibration of a helicopter, when it lands at COH.... and it troubles her and other seniors living there.

This area is single dwelling, duo apartment living, and the city derives a handsome tax base from the Laurelhurst, Windermere, Hawthorne Hills, and immediate areas.

If the preponderance of high pitched noise and the insecurity of low flying helicopters over our homes and families cause a decay in the neighborhood, then even the

7500 Sand Point Way NE • C-15700 • Seattle, WA 98115-0070 • (206) 526-1670

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city loses, as neighbors have, if we are forced to move to a less dense community.

Helicopters have been known to crash, especially upon take-off and landing, and we have a strong concern that the Laurelhurst School is one block away, with classrooms filled with our children. What a tragic fate to injure or kill a number of children by a helicopter crash while it was landing at COH with one child aboard for treatment.

We are but a few neighbors, not necessarily affluent, who live with the Childrens Orthopedic's continuing expansion into a larger institution ..... no longer small and nestled appropriately into the community surrounding it.

Thank you for listening.

Sincerely,

M. O. Christman
President

MOC/mc

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JG

FROM: Wm. and Esther Branch
5011 - 45th Ave. N.E.
Seattle WA 98105
January 29, 1986

Wm. Branch

RECEIVED
FEB - 3 1986
DEPT OF CONSTRUCTION & LAND USE DIVISION

TO: Director
Dept of Construction and Land Use
Room 400 Municipal Building
Seattle WA 98104

RE: Children's Orthopedic Hospital Medical Ce[illegible]pad Request

IMPACTS and ISSUES WHICH SHOULD BE ADDRESSED:

Overuse of air-space - This area is already subjected to frequent noisy airliner approach into Sea-Tac Airport and Boing Field as well as helicopter landings at Sandpoint Naval Station. The EIS should take into account how many hospitals in the Seattle area are going to be wanting their own helicopter landing sites.

Danger of Crash - The proposed helipad is located within two blocks of an elementary school and two churches. On three sides of the hospital grounds are high-density apartment complexes -- the fourth side is single-family residence fairly close together. Would insurance cover crash loss? Danger also to hospital population.

Noise - An independent study should be directed to noise levels within the hospital instead of leaving that to the hospital administration to determine since they have a vested interest.

The noise effect on nearby residents is very disturbing, especially for elderly persons in the apartment complex immediately below the proposed landing pad. At least twice in the last few months large MAST helicopters have landed on the hopsital grounds despite the COH promise that these helicopters would never be used on the proposed landing pad. The last one circled several times directly over our house before landing. How often will this happen?

Effect on Property Values - Will the increase of noisy flights and the danger of crash have an adverse effect on residential property values.

Alternative Sites - Are there better alternative sites which would create less noise disturbance and less risk? Does the hospital gain enough added benefit by having the helipad on their grounds rather than at the U.W. field now in use as the landing site?

The COHMC has been steadily eroding the quality of the environment around it ever since it moved into this residential area. The request for the helipad needs to be considered in conjunction with the future plans of the hospital, which they refuse to divulge to residents who neighbor their grounds.

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JG 6

Director
Dept. of Construction and Land Use
Room 400 Municipal Bldg
Seattle, Wa. 98104

RECEIVED
JAN 23 1986
DEPT OF CONSTRUCTION AND LAND USE

Dear Sir.

On Dec 6th, 1985 at about 10 AM a large med helicopter flew directly over house, (even circled around the area twice) before landing at the Childrens Orthopedic Hospital. The noise and vibration was very disturbing.

We ask you to take into consideration the impact on the neighborhood as well as the young patients in the hospital of a service like that.

Yours truly —
Edith A. Pilcher
Arthur J. Pilcher
5011-45th Ave. N.E.
Seattle, 98105

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12 J6

4036 N.E. 45
Seattle, Washington 98105
January 27, 1986

RECEIVED
JAN 29 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Beatrice Ryan
Interim Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

RE: Helipad, 4800 Sandpoint Way N.E. PROJ #8495870/Kroll

I have lived in Laurelon Terrace (at two different addresses) since 1955. I am a Medical Technologist (recently retired) and have worked at the University of Washington in medical research for 25 years, followed by 10½ years as supervisor of a division in the clinical laboratory. Thus I have some background, knowledge and understanding of: (1.) the development and past changes in the residential area surrounding Children's Orthopedic Hospital and (2.) the changing patterns and pressures of health care and health care delivery.

I have attended every meeting regarding the helipad issue for the past two years and, though I feel well informed on the pros and cons of the issue, I do still have some concerns:

Laurelon Terrace is a condominium of 136 units covering a three block area immediately west of COH. The buildings were built in the late 1940's (prior to COH's move into the area) and converted to a condominium in 1978, well in advance of any public knowledge that a helipad might be in the picture.

The enclosed map shows the 19 buildings that comprise Laurelon Terrace and demonstrate its proximity to the hospital. Also, the complex is downgrade from the hospital (separated only by a firelane) so that the helicopter approach to the proposed pad has a significant bearing on the noise level, vibration and safety hazard to various homeowners.

There have been at least seven unauthorized landings at COH since November. Instead of the helicopter following the prescribed flight path---which we understand to be over Sandpoint Way NE and up the COH drive to the 'Kitchen Garden"---it has been coming in LOW at an agle over buildings 13, 14, 9, 10 and 18. Again, because of the topography, when the helicopter comes in so low it is not only much more dangerous to us, but the reverberations are intensified! From talking with some people at the hospital we understand: (1.) the new helicopter does not have to circle; it can come in high and drop straight down to the pad; (2.) there is no reason for the pilot not to take the prescribed route over Sandpoint Way rather than over residences.

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The items we feel should be addressed in the Environmental Impact Statement are:

1. NEED. If the community could be assured that the helicopter would be used only for truly critcal cases, we would live with that. At the same time, if the pad permit is granted we request that there be a workable, effective and timely process to assure the helicopter is not being misused. There should be knowledgeable community representatives included in any such "Peer .Review" committee.

2. FREQUENCY: This is an adjunct of 'Need'. One can predict that if there are 15 flights the first year, the number of flights in subsequent years will increase even if the tool is not abused, simply because of increasing advances in technology. This expected growth underlines the importance of only one flight per patient, having the medical crew picked up either at the 'soccer field' or at Harborview (rather than the possible two flights per case into COH).

3. FLIGHT PATH: We strongly urge the pilots be instructed to adhere to the prescribed flight path, and come in high rather than almost level with our roofs which has happened on several recent occasions. The solid red line on the enclosed map indicates the presecribed flight path; the broken red line denotes the path taken by 5 of the last 7 flights. We realize that adhering to the Sandpoint Way route may impact other neighbors. We have no desire to better our situation at the expense of others. The chosen route should take all residents' situations into account. We do feel, however, that our topography makes it mandatory that the helicopter come in high!

4. SAFETY: Helicopters, unfortunately, do crash. The hospital assures us that the statistics indicate there would be only one crash in 64 years. Please note the recent crash of a medical emergency helicopter (in another state) 5 minutes from its landing. Who is going to pay for this insurance? Even without helicopter hazards the current state of insurance premiums is a disaster in itself! Another strong point, we think, for restricted flights and controlled flight paths.

5. VIABLE ALTERNATIVES: The UW 'soccer field' has served for some years as an emergency landing field for both UW and COH. Here the approach can be over water, marsh, parking lots---not homes. Rather than say the field is too soggy, a decent, lighted helipad could be constructed here to serve both institutions. Helipads should be looked at as regional facilities--- no matter what the future medical technology, can we afford to have the service at every hospital?

Enclosure

Sincerely

Patricia Ann Wood

Patricia Ann Wood

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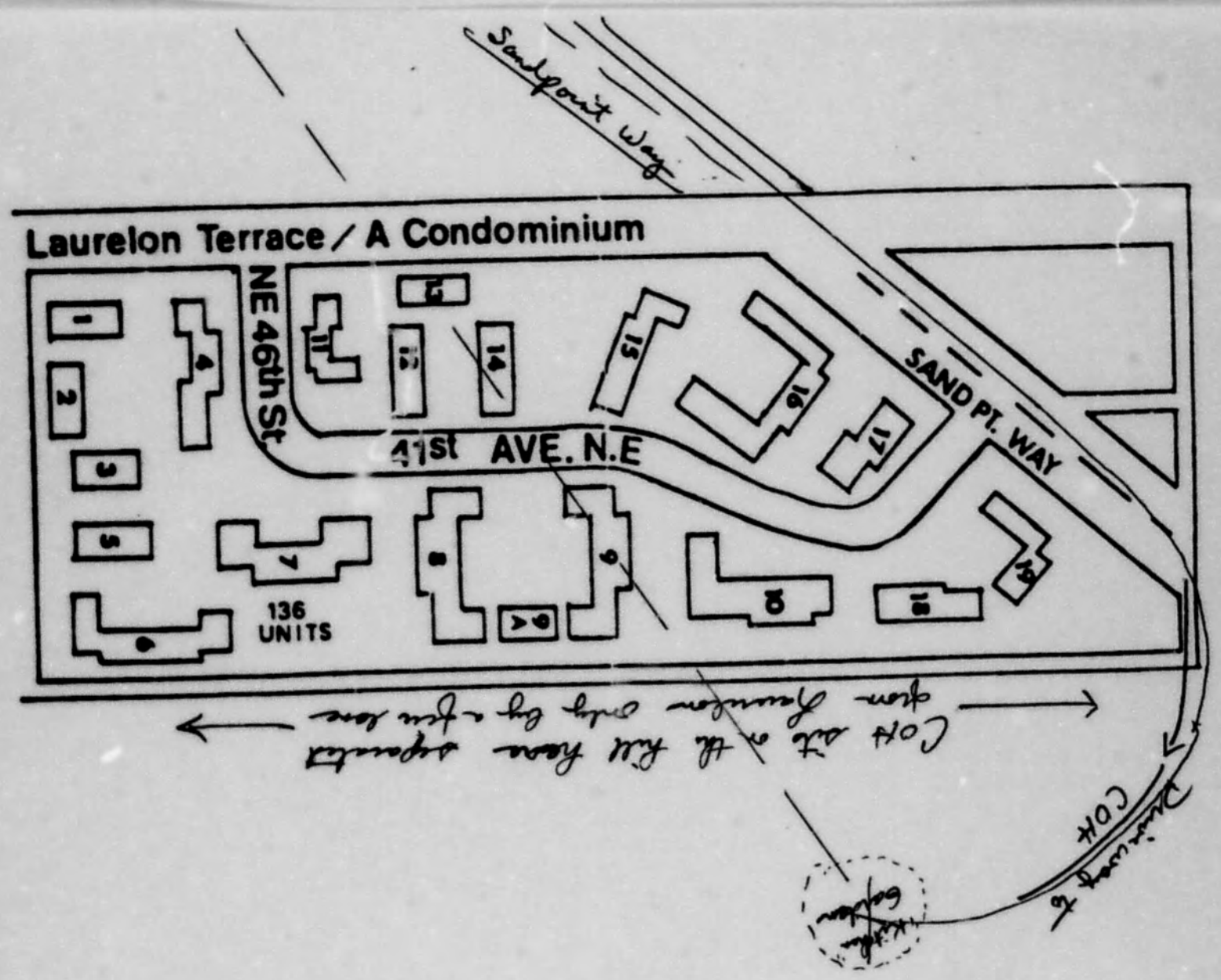
Enclosure
Letter to Bettie Ryan re Helpful
for Patricia Ann Wood

NE 50th



Cont. to all bus zones opposite
from Pennington only by-pass zone

Assisted route

--- Route taken in study test flights (min. 11/85)

Katy / Julia FYI

AC/CP

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

June 9, 1986

Martin C. Hansen
3843 120th Southeast
Bellevue, Washington 98006

Dear Mr. Hansen:

Thank you for your thoughtful letter about Children's Orthopedic Hospital's helistop proposal. We have received many letters expressing strong feelings about this application.

I wish it were easier to decide whether to allow this helistop, but the law requires us to make sure the helistop proposal conforms to the criteria set down in the Land Use Code. These include examination of alternative locations including sites outside the hospital boundaries.

You are right; we can all be proud of Seattle. We all have the opportunity to voice our opinions and cooperate in keeping our city, its institutions and neighborhoods as sources of pride. Striking a working balance among our community's numerous and various goals is an important responsibility of city government, and I am confident the decision made on this permit application will be one which acknowledges both the medical needs of our children and the concerns of residents.

You can keep track of the decision process on the helistop by calling Julia Gibb, Land Use Specialist, Department of Construction and Land Use, at 625-4509.

Sincerely,

(SGD) CHARLES ROYER

Charles Royer

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JO ✓

FROM: Wm. and Esther Branch
5011 - 45th Ave. N.E.
Seattle WA 98105
January 29, 1986

RECEIVED
FEB - 3 1986
DEPT OF CONSTRUCTION & LAND USE

Wm. Branch

TO: Director
Dept of Construction and Land Use
Room 400 Municipal Building
Seattle WA 98104

RE: Children's Orthopedic Hospital Medical Ce[illegible]ad Request

IMPACTS and ISSUES WHICH SHOULD BE ADDRESSED:

Overuse of air-space - This area is already subjected to frequent noisy airliner approach into Sea-Tac Airport and Boing Field as well as helicopter landings at Sandpoint Naval Station. The EIS should take into account how many hospitals in the Seattle area are going to be wanting their own helicopter landing sites.

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(Copy of) Letter sent to names on attached list

Seattle
Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

Re: Scoping of Environmental Impact Statement
MUP 8405870

Nancy Greenawalt
Children's Orthopedic Hospital
P. O. Box C5371
4800 Sand Point Way N.E.
Seattle, Washington 98105

Dear Ms. Greenawalt:

Based upon the Department's analysis and upon letters received during the scoping comment period, our scoping determination for the Environmental Impact Statement for your application for a helistop permit is as follows:

AREAS OF IMPACT

Noise
Vibrations
Safety
Cumulative land use impacts of emergency medical transport by helicopter in the Seattle-King County region
Alternatives
- alternative sites off-campus, including UW Graves Field (soccer field)
- shared usage of sites
- no action alternative

MITIGATION MEASURES

Possible mitigation measures discussed in the EIS shall include the following:
- flight paths
- number of flights
- usage and location of U. S. Army (M.A.S.T.) or other agency helicopter landings
- off-campus pick-up of medical teams
- liability insurance
- criteria for use of helicopters
- plan for monitoring use

Comment letters should be carefully reviewed by the consultants preparing the EIS. The letters contain concerns regarding background data, impacts, study methodology and possible mitigation measures, within the scope of the EIS just outlined.

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If you have questions on this scoping determination, please call me at 625-4509.

Sincerely,

BEATRICE FARRAR RYAN
Interim Director

By
JULIA GIBB
Land Use Specialist

JG:vg

cc: Glen Bachman, Shapiro and Associates

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Mrs. Eleanor R. Emery
4814 N.E. 44th Street
Seattle, Washington 98105

Patricia L. Scanlon, President
Board of Directors
Laurelon Terrace Condo. Home-
owner's Association
4015 N.E. 46th
Seattle, Washington 98105

Treuman Katz
Children's Orthopedic Hospital
P.O. Box C5371
4800 Sand Point Way N.E.
Seattle, Washington 98105

Albert A. Feldmann
4873 Terrace Drive N.E.
Seattle, Washington 98105

Marvin O. Christman
4350 53rd N. E.
Seattle, Washington 98105

Helen and David Belvin
4757 45th Avenue N.E.
Seattle, Washington 98105

Carolyn Margon
3650 42nd Avenue N.E.
Seattle, Washington 98105

Wm. and Esther Branch
5011 45th Avenue N.E.
Seattle, Washington 98105

Hugo and Gisela Schimmelbusch
4702 45th Avenue N.E.
Seattle, Washington 98105

Barbara L. Erak
6807 54th Avenue N.E.
Seattle, Washington 98105

Charles R. Hough
5054 44th Avenue N.E.
Seattle, Washington 98105

Jane Johnson
4323 N.E. 45th St.
Seattle, Washington 98105

Kathleen M. Johnston
4200 N.E. 50th
Seattle, Washington 98105

Robert Klug, President
Laurelhurst Community Club
4326 N. E. 42nd Street
Seattle, Washington 98105

Jerry Schneider and
Anita Francis
5003 45th Avenue N.E.
Seattle, Washington 98105

Ariel G. Nelson
4562 41st Avenue N.E.
Seattle, Washington 98105

Patricia Ann Wood
4036 N.E. 45th
Seattle, Washington 98105

Lola Goltz
4708 44th N. E.
Seattle, Washington 98105

Robert B. Heilman
4554 45th Avenue N.E.
Seattle, Washington 98105

Fred and Patricia Wright
3925 48th Avenue N.E.
Seattle, Washington 98105

Mrs. Phyllis L. Jackson
4307 N.E. 57th Street
Seattle, Washington 98105

Jean T. Harkins
4659 41st St. N.E.
Seattle, Washington 98105

Arthur and Edith Klassen
5011 45th Avenue N.E.
Seattle, Washington 98105

Oliver and Nancy Lawrence
10660 Lakeside Avenue N.E.
Seattle, Washington 98125

Gregory M. Bush, Manager
Environmental Planning Div.
METRO
821 Second Avenue
Seattle, Washington 98104

Carolyn and David Scott
3915 48th Place N.E.
Seattle, Washington 98105

Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

Herman S. Siqueland
The Siqueland Partnership
1200 Westlake Ave. N., #801
Seattle, Washington
98109-3530

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RECEIVED

FEB - 5 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

President
Board of Directors
Laurelon Terrace Condominium
Homeowner's Association
4015 N. E. 46th
Seattle, Washington 98105
January 30, 1986

Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

RE: The Environmental Impact Statement for the Emergency Helistop Facility at Children's Orthopedic Hospital, 4800 Sand Point Way, Seattle, Washington

The members of the Board of Directors of The Laurelon Terrace Condominium Homeowner's Association are the elected representatives of the owners of 136 family dwelling units located on the West boundary of The Children's Orthopedic Hospital.

Recently, there have been several (5-10) unauthorized helicopter landings at the hospital. The flight paths for most of the landings were low angle approaches over several of the Laurelon Terrace Condominium residences. The extreme noise and reverberations generated during these flights, has been stressful to elderly residents and the night flights have been especially so, due to the anxiety of waiting for the helicopter to depart.

We respectfully request your thorough investigation of the following:

1. MEDICAL NEED:

Is there truly a medical need for a helicopter landing site at Children's Orthopedic Hospital? Would the site be used only for bona fide critical cases and not for "marketing" purposes?

2. SAFETY:

Can there be assurances that the flight path for all landing would be a route that would minimize danger and noise for the surrounding community of homes, schools and businesses?

3. FREQUENCY OF FLIGHTS:

At least some of the recent flights were actually two trips (four over-flights) for one patient. One flight to pick up a medical team and another to deliver the patient to the hospital. There are many conflicting accounts of the anticipated number of flights per month and the costs associated therewith.

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Director, Dept. of Construction and Land Use January 30, 1986

4. ALTERNATE SITES:

The present landing site at the nearby soccer field has served well for many years. Is it actually no longer a suitable landing site? If not, why not? Is there a medically acceptable alternate landing site? The approach to a landing site at The Sand Point Naval Station could be mostly over water. There is presently a landing site at Harbor View Hospital and may soon be a landing site at University Hospital which is even closer than the Sandpoint Naval Station or Harbor View. Perhaps Seattle's Medic I, with the best response record in the nation, could be utilized.

5. COST:

We do not wish to imply that a dollar value be placed on a human life. Common sense, however, requires that initial and recurring costs be considered as a vital part of your investigation. Duplication of services would not be cost effective and should be avoided.

6. QUALITY OF LIFE:

The residents of Laurelon Terrace have always supported the Children's Hospital and will continue to support this outstanding institution with both money and voluntary service. The surrounding community is entitled to health, safety and tranquillity, rights which should not be ignored, but have been abridged by the hospital in their endeavor to institute emergency helicopter service.

Thank you for the opportunity to express our concern in this matter. Please notify us of the time, date and place of any public hearing regarding this project.

Patricia L Scanlon

Patricia Scanlon, President
Board of Directors
Laurelon Terrace Condominium
Homeowner's Association

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January 23, 1986

RECEIVED

JAN 27 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Seattle Department of Construction
and Land Use
Beatrice Farrar Ryan, Interim Director

Re: COHMC Helistop

Dear Ms Farrar:

1- We are concerned about the use of helicopters over two schools, thickly populated residential areas and a much used city playfield.

2- What rights and protection do home owners have in protecting <u>their quality of life</u> from constant zoning exceptions and changes being made.

3- The present Mast system and its location serves two hospitals, U of W and COHMC. Is the competition for business between hospitals going to be allowed to impact everybodys lives?

4. We are concerned about duplication of services. Will each hospital want their own helicopter service? This needs to be studied and controls be established. The Trauma center at Harborview Hospital has an excellent record for treating children and adults - treating - stabilizing and then transporting children to COHMC by ground service.

5- We attended the September 9, 1985 meeting called by the Health and Human Services Committee of the Washington State Legislature. It was our understanding that the <u>Free</u> service Mast provides will not be able to continue to serve the area if a private helicopter service is established. (They cannot compete with private business) Who then will pay the bill? The patient?

6- We understand that the Doctors are divided on the issue of necessity.

7- We are concerned about the abuse of the use of the helicopter service. This is a big concern. Who will monitor and decide what is or isn't an emergency. Once the service is allowed to begin and the six month trial period is over, who willthen monitor to see if the system is being abused.

over use ka X

8- With helicopters, traffic watch planes and the constant sea-plane activity over the area, it indicates to us that some form of control of air traffic over residential areas is necessary.

Yours truly

Patricia O. Wright

Patricia O. Wright

Fred M. Wright

Fred M Wright

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Seattle Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

MASTER USE PERMIT

January 13 1986

NOTICE OF DECISION (DECLARATION OF SIGNIFICANCE & SCOPING)

The Director of the Department of Construction and Land Use has reviewed the Master Use Permit application described below and has issued a Declaration of Significance (DS) on this project.
The public is invited to identify specific significant environmental impacts and issues which should be addressed in the Environmental Impact Statement.
If an EIS is prepared, you will be notified of the time date and place of the public hearing.

See attached

Comments on the scope of the Environmental Impact Statement are to be sent to the following address by FEBRUARY 03, 1986 :

Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

The Declaration of Significance is a part of the file on this matter and is available for public viewing in Room 408 of the Seattle Municipal Building

NORTHEAST

4800 SAND POINT WY NE ZONE I-4/I-2/SF 5 PROJ #8405870/KROLL 16W
TO CONSTRUCT AN EMERGENCY HELISTOP FACILITY ACCESSORY TO AN EXISTING HOSPITAL/ MEDICAL CENTER.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

14512 NE 178th Place
Woodinville, Washington 98072
June 6, 1986

RECEIVED
JUN 9 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

I am a mother of small children and a member of a guild in Woodinville. It would ease my mind to know that my child, as well as any child, could be transported safely as well as quickly to Children's Hospital if such an emergency should arise.

I understand the concerns of those people who are objecting but feel that those concerns about noise and safety are far outweighted by the good that will be realized if the helicopter is used.

Thank you for the opportunity to state my opinion. Please let the rest of the Seattle City Council know of my concern.

Sincerely,

Kim Chastain

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NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Dear Mrs. Gibb -

I am writing in support of childrens Orthopedic Hospital + Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a parent and a community member who feels very strongly that our first consideration should be to provide the fastest + best possible medical attention to those in need. The value of a helistop at other hospitals (such as in Portland) has been proven.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely
Anne Peff

Sinclair Lewis

RECEIVED

DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb
Dept. of Construction + Land Use
400 Municipal Bldg.
Seattle, WA 98104

Claire L. Peterson
4819 F Terrace Drive NE
Seattle, WA 98105

RECEIVED
FEB 10 1992
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

USA 19

P405870

Ms. Faith Lumsden
Dept. of Construction
and Land Use
710 2nd Avenue, Suite 700
Seattle, WA 98104

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I'm concerned about the proposal to build a heli-stop at Children's Hospital. The helicopters fly directly over my home on its descent. My condo complex is surrounded by trees and telephone wires. Aside from the noise, the physical obstructions for the helicopters make it an extremely unnerving experience.

I've seen helicopters unloading patients on one of the U.W. athletic fields, and understand discussions are underway between Children's and the University for construction of a permanent helistop. I strongly urg that this be the course taken.

Claire Peterson

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1986

5132 45th Ave
Sea. 98105

Dept of Construction & Land Use
400 Municipal Bldg.
600 4th Ave.
Seattle 98104



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5132 45th NE
Seattle, WA 98105
Jan. 26, 1985

To Whom It May Concern:

This is to express my concern concerning the proposed helipad site at Children's Hospital. As a neighbor, I feel it would negatively impact the area.

Sincerely,

Marianne Dailey

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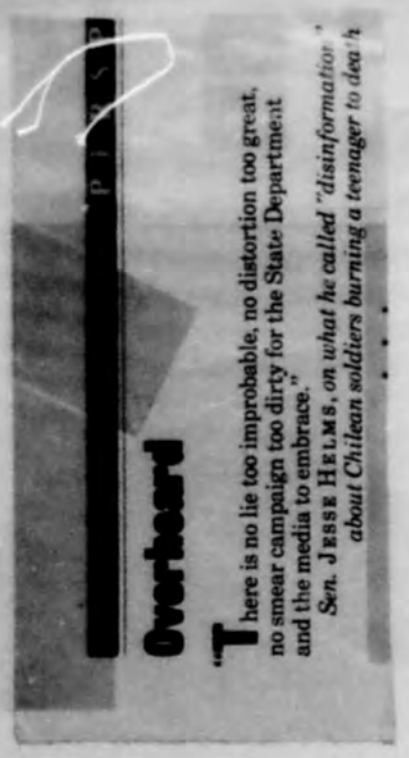

CAR RT PRESORT *ECR)
PRESIDENT
4537 55TH AVE NE
SEATTLE WA 9810

Children's
Hospital & Medical Center
P.O. BOX C5371 • 4800 SAND POINT WAY N.E.
SEATTLE, WASHINGTON 98105 • (206) 526-2000

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Per. No. 8225

7. "COH's response to the competition and cutback in need is to market its service to a larger area, in part through fixed wing."

7. Our patients have historically come from a four-state region, as well as from every state in the union. While we provide a wide range of children's medical services, our reputation has been based on the fact that there is no other place within our region to care for pediatric critical cases. The availability of a helicopter has only strengthened our existing transport system of fixed wing and ground because we are able to reach patients who might not otherwise be able to access the care they need.

8. "The need must be justified and standards set. ...The State's Attorney General...succeeded in getting the Certificate of Need requirement dropped."

8. Certificate of need (CON) review is a state-mandated process imposed on hospitals and nursing homes in Washington and other states to assure the public that unneeded health facility buildings and beds are kept out of the system. There are two conditions which trigger the need for CON review:

(1) The health care facilities proposal will exceed $1 million.
(2) The proposal represents a substantial change in service.

Our proposed helistop will cost $60,000 to build. Secondly, Children's has been treating helicopter-transferred patients for several years. Therefore, the requirement for CON review was never dropped. It just was never called for under the law.

The state has just issued a letter to the hospital which reiterates that the hospital has no legal requirement to go through a CON review.

8 continued

Considering Dr. Nicola's report supporting a medical need for the helicopter, coupled with the statement within a position paper of the Puget Sound Health Systems Agency that Children's would most likely be identified as a Seattle-area hospital that should have a helipad for medical emergencies, we cannot justify the cost and delay associated with the CON process.

9. "Hospital helicopters are overused by a factor of 90%, according to studies noted in a recent report of the Washington Hospital Commission."

9. The Washington State Hospital Commission did not state that hospital helicopters are overused by 90%, but rather that in 90% of all cases requiring transport to a hospital, a helicopter is not always the best means, a statement with which we agree.

10. "We have asked COH to spell out its proposed conditions of use and to justify the need. ... Because helicopters operate most effectively in a regional area, it is necessary for planning to occur on a regional basis."

10. Representatives from the hospital board and administration have met numerous times to discuss this proposal and many other concerns of the neighbors. We have answered questions and presented proposals verbally and in writing. We have taken neighbors through the hospital and explained the medical conditions of the children transported by helicopter.
Airlift Northwest is already operating on a cooperative basis among the four hospitals. It was begun in an effort to effectively provide emergency air transportation on a non-competitive, shared basis. Airlift is a model of regional planning that was conceived, developed and implemented in the best interests of residents of the Pacific Northwest.

The Hospital's helipad proposal has been carefully thought out and prepared in the interest of improving the lives of children - that is our obligation as the primary regional pediatric medical center. We have studied with care the issues of noise and safety. We believe our information to be complete. It is important to note that there are other statements contained in the Laurelhurst Newsletter that are untrue, which we did not respond to.

If you would like more information, or if you have questions about the facts presented, please call Nancy Greenawalt, Director of Government Affairs, at 526-2505. Your knowledge and accurate understanding of our proposal are important to us.

Sincerely,

Mary Jane Anderson
Chairman, Children's Hospital
Board of Trustees

Treuman Katz
Chief Executive Officer

Children's
Hospital & Medical Center
P.O. BOX C5371 • 4800 SAND POINT WAY N.E.
SEATTLE, WASHINGTON 98105 • (206) 526-2000

July 25, 1986

Dear Neighbor:

It has come to our attention at Children's Hospital and Medical Center, that you may have recently received a mailing from the Laurelhurst Community Club containing excerpts from their presentation regarding our proposal to build a helistop on the campus of Children's Hospital. We feel, that as a neighbor of the Hospital, it is important for you to know the facts and our position on them.

In October 1984, Children's Hospital and Medical Center applied to the City of Seattle for permission to build a landing pad for helicopters next to the emergency room. In May 1985, Airlift Northwest, a consortium of our hospitals - Children's, Harborview, Provident and University - provided emergency air transportation by leasing a state-of-the art helicopter that could safely land outside the emergency room.

Because of our concern about the environmental impacts on the neighborhood, we hired consultants to study noise and safety issues. We submitted a report on those issues to the City in the fall of 1985. At that same time, Dr. Bud Nicola, the Public Health Director for Seattle-King County, reviewed all documentation of the helicopter flights that had landed directly at the Hospital. Dr. Nicola also conducted a public hearing to determine whether there was a medical need for Children's to have a landing pad on its campus. In December 1985, Dr. Nicola issued his report, which concluded that there is a medical need.

In January 1986, the City requested that we complete a more extensive analysis of environmental impacts. That report, called a draft EIS, will be publicly issued at the end of July. The City will have copies available for public review, and there will also be copies available for your review at the hospital.

The following statements are excerpts from the recent Laurelhurst Newsletter accompanied by the facts.

LAURELHURST LETTER	FACTS
1. "(Helicopter) service is used almost exclusively for interhospital transfers of stabilized patients."	1. Most of the patients come from another hospital where the condition of the patient has overwhelmed the resources and experience of the personnel. Every attempt is made to stabilize very unstable patients prior to the helicopter leaving the ground. Examples of patients transported directly to Children's include: • extremely premature babies weighing between 2 and 4 lbs • children whose lungs collapsed in flight • children with increasing swelling and pressure on their brain • children with uncontrolled seizures • near drownings • chemical poisonings
2. "The use of helicopters for interhospital transfers is a service which replaces ground ambulance transportation."	2. Seattle--King County has a nationally recognized emergency medical system. Helicopter service is but one component of that system. Children's proposes to land the helicopter on its campus only in life threatening situations where: • due to medical factors the time gained would improve the outcome. • due to environmental factors such as traffic, weather conditions, and distance the helicopter would be a better choice than ground transportation. • The combination of technological advances, including the sophistication of the helicopter and the medical team on board, provide the optimal chance of saving or enhancing the quality of life.
3. "In 1986, it (Children's) is moving to become a regional pediatric trauma center."	3. Only Harborview Medical Center is staffed and equipped 24 hours a day to meet the accepted definition of trauma center. Children's now is not staffed nor does it plan to staff 24 hours per day to meet trauma center criteria. These statements are clearly written in the draft EIS and were made verbally and in writing to representatives of the Laurelhurst Community Club Board.
4. "There are no conditions established for the use of the Airlift Northwest helicopter."	4. As one of the four member hospitals of Airlift, Children's has asked for the city's approval to land at the hospital only those children who are in a life-threatening situation. In addition, Dr. Bud Nicola's report issued in January (referenced earlier) determined the medical need at the request of the city.
5. "The safety issue is not insignificant..."	5. Using the worst case experience for single-and-twin-engine helicopters, the projections are one accident per 5,459 transports that could occur anywhere along the flight path which translates into about one accident every 23 years. In addition, Airlift has personnel levels (pilots per aircraft) as well as a minimum experience requirement and ongoing certification for pilot hiring that exceed industry standards. Finally, Airlift's policy for ongoing training for pilots and medical team personnel serves as a model for guidelines and standards that are being developed by the industry. There are over 20 pages on helicopter safety in the draft EIS which very plainly demonstrate that safety is not a significant factor for the neighborhood and the hospital.
6. "The adverse effects of noise on human health are well-documented...We are understandably concerned with safety and with the adverse effects of noise on the children and the elderly."	6. The draft EIS also contains a very thorough study of the noise created by the helicopter and its potential effects on our neighborhood. A helicopter landing at the proposed site near the emergency room is no louder or no more disturbing than a diesel truck along Sand Point Way according to the studies done for the EIS. Noise levels measured at five sites surrounding the hospital are not of sufficient volume to cause adverse health effects on humans.

May 22, 1986

Kerry Colleen Read
15125 N. E. 67th Place
Redmond, Washington 98052

RECEIVED
MAY 27 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mrs Gibb,

I am writing as a concerned parent in support of Childrens Orthopedic Hospital request for permit to build a helistop at the Hospital. Surely a childs life is more important than the noise incured in trying to do so!

Please convey my feelings to Seattle City Council — Thank you
Kerry Read

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18121 NE 197th Place
Woodinville, Washington 98072
June 7, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

RECEIVED
JUN 9 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

I am a mother of small children and a member of a guild in Woodinville. It would ease my mind to know that my child, as well as any child, could be transported safely as well as quickly to Children's Hospital if such an emergency should arise.

I understand the concerns of those people who are objecting but feel that those concerns about noise and safety are far outweighted by the good that will be realized if the helicopter is used.

Thank you for the opportunity to state my opinion. Please let the rest of the Seattle City Council know of my concern.

Sincerely,

Phillis Coleman

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19615 182nd Avenue NE
Woodinville, Washington 98072
June 1, 1986

RECEIVED

Julia Gibb
Department of Construction and Land Use JUN 6 1986
400 Municipal Building
Seattle, Washington 98104

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb:

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Thank you for the opportunity to state my opinion. Please let the rest of the Seattle City Council know of my concern.

Sincerely,

Judith M. Bomjack

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JUN 4 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

18109 NE 197th Place
Woodinville, Washington 98072
June 3, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

I am a mother of small childr[illegible] and a member of a guild in Woodinville. It would ease my mind to know that my child, as well as any child, could be transported safely as well as quickly to Children's Hospital if such an emergency should arise.

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Thank you for the opportunity to state my opinion. Please let the rest of the Seattle City Council know of my concern.

Sincerely,

Sharon Bostrom

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16704 188th Place NE
Woodinville, Washington 98072
June 17, 1986

RECEIVED
JUN 18 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

I am a mother of small children and a member of a guild in Woodinville. It would ease my mind to know that my child, as well as any child, could be transported safely as well as quickly to Children's Hospital if such an emergency should arise.

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Thank you for the opportunity to state my opinion. Please let the rest of the Seattle City Council know of my concern.

Sincerely,

Lillian M. Hansen

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JUN 23 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

18120 NE 189th
Woodinville, Washington 98072
June 20, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

I am a mother of small children and a member of a guild in Woodinville. It would ease my mind to know that my child, as well as any child, could be transported safely as well as quickly to Children's Hospital if such an emergency should arise.

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Thank you for the opportunity to state my opinion. Please let the rest of the Seattle City Council know of my concern.

Sincerely,

Carolyn Beck

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18221 NE 186th
Woodinville, Washington 98072
June 25, 1986

RECEIVED
JUN 27 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

I am a mother of small children and a member of a guild in Woodinville. It would ease my mind to know that my child, as well as any child, could be transported safely as well as quickly to Children's Hospital if such an emergency should arise.

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Thank you for the opportunity to state my opinion. Please let the rest of the Seattle City Council know of my concern.

Sincerely,

Janie Hunter

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19915 182nd Ave. NE
Woodinville, Washington 98072
June 14, 1986

RECEIVED
JUN 16 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

I am a mother of small children and a member of a guild in Woodinville. It would ease my mind to know that my child, as well as any child, could be transported safely as well as quickly to Children's Hospital if such an emergency should arise.

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Thank you for the opportunity to state my opinion. Please let the rest of the Seattle City Council know of my concern.

Sincerely,

Val J Didyurgis

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available at Children's must be accessible to all youngsters regardless of geographical location.

I have heard the concerns of the neighborhood and feel that their fears are unjustified in the light of statistical evidence, personal experience and quality of life considerations.

Thank you for your attention.

Sincerely,

Linda Mattox

Mrs. Jeremy Mattox

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RECEIVED
MAY 09 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 5

Dear Ms. Gibb,

I am writing because I support the Children's Hospital and Medical Center request for permission to build a helistop outside the Emergency Room.

I am a parent, volunteer and Seattle resident and strongly believe that the levels of care

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RECEIVED
JUL 10 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

RECEIVED
JUL 1
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

18246 NE 196th Ct.
Woodinville, Washington 98072
July 1, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

As a mother of children that would use Children's Hospital and as a guild member of a guild in Woodinville, I feel that the use of a helicopter by the Hospital is of upmost importance. To be able to transport a critically ill child to the Hospital as quickly and a safely as possible is a vital requirement of a high technological Medical Center. I would hope that such as service would be available to all children that would need it.

I understand the concerns and worries of those who oppose such a service. However, I feel that the Hospital has recognized these concerns and has addressed them with options that would provide workable alternatives, that would alleviate some of the noise and safety questions. The benefit of having the helicopter land at the Hospital far outweights the dangers in my opinion.

Thank you very much for letting me state my opinions and would you please convey them to the rest of the Council.

Sincerely,

Linda Loyden

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RECEIVED
JUL 3 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

18228 NE 191st
Woodinville, Washington 98072
July 9, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

As a mother of children that would use Children's Hospital and as a guild member of a guild in Woodinville, I feel that the use of a helicopter by the Hospital is of upmost importance. To be able to transport a critically ill child to the Hospital as quickly and a safely as possible is a vital requirement of a high technological Medical Center. I would hope that such as service would be available to all children that would need it.

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Sincerely,

Sandra M. Simmerman

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19615 182nd Ave Ne
Woodinville, Washington 98072
July 18, 1986

RECEIVED
JUL 21 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

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Sincerely,

Kathryn Gordon

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RECEIVED
JUN 16 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

20005 NE 192nd
Woodinville, Washington 98072
June 11, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

I am a mother of small children and a member of a guild in Woodinville. It would ease my mind to know that my child, as well as any child, could be transported safely as well as quickly to Children's Hospital if such an emergency should arise.

I understand the concerns of those people who are objecting but feel that those concerns about noise and safety are far outweighted by the good that will be realized if the helicopter is used.

Thank you for the opportunity to state my opinion. Please let the rest of the Seattle City Council know of my concern.

Sincerely,

Diane Cuthbertson

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RECEIVED
JUN 16 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

18616 NE 189th
Woodinville, Washington 98072
June 14, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

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Sincerely,

Michele Dickens

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US Department
of Transportation

**Federal Aviation
Administration**

Flight Standards District Office
7300 Perimeter Road South
Seattle, WA 98108

RECEIVED
JAN 9 1987
SHAPIRO AND ASSOCIATES, INC.

January 7, 1986

Shapiro & Associates, Inc.
The Smith Tower Suite 1812
506 Second Avenue
Seattle, WA 98104

ATTN: Ray Sachs

Dear Mr. Sachs:

This letter is in response to your letter to me of December 29, 1986 wherein you requested further input regarding the proposed helistop at Children's Hospital.

1. I have personally inspected the proposed site many times including several views from overhead in a helicopter.

2. You have asked for an analysis of one site relative to others re: COH facility, UW HospitaL, and the UW Soccer field.

Given the hyopothetical of a helicopter approaching over an open area and landing in a soccer field versus an approach and landing over a congested area one would have to surmise there is no risk to persons or property on the surface regarding the first instance: This is by virtue of the fact, it is a complete open area.

The site of the U of W proposed helistop was evaluated and inspected by me. In my view it is slightly different in that much of the ingress and egress can be accomplished over a more open area.

The helistop sites (3) near the Space Needle downtown are significantly more hazardous to persons and property on the surface, relatively speaking. Approaches and departures are over very busy streets at these locations.

I believe we must consider what is an acceptable level of safety. Certainly having a car manned by some unknown person coming head on to you at 60 MPH ten feet away is not my idea of being safe but in today's life it's accepted because of necessity.

In 11 years at this office I'm not aware of any incidents or accidents at helistops. I am not aware of any accidents at Boeing Field by helicopters that were in a normal take off or landing phase. Boeing has numerous daily helicopter operations.

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In comparing the aforementioned sites one also needs to consider factors such as frequency of operations, re: emergency only, and twin engine helicopters.

The acceptable level of safety is extremely high at the COH facility, U. W. facility and the soccer field.

It is true EMES helicopters have had accidents however, almost all have been at remote locations where hazards are numerous, re: unlighted night landings, unfamiliar area, mountainous terrain, excitable inexperienced ground personnel, trees and obstructions surrounding the pick up site and weather factors.

Lastly you asked about pilot qualifications Basic Licensed Commercial pilots are required to have a minimum of 150 hours by the Federal Aviation Administration. This would allow him to recieve compensation for such operations as aerial survey, photo and scenic flights, pipeline patrol but excludes carrying passengers for hire. The minimum FAA requirements are 500 hours of flight time in order to transport people or cargo for hire.

No insurance company will insure a pilot for air taxi operations with these minimums. They place much higher experience requirements on the pilots. You can verify this by calling 503-640-4686, the Westmiller Insurance Company.

Commercial pilots engaged in Air Taxi EMES operations are required to pass oral and flight test each 12 months by the FAA.

Commercial pilots engaged in the less restrictive operations mentioned earlier are not required to pass any FAA test after original certification.

I hope I've been of some help. If you need anything further please call my new number 431-1386.

Sincerely,

Frank G. Benedict
Principal Aviation Safety Inspector

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Comments to Oct. 17, 1986 *Send cc to Krueger/Sullivan

9.23.86 Testimony on Helistop → Draft Environmental Impact Statement

PLEASE PRINT

	Name	Address	
1.	Helen Memmon	4252 NE 50th	98105 ✓
2.	ALBERT A. FELDMANN	4873 Terrace Dr NE	98105 ✓
3.	ANITA FRANCIS	5003 45 NE	98105 ✓
4.	Vicky King	View Ridge Comm. Club	
5.	Liz Anderson	Laurelhurst	
6.	BART BAXTER	3905 48TH PL NE	98105 ✓
7.	Jerry Schneider	5003 45 NE	98105 ✓
8.	KEN JACOBSEN	7307 40th NE	98105
9.	Maryann E. Spangler	4013 N.E. 46th St.	98105 ✓
	~~LAURELHURST ELEM. P.T.A. EXEC. BOARD~~		
	~~Hilda Gibbons~~	~~4338 N. Surber~~	~~98103~~
10.	Seelye Martin	5217 NE 43rd	98105 ✓
11.	BILL BRANCH	5011-45 NE	98105
12.	Doris Burns	2511 W Montlake E	98112
13.	Barbara Quinn (Citizen v. Cit. Advis. Comm.)	5264 16th NE	98105 — put on notice list
14.	Jane Johnson	4323 NE 45 St	98105
15.	Ariel Nelson	4652 41st NE	98105
16.	JOHN MENDENHALL	5033-44th NE	98105
17.	HUGO SCHIMMELBUSCH	4702-45th NE	98105
18.	~~Jeorge Frank~~ Not present	4000 55th NE	98105.
19.	Orris Pai	4331 NE 45th.	98105
20.	Skenneth Pai	4331 NE 45 ST	98103

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list for testimony

	NAME		ADDRESS
✓ 21.	Mary Crisman	testimony	Laurelhurst
✓ 22.	Suzanne McQuary		4849 NE 42nd
✓ 23	Cynthia Sullivan		402 King County Courthouse
✓ 24.	Kate Kemer		453? 50
✓ 25.	~~Carol~~ Krug, Pres.		Laurelhurst Comm. Club.
✓ 26.	Jerry Markot		Lawton Terrace Cards.
	~~28~~ total		
	~~25~~ 29		BOB KLUG
	total speakers		4326 NE 42ND St
			SEATTLE 98105

✓ 27. Richard Diamond — Laurelhurst
Richard Diamond
4318-55th Ave, N.E.
Seattle, 98105

✓ 28. Hans Klug — Laurelhurst
4146 42nd AV NE
Seattle

✓ 29. * Scott Cole — left copy of remarks — Laurelhurst

✓ 30 Morgan Brigman
E.M. 2 4657 41st NE 523-7255

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

To: City of Seattle, Department of Construction and Land Use

From: Laurelhurst School P.T.A. Board

Re: Hearing on Draft Environmental Impact Statement of Children's Hospital and Medical Center Helistop

Date: September 23, 1986

We, the Laurelhurst School P.T.A. Board, come before you this evening primarily in the interest of the children who attend this public school. Our interest does extend beyond the school as well. We represent the board only, not the whole Laurelhurst School Parent-Teacher Association. At this time, we are merely familiar with the major arguments for and against the proposed helistop. We wish to express in brief our concerns, and we wish to ask some questions for which we could not find answers in the Draft E. I. S.

While the school is normally occupied between 9:00 A.M. and 3:00 P.M. five days a week, children and staff arrive on foot, by car and by bus as early as 7:30 A.M. (some for day care). Children leave at 3:00 P.M. to walk or ride home, but some stay as late as 6:00 P.M. (until picked up by parents). Staff leave at differing times in the afternoon. Outdoor playtimes include A.M. and P.M. recesses, post-lunch recesses and some physical education classes. Many children play and participate in activities at the adjacent Laurelhurst Park. On several occasions there are evening events sponsored by the P.T.A. which draw students, their families and staff. In addition, some Laurelhurst Park Department classes are taught in the school. It is safe to say that the school is unoccupied between 10:00 P.M. and 7:00 A.M.

We are concerned, therefore, about the impact of noise and vibration on Laurelhurst School. It is noted in the Draft E. I. S. that "helicopter noise could and probably would be disruptive of some adjacent residents' lives." (pg. 92) Would the impact be greater for the secondary approach-departure path, which covers the area over Laurelhurst School? What would the impact of noise and vibration mean to daily instruction in the classroom, study in the library, instrumental music lessons in the auditorium, individualized teaching on the second floor or programs in the gymnasium? We are concerned about the frequency of flights, given that every instance requires two approaches and departures each.

In regard to the flight path, the Draft E. I. S. says, "a secondary approach-departure path would be used during northwesterly winds that are in excess of approximately 17 knots. Based on surface wind data for Sand Point this latter situation is expected approximately 0.2% of the time, and would be most likely to occur during the winter months (U.S. National Climatic Center, 1982)." (pg. 45) We are concerned about these statistics, since the school and hospital are sited in a more hilly location than Sand Point, 17 knots indicates a moderate breeze ~~and 0.2% of the time may only amount to once a year.~~ and Seattle has many of these.

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It would seem that there would be a frequent use of the secondary approach-departure path. Who determines the weather conditions and their suitability to flight paths? Who is responsible for these decisions? Who can elect to make flight path deviations? Who takes responsibility for them?

In consideration of the possibility of helicopter accidents, we notefrom the Draft E. I. S. that "a worst case scenario was generated using the overall accident rate for E.M.S. helicopters. Under this scenario, a flight involving a Children's-destined patient would have a statistical probability of an accident one in 5,459 transports. The accident could occur at any point on the four segments of each flight." (pg. 72) While this is a favorable statistic for the projections of flight frequency given, any accident is of concern to us. Who is responsible in the event of an accident? What if an accident occurred on or near the school grounds, during recess when many children are playing out of doors or after school hours when children are walking home? If the City of Seattle issues a use permit, will the city provide all of the necessary services in the event of bodily harm and/or property damage?

Laurelhurst School has been considered for closure by the Seattle School Board on more than one occasion. Parents from the surrounding neighborhood as well as those from many other Seattle neighborhoods whose children attend this school consider it imperative that this school stay open. We are concerned that the installation of the proposed helistop, whose siting raises serious questions, could jeopardize the ~~future~~ viability of Laurelhurst School. The alternative possibility of a helistop at the Intramural Field bordering N. E. 45th Street is not ruled out as a satisfactory site in the Draft E. I. S. Will the final E. I. S. contain an evaluation of the impacts regarding the public school which is only two blocks away? We hope it does.

Thank you.

Barbara Droker
PTA Board (DM)

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MONTLAKE COMMUNITY CLUB

"Cooperating to maintain a fine Montlake Residential District"

TESTIMONY AT PUBLIC HEARING, SEPTEMBER 23, 1986, ON CHILDREN'S HOSPITAL HELISTOP

I am Doris Baxter Burns, 2511 West Montlake Place East, Seattle 98112, President of the Montlake Community Club. We will present some of our comments at this time with more detailed concerns in writing before the October 2nd deadline.

First of all, we must protest your mailing list which contains not a single community council. Allied Arts may well be concerned about the helipad, but why are University District, University Park, Laurelhurst, Green Lake, Montlake, Wallingford, Ravenna-Bryant, Eastlake, Portage Bay-Roanoke, Capitol Hill and other communities well within the flight paths ignored? Some of these community groups may not be aware of the publication of this Draft Environmental Impact Statement and thus miss the deadline for reply about their just concerns. An honest attempt should be made to rectify this error. It certainly is a grave one that should be remedied by notification of the concerned groups and extension of the reply time.

Secondly, cumulative impact must be discussed more adequately. No man is an island, and no institution exists in splendid isolation. Airlift Northwest is a consortium of four hospitals. Providence and Harborview share a helipad which is located on a parking lot at Harborview. University and Children's want individual landing pads: one atop the hospital and the other outside the emergency room. University Hospital manages Harborview and has intimate ties to Children's. The close proximity of University and Children's Hospitals demands that the cumulative impact of landings at both helipads must be considered in this DEIS. Children's Hospital claims only 17% of the helicopter flights. How many will land at University Hospital? You state that other helicopters will be allowed to land at the hospital. It is necessary to provide at least some indication of the numbers of such flights to both hospitals. Additionally, how many MAST flights will continue to both hospitals and where are they expected to land? How do you expect to enforce your flight patterns on emergency medical helicopters other than Airlift Northwest? One recently flew over my home which is some distance from I-5. Indeed, Airlift Northwest flights will operate at pilot's discretion also.

Other aircraft that must be considered are the traffic advisory planes and helicopters which patrol I-5, SR 520 and the Montlake Cut. Private planes of the fixed wing variety abound in this area. Float planes fly over Capitol Hill, swoop down over SR 520 and land on Portage Bay. Lake Union is also a favorite destination. During football games at Husky Stadium, planes trailing advertizing slogans circle the area. All these flying vehicles appear to be completely unregulated. Add to this a proliferation of emergency medical helicopters whose safety record as a class leaves much to be desired. The cumulative impact of all planes, fixed wing or rotor propelled, must be considered in your

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analysis of cumulative impact on the densely populated area over which the helicopters will fly.

In conclusion, we find this a most inadequate document that raises more questions than it answers. Hopefully the FEIS will be more satisfactory.

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5405870 Submitted as testimony of Albert Feldman @ DEIS pub. hrg. 9-23-86

High Aeromedical Helicopter Crash Rate Tied to Pilot Fatigue

Washington—The U. S. aeromedical helicopter crash rate is running triple that of commercial helicopter operators, and concern is growing among safety experts that long pilot duty shifts are compromising safety.

The nonfatal crash of an aeromedical helicopter in Idaho Aug. 10 has brought the number of confirmed U. S. aeromedical crashes this year to 20, five more than in all of 1985. Two of this year's crashes were fatal, killing two pilots and three on-board crew.

On June 2, near Hueytown, Ala., a Messerschmitt-Boelkow-Blohm BO. 105 returning to its hospital base after a successful patient transfer mission hit a wire and dropped into the Warrior River, killing a pilot and two medical crew. In January, a Maryland State Police Bell 206 JetRanger crashed at night in trees while returning from a mission to its base near Baltimore, Md., killing a state police pilot and emergency medical technician/observer (AW&ST Apr. 21, p. 63; Mar. 24, p. 30).

In the Idaho crash, which occurred at approximately 9:30 p. m., the Bell LongRanger 206 hit trees while lifting off a mountain ridge at 8,400 ft. after rescuing an injured aircraft crash victim.

Pilot error has been a factor in about 90% of the accidents, according to John B. Galipault, president of the Aviation Safety Institute in Worthington, Ohio, and Donald Wright, president of the National Emergency Medical Service Pilots' Assn., near Houston, Tex. Their organizations monitor flight safety and compile records on aeromedical helicopter accidents.

Galipault and Wright believe that duty shifts frequently averaging 12 hr. and more, combined with rotating day and night workweeks, are contributing to the problem by fostering pilot fatigue.

"The average hospital-based helicopter operation with 24-hr. coverage has a staff of three pilots, which, when you divide it up, results in six 40-hr. workweeks a month per pilot," Wright said. "Those flying in two-pilot operations work the equivalent of almost nine 40-hr. weeks a month.

"When you're tired, your judgment is affected and you make bad decisions, like continuing to fly into bad weather . . . and in case of emergency your reaction time is slow," he said.

The aeromedical helicopter departments in the Alabama and Idaho crashes were two-pilot operations, with two pilots responsible for covering a 24-hr. duty day. It is believed that fatigue was a factor in at least one of the crashes. □

Airline Observer

Air Line Pilots Assn. has hired Future Aviation Professionals of America to provide counseling and job searching for 566 pilots out of work after the bankruptcy at Frontier Airlines. Unlike the situation in which Braniff pilots were looking for cockpit positions in 1981, those Frontier cockpit crewmembers willing to take flight engineer and junior copilot jobs could be flying within the next three months. It required almost three years for the airlines to absorb the unemployed Braniff pilots. A number of the larger carriers are willing to hire pilots in their 50s, and more than 15 will hire cockpit crewmembers beyond the age of 40, because of the strong demand for qualified pilots. American Airlines already is interviewing former Frontier pilots and United, Federal Express and Piedmont Airlines are showing an interest in the same group.

Short-range transports will continue to dominate the production line, according to McDonnell Douglas' 1986-2000 commercial aircraft outlook. The company projects demand for 1,166 aircraft seating 110 passengers and 1,786 aircraft seating 160 passengers in the short-range category. Airlines in the U. S. would buy 39% of the 110-passenger airplanes and 54% of the larger capacity aircraft, with orders concentrating during 1991-1995, according to the forecast.

Canada's Air Transport Assn. is encouraging travelers not to smoke on board aircraft but does not support a smoking ban on all flights, citing determined opposition to a ban and the risk to safety of covert smoking. In a statement, ATAC welcomed the prohibition against smoking on limited duration flights in Canada and noted that such prohibitions on transborder and international flights require international agreement.

Major carriers shopping around for a stronger western foothold are considering acquisition of AirCal, Pacific Southwest Airlines and Alaska Airlines, according to industry sources. The Delta Air Lines acquisition of Los Angeles-based Western has put pressure on other majors to align themselves with West Coast carriers that serve a significant market share. Of the majors, United Airlines has the strongest service in the West, but American Airlines' and Trans World Airlines' route systems may need to be reinforced.

Airframe manufacturers are keeping in mind requirements for more sophisticated forms of in-flight entertainment systems when developing designs for new transport aircraft, according to in-flight entertainment industry officials. Flat screen displays installed in seat backs and over-water satellite communications for conducting passenger business activities as well as airline operations could be possible within the next five years.

Strong summer traffic, coupled with strengthening yields and reduced unit costs, could produce a $1-billion plus operating profit for U. S. airlines in the third quarter. The earnings would compare with a $700-million operating profit in last year's third quarter. Airline Economics, Inc., Washington, D. C., forecast the turnaround, and now is being joined in the positive forecast by Wall Street analysts.

Tampa Bay area authorities decided to give up Tampa's dormant authority as gateway to London, supporting a shift of that authority to Charlotte, N. C., and supporting Piedmont Airlines as the carrier to London. Piedmont has pledged to originate and terminate its transatlantic service at Tampa, with Charlotte as a stop en route. Tampa Mayor Sandy Freedman said one-stop London service was better than no service, and Tampa civic parties said there was little time to find an airline to use the Tampa authority in response to a Transportation Dept. order asking why the authority should not be removed. Piedmont ranks second with 31 daily departures at Tampa.

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Suzanne McQuary

To: City of Seattle, Department of Construction and Land Use

From: Laurelhurst School P.T.A. Board

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Thank you.

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Sept. 22, 1986

Dear Julia

Pursuant to SEPA ordinance 25.05.'155'7
I am requesting a 15 day extension
of the comment period established
by DCLU with regard to COH's DEIS
on the proposed hilistop. It is crucial
that we have sufficient time to
distribute copies of the DEIS to those
neighboring community councils
which did not receive it. Such as
Montlake, View Ridge, Hawthorne Hills,
Ravenna Bryant, University District,
Windermere, and Blaine Terrace.
These communities surround COH and
will be significantly impacted by
this project and should have adequate
time to respond to the DEIS. In addition
we have been forced to seek additional
comments on the DEIS from impartial
sources outside of Washington State
because of local physicians and pilots
desire and dignity. Nationally
recognized experts on various aspects
of EIHS transport reside in other
parts of the country and consequently
there is a significant time delay
in receiving their DEIS comments.

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Please notify us as to your decision regarding this request.

Sincerely,

Liz Anderson
CCHT
and Lauralhurst Community Club

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COHMC STRATEGIC DIRECTIONS STUDY

Presented by David Hunter
January 22, 1986

I. Description of the strategic directions study process, a review of internal and external environments (the truth about the healthcare environment as it presently exists inside and outside of the hospital.

A. External - What is happening in and to the healthcare environment in general?

. financing crisis
  - decrease in federal and state revenues
  - decrease in insurance coverage especially for dependents
  - increasing capital needs
  - decrease in philanthropy, although not at COH
  - unavailability of cross subsidization
. alternative delivery mechanisms
. mergers, acquisitions, etc.
. emphasis on competition vs. regulatory protection
. focus on outpatient
. general aging of the population

B. Internal - Uniqueness of pediatric health care and Children's Orthopedic Hospital

. focus on outpatient, few children require hospitalization
. children hospitalized are very sick, require intensive care
. higher staff to patient ratios than adult
. specializations require maximum patient volume to maintain quality (regionalism)
. unique equipment needs
. inpatient pediatric care expensive; however, more cost effective given the patient's predicted productive life span

II. Demographic Profile - general description

A. Population trends

B. General aging of population

C. COHMC service areas

III. COHMC Mission

A. Pediatric patient care

. community hospital
. regional health center

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B. Teaching

. University of Washington
Pediatric graduate medical education

C. Research

. attract and maintain quality staff
. need for research and clinical areas on same campus

IV. Future Planning Parameters

A. Solutions/plans must be fluid

B. Problems in Master Planning

C. Strategic Planning more difficult than in past regulatory environment

V. Strategic Directions - plans which encourage the operation of a fiscally sound organization that maintain quality tertiary care (including teaching and research) with the capability to provide total pediatric healthcare needs for the children of the Pacific Northwest.

A. Networking

. emergency transportation system (ground, fixed wing and rotary) to COHMC as well as back to community of origin
. decentralization
. management of pediatric care
. evaluation of partnerships with organized multi-hospital systems
. national networking

B. Research/Teaching

. Medical Office Building
. Community Education

C. Preferred Provider arrangements

dj
1/13/86

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SEPT 23, 1986

I WOULD APPRECIATE THE FOLLOWING QUESTIONS BEING RAISED/ANSWERED AT THE SEPT 23 DCLU HELISTOP HEARING. THE QUESTIONS PERTAIN TO STATEMENTS IN THE COH DRAFT E.I.S. REGARDING HELICOPTER OPERATIONS.

1. Pg 45, para 2 : WILL THERE BE NIGHT LANDINGS AT COH?
   para 3 : SURFACE WIND DATA FOR LANDINGS AT COH SHOULD NOT APPLY AS SANDPOINT IS APPROX 1½ MILES N.E. ON FLAT TERRAIN. WILL AIRLIFT NORTHWEST OR COH HAVE A TRAINED WEATHER OBSERVER AT THE HOSPITAL TO ACCURATELY REPORT ACTUAL WEATHER CONDITIONS AT THE HELIPAD DURING ADVERSE WEATHER? IF NOT, WHY NOT?

   ARE ALL AIRLIFT NORTHWEST PILOTS INSTRUMENT QUALIFIED? I.E. "IFR RATED" PILOTS.

2. pg 67, para 3 : WHY DO AN PILOTS HAVE THE "OPTION" OF USING FAA WEATHER MINIMUMS OR A.N. WEATHER MINIMUMS? TWO SETS OF STANDARDS MAY LEAD PILOTS TO FEEL PRESSURE TO FLY UNDER MARGINAL WEATHER CONDITIONS.

3. pg 68, para 1 : "AIRLIFT NORTHWEST WOULD ONLY LAND AT COH IN CONDITIONS OF GOOD VISIBILITY." WHAT EXACTLY DOES A.N. CONSIDER "GOOD VISIBILITY"? CEILING AND HORIZONTAL VISIBILITY?

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4. Pg 69 para 3 : EIS STATES THAT "AIR TAXI HELICOPTERS ARE EXAMINED AND FLIGHT TESTED BY THE FAA AT LEAST ANNUALLY." THIS STATEMENT IS INCORRECT. FAA DOES NOT FLIGHT TEST HELICOPTERS ANNUALLY. AIRLIFT NORTHWEST SHOULD CLARIFY THIS STATEMENT.

THANK YOU.

RICHARD L. MERRELL
4541 51ST AVE NE.
SEATTLE 98105
525-7005

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AIR TAXI part 91 - 121

Pg 45, Para 2

* NIGHT LANDINGS? STANDARDS ALSO APPLY AT NIGHT (WX MINS) ONLY DAY STANDARDS MENTIONED.

*** WHO ESTABLISHES OR REPORTS EXISTING WX CONDITIONS AT CHILDRENS - WX OBSERVER?

* 300/½ = IFR → IS THERE AN ESTABLISHED IFR APPROACH PROCEDURE I.E. ILS TO THE HELIPAD / missed approach

Para 3 * SAND POINT WX DATA NOT RELIABLE - LOCATED APPROX 1½ MI NORTH EAST FM COH AT LOWER ELEV.

Para 4 * ALTITUDES CITED IN MSL OR AGL? G/P depicted but where is inst
Fig 7 pg 41 approach procedure

para 1 * NO PAD LIGHTING DURING DAY, POOR WX LANDINGS?
pg 45

para 4 * WHAT ARE ANs "GUIDELINES" ON ACCEPTABLE WX CONDITIONS - CITED AS
pg 49 "MORE RESTRICTIVE THAN FAA". Pg 45 para 2 "pilots have OPTION TO USE COMPANYS guideline OF 500/OR LESS THAN 1 mi. HOW MUCH LESS?

para 2 * WHAT IS POSITION/POLICY OF AN W/REGARD TO "PILOTS WILLINGNESS TO FLY
pg 62 IN ADVERSE WX WHEN OTHER comm HELICOPTER PILOTS WOULD NOT FLY"

para 3 * REASONS FOR ACCIDENTS - POOR VIS, LACK OF EXPR W/LOC AREA, OBSTRUCTIONS
pg 64 panicky Behavior of Ground personnel - AN GROUND PERSONNEL always on COH TO ASSIST?

para ● * accidents - caused by Pilot error in POOR VIS.
pg 66 * Completely wrong - IFR/VFR - Terrain does not determine MIN A FLIGHT Visibility
para 2 rules - landing minimums may be effected IFR IS IFR
(may not apply to arguements)

para 3 * Pilot has "option" to fly under FAA OR AN rules contradicts motivation, AN rules
pg 67 * which are "more restrictive" - which rules does AN pilot operate under Para 3
SEE PG Co rules stated as 500/or less than 1 mi / pg 45 para 2 and 500/1 pg 67

para 1 * what does AN consider "marginal WX conditions" and what does AN
pg 68 consider "conditions of good visibility" - how does helicopter descend thru an overcast or broken layer of clouds at COH

para 3 * FAA FLIGHT TESTS AIR TAXI helicopters at least annually? Frank Benedict
pg 69 * CK annual route pg 56 wrong 300/½ VIS FOR HELICOPT airspace
* are AN Pilots all IFR Qualified? see and avoid

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Dear Mr. Merrell,

Thanks for your helpful comments to the Laurelhurst Letter Opinion Poll.

Here is a copy of the draft environmental impact statement (DEIS) for the proposed helipad for Children's Hospital. A DEIS hearing is scheduled for September 23 at 6 p.m. at the Laurelhurst Elementary School (N.E.45th at 46th N.E.). Written comments are due by October 2.

We are particularly interested in having comments related to the Intramural Field Alternative (page 49) and the Limited Landing Alternative (page 55).

A noise expert is reviewing this DEIS and we are searching for an expert to review safety factors. A recent AMA News article and a CBS t.v. news item have brought the safety problems of hospital based helicopters to public attention.

Any ideas here?

Any comments you might come up with would be greatly appreciated. If you don't want to submit them in your name, please send them to me. We appreciate any insights you might have. There is so much "hoopla" surrounding this issue, that we are grateful for any careful, considered views on this subject.

Thanks for your help.

Sincerely,

Jerry

Jerry B. Schneider
September 15, 1986

5003 45TH N.E.

5003 45NE
Seattle 98105
524-9340

91:105 - VFR - 1 mi Statute mile 1200 AGL unless VFR
135:205

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9-23-86 Bart Baxter

3905 48th PL NE
Seattle, WA 98105
September 23, 1986

Julia Gibb
City of Seattle Department
of Construction and Land Use
Room 408
Municipal Building
Seattle, Wa

Dear Ms. Gibb:

For six years I was a Search and Rescue pilot for the U. S. Coast Guard. I also served for three more years as the Senior Controller in the Coast Guard's Rescue Coordination Center located atop the Federal Office Building downtown. I was responsible for information processing, planning, and launching helicopters from Astoria, North Bend, and Port Angeles, and fixed-wing aircraft from Sacramento and Kodiak. I have worked extensively with MAST, the National Guard, Navy helicopters from Whidbey Island, and the Air Force in conjunction with the National SAR Plan. I am a graduate of the National Search and Rescue School in New York. I have personally been involved in hundreds of search and rescue operations and medical evacuations on both coasts, the Caribbean, Mexico, Alaska, and the South Pacific. I am currently a Captain for Alaska Airlines. I am the 737 Safety Representative for the Airline Pilots Association, and recently completed the Association's Accident Investigation School in San Diego, California.

It is my professional opinion that the Children's Hospital and Medical Center Helistop Proposal is neither necessary nor safe.

It takes 2½ minutes, in rush hour traffic, to drive from the University of Washington Intramural Field to the door of the Emergency Room at Children's Orthopedic Hospital. On Table 2 (p. 14) of the DEIS, from August, 1985 thru June, 1986, the average one-way flight time (from pick-up of the patient to arrival at COH) was one hour and four minutes (1+04). If two of the longer flights are excluded, the average flight time is 46 minutes. The total mission time, including flight time from Boeing Field to COH to pick up the Medical Team, flight time to arrive at the accident scene or the referring hospital, and return to COH, is at least twice the amount of time reported in the DEIS. This does not take into account the initial medical evaluation time, the decision making process, notification, flight planning, and the preflight checks of the aircraft. The time frame we are discussing is obviously not minutes and seconds. In nine years of hands-on operations, I never, ever saw the outcome of a single mission determined by 2½ minutes.

The DEIS would have you believe that the jostling sustained in the transfer from helicopter to ambulance might be dangerous to a critically ill child. Turbulance is primarily caused by low

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level winds. Even light winds, when associated with buildings, hills, or trees can cause moderate to severe turbulance from the surface up to 2000 or 3000 feet in altitude. This, of course, is exactly the operating regime of most helicopters.

I can personally guarantee that the smoothest part of a child's ride will be when it is carefully lifted by the paramedics from the helicopter and placed in the ambulance. To assert that a professional medical team will jostle a small child more than a 46 minute helicopter ride is nonsense.

While the necessity of the proposal seems contrived at best, the safety issues are very real.

The current helicopter landing sight at the University of Washington Intramural Field allows a wide-open, normal, controlled approach profile from all quadrants with no obstructions. The proposed helicopter landing sight at COH is surrounded by hills, tall trees, power lines, tall buildings, an elementary school and a densely populated residential area.

The approach profile proposed by Airlift Northwest calls for a 1500 ft/min rate of descent. A normal approach by a commercial jet aircraft is based on a 500-700 ft/min rate of descent. Remember how that feels on your ears and sinuses and thentry to appreciate the damage possible to a small child with a descent rate three times as great.

The proposed flight path also calls for excessive maneuvering in downwind landing situations. This is always a critical maneuver, but is made more so by the lack of escape routes from the proposed landing sight. A helicopter simply does not enter or sustain hover as well downwind, and a downwind departure with full fuel tanks, medical personnel, and at maximum gross weight, could be particularly demanding.

Emergency Medical Operations are conducted under the rules of Part 135 of the Federal Aviation Regulations. When operating under the Visual Flight Rules of this Part, helicopters must maintain 300 ft altitude over congested areas except in the landing environment. They must not operate under Visual Flight Rules when the in-flight visibility, as observed by the pilot, is less that one-half mile. Contrary to the testimony of the Airlift Northwest pilot in the DEIS, there is no FAA minimum ceiling specified for helicopters.

There are no FAA weather minimums, other than visibility and icing that are restrictions on Part 135 helicopter operations and inflight visibility is determined by the pilot and if the pilot, based on his observation of the weather, believes there might not be icing conditions, regardless of forecasts, then this restriction does not apply.

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FAR Part 135.213(a) states that for operation under VFR, the pilot in command may, if a National Weather Service weather report is not available,"use weather information based on the pilots own observations...."

Under Part 135, and EMS pilot is limited to eight hours flight time in a twenty-four hour period, except in the event of bad weather when there is no restriction.

It is reasonable to assume that a helicopter pilot will do everything in his power to transport a critically ill child, even into a marginal landing environment.

Given a single piloted aircraft, such as the Agusta, in marginal weather conditions, the pilot must not only maintain aircraft speed, altitude, and attitude monitor critical engine operating parameters, and maintain navigational guidance by reference to his instruments, but he must also maintain visual reference with the surface, all the while talking on the radios and maneuvering his aircraft to avoid obstacles such as hills, trees, power lines, tall buildings. and elementary schools.

There is no question that helicopters play a vital role in the transport of critically ill patients.

I would only ask that you consider the following. First, the need for a helicopter landing site 2½ minutes closer to Children's Orthopedic Hospital is negligible.
Second, the shift from a wide open, inherently safe landing site, to a congested, difficult, and demanding landing site invites incident ranging from the merely injurious, to the catastrophic.

If for some profit motive or marketing consideration this proposal is considered favorably and is brought to fruition, and if one small child dies or is seriously injured as a result of this senseless plan, this community and the city of Seattle should be morally outraged.

Sincerely,

Bart E. Baxter

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Seattle
Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

October 10, 1986

RE: Comments on Draft Environmental Impact Statement (DEIS)
For Children's Hospital Helistop

Frank Chestnut, Director
Certificate of Need Program ET-33
Department of Social and Health Services
Olympia, Washington 98504

Dear Mr. Chestnut:

Our comment period for public and agency comments on this document has been extended until October 17.

We held a hearing on the DEIS on September 23 and took testimony from a number of individuals, agency representatives and legislators. Numerous written comments have also been received on issues of medical need for the helistop, noise, safety, alternative sites, cumulative effects and other topics.

Because your agency is one with some expertise and/or jurisdiction over medical emergency transport matters, we believe the DEIS will benefit from your review and comments to us.

Thank you for your consideration of this request. If you have questions please feel free to call Julia Gibb at 625-4509.

Sincerely,

HOLLY MILLER
Director

By
KATY CHANEY, Director
Land Use Division

JG:vg

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Lucy Steers
Land Use Chair
League of Women Voters of Seattle
1402 18th Avenue
Seattle, Washington 98122

Allied Arts of Seattle
107 S. Main Street
Seattle, Washington 98104

SEPA Register
Dept. of Ecology
Mail Stop PV-11
Olympia, Washington 98504

Lloyd David, Dir. of Planning
Harborview Medical Ctr.
325 9th Av.
Seattle, WA. 98104

Dr. Lothar Pinkers
1201 116th NE
Bellevue, WA 98004

Seattle Area Hospital Co.
190 Queen Anne Av N,
3rd Floor
Seattle, WA 98109

Citizens Concerned About Helicopter Transport
C/o Liz Anderson
4746 45th Av NE
Seattle, WA 98105

University of Washington
University Hospital
Seattle, WA 98195

Commander, 54th Medical Detachment
Attn Capt. Dan Madden
U.S. Army 54th M.A.S.T.
Fort Lewis, WA 98433

Frank Benedict,
Flight Standards Division
Federal Aviation Admin.
7300 Perimeter Rd. South
Seattle, WA 98108

Ms. Sally Marks
Campus Planning Office
FJ-05
University of Washington
Seattle, WA 98195

Frank Chestnut, Director
Certificate of Need Program
Dept. of Social & Health Serv
Olympia, WA 98504

King County Medical Society
200 Broadway
Seattle, WA 98122

WA State Hospital Assn.
190 Queen Anne Av N
3rd Floor
Seattle. WA 98109

Dr. Michael Copass, MD
Airlift N.W.
325 9th Ave
Seattle, WA 98104

Larry Thompson, Executive Dir
Puget Sound Health Systems Agency
601 Valley Street
Seattle, WA 98109

Dr. Jay Kranz
801 Broadway, Suite 927
Seattle, WA 98122

WA Natural Gas
815 Mercer Street
P.O. Box 1869
Seattle, WA 98111

King County Medical Societ
Attn Michael Reese
200 Broadway
Seattle, WA 98122

King County EMS Coord. Co.
c/o Jack Cvitanovic
EMS Section
1112 So. Quince
MS ET-34
Olympia, WA 98504

Seattle Times
Attn: Ms Polly Lane
P.O. Box 70
Seattle, WA 98111

WA State Medical Association
2033 6th Ave
Seattle, WA 98101

Susan Berg
University Herald
1225 N 43rd
Seattle, WA
98103

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Director, Environ. Evaluation
Environmental Prot. Agency
1200 6th Ave MS 443
Seattle, WA 98101

Dept. Social & Health Services
Water Supply & Waste MS LD-11
Olympia, WA 98504

Director
DCD
09 - 03 - 02
(3 copies)

Reg. Director Dept. Commerce
Economic Development Assoc.
1700 Westlake Ave N. #500
Seattle, WA 98109

Director
WA State Historic Office
111 W. 21st Ave MS KL-11
Olympia, WA 98504

Chief
Fire Department
04-44-04

Dick Moore, Env. Officer
Community Planning
Dept. Housing & Urban Dev.
Arcade Plans 10.3.SS
Seattle, WA 98101

Planning & Community Affairs
400 Capitol Center Bldg FN-41
Olympia, WA 98504

Chief
Police Department
02-04-01
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Environmental Manager
METRO MS 63
821 Second Ave
Seattle, WA 98104

Commerce & Economic Dev.
101 Gen. Admin. Bldg. MS AX-13
Olympia, WA 98504

Director
Human Resources
09-01-01

Mr..A.R. Dammkoehler
PSAPCA
P.O. Box 9863
Seattle, WA 98119

City Council
01-11-01

Superintendent
Water Department
99-11-01

Ms. Barbara Hastings
PSCOG
216 First Ave S
Seattle, WA 98104

Law Department
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Bill Roach, Program Manager
METRO
Exchange Building 99-01-01

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Engineering Department
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Daily Journal of Commerce
P.O. Box 11050
Seattle, WA 98111

Director
Health Department
09-07-01

Director
Parks Department
01-02-10

Seattle Times
Attn: Ms. Polly Lane
P.O. Box 70
Seattle, WA 98111

Office of the Governor
Legislative Building
Olympia, WA 98504

G. Voorhees
Design Commission
Dept. of Community Development
09-03-02

Seattle P.I. Real Estate
521 Wall Street
Seattle, WA 98121

Dept. of Transportation
District Design Engineer
Environmental Review
9611 S.E. 36th St
Mercer Island, WA 98040

Ms. Judith Fleminas
Citizen Service Bureau
01-01-05

Land Use & Transportation
Project
01-02-06

Jerry Jermann, Director
Public Archaeology, U of W
3 8 Engineering Annex FM-12
Seattle, WA 98195

Superintendent
City Light
05-[illegible]

Office of the Mayor
01-12-01

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Claire A Marston
4250 N.E. 50th
Seattle, WA 98105

Russ Altermatt
Seton, Johnson & Odell
133 S.W. Second
Portland, OR 97204

Representative Joanne Brekke
State House Committee on
Social & Health Notification
House Office Bldg, 2nd Floor
Olympia, WA 98504

E A Lincoln
4708 41st Ave N.E.
Seattle, WA 98105

Pat Lundquist
4685 41st Ave N.E.
Seattle, WA 98105

Lois Jean Zander
4679 41st N.E.
Seattle, WA 98105

State of Washington
Dept. of Transportation
Div. of Aeronautics
8600 Perimeter Rd
King County Int'l Airport
Seattle, WA 98108

Albert A Feldmann
4873 Terrace Dr N.E.
Seattle, WA 98105

Seattle-King County Hospital Soc
2161 E Hamlin
Seattle, WA 98102

Leo C Johnston
4200 N.E. 50th St
Seattle, WA 98105

Gordon F Vickery
2621 Second Ave Ste 1804
Seattle, WA 98121

Kathleen McHugh Johnston
4200 N.E. 50th
Seattle, WA 98105

Richard Gibson MD
Calawah Medical Clinic
R.R. 3 Box 3575
Forks, WA 98331

Councilmember Jeanette Williams
City Council
01-11-01

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Dir of Planning
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1959 N.E. Pacific St
Seattle, WA 98195

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Forks Women's Clinic
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Karen Olson Rasmussen
Law Offices
Franklin & Watkins
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Robert D McCroskey
3329 W Laurelhurst
Seattle, WA 98105

David A Bricklin
Suite Fourth & Pike Bldg
1424 Fourth Ave
Seattle, WA 98101

John Kehoe
5208 N.E. 50th
Seattle, WA 98105

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RECEIVED
APR 29 1986
DEPT. OF CONST. & LAND USE

City of Seattle
Charles Royer, *Mayor*

King County
Tim Hill, *Executive*

Seattle-King County Department of Public Health
Bud Nicola, M.D., M.H.A., *Director*

April 25, 1986

Larry Thompson, Executive Director
Puget Sound Health Systems Agency
601 Valley Street
Seattle, Washington 98109

Dear Larry:

I am writing to give you my comments on the Puget Sound Health Systems Agency's proposed plan for air ambulance (helicopter) services. First, let me apologize for the delay in responding. In the last month, my staff and I have had an opportunity to review the proposal and the issue generally with County Executive Tim Hill, representatives of the Mayor's Office and key County Council members. I would summarize our general comments as follows:

1) There is a consensus on the need to develop such a plan. We are on the threshold of a major change in pre-hospital emergency medical services and in the relationship between providers and the hospital community. In addition, inter-hospital relationships are being affected by the introduction of air ambulance services. The relationship of local community hospitals throughout the Puget Sound basin to the tertiary care centers in the Seattle-Tacoma metropolitan area may be the major factor influencing the development of air ambulance services.

2) There is a need to coordinate the development of such a plan with others who are already working on this issue. The Washington State Medical Association Emergency Medical Services Standards Committee has appointed a special Task Force to deal with helicopter medical standards. Their charge is to develop medical indications or "user guidelines" for the use of helicopters in patient transportation. I have attached for your information a memorandum from Lothar Pinkers, M.D., dated February 21, 1986, that outlines the Task Force's agenda.

   The WSMA Task Force will be addressing many of the items identified in your proposal. I believe they will be establishing a framework for further planning. They are hoping to have a final report by June, 1986.

   There is also talk of incorporating air ambulance service planning into a statewide EMS planning effort.

400 Yesler Building Seventh Floor Seattle, Washington 98104 (206) 587-4600

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3) It seems essential that any planning effort be broader in scope than just Seattle and King County. I realize this is a change from what we discussed previously, but upon further reflection, it just does not seem realistic to focus on Seattle and King County when the operation of air ambulance services will undoubtably be multi-county in scope. If the planning process is too narrow, it will lack credibility with other potential users on our borders and beyond.

In summary, it is my recommendation that the Puget Sound Health Systems Agency look to broadening the geographical scope of a plan for air ambulance services. It is imperative that those entities outside of Seattle and King County with an interest in such a plan be included in the process from the beginning. Secondly, the Health Systems Agency's planning effort should compliment the Washington State Medical Association's activities. In fact, it should probably follow and expand upon their work.

Finally, I understand your agency is involved in reviewing a Certificate of Need for helicopter services in Bellingham. How does that fit into this evolving situation?

I would ask that you contact Steve Call, Manager of the Emergency Medical Services Division, at 344-4293, to schedule a meeting to discuss where we go from here.

Thanks for your efforts to date. I look forward to working with you.

Sincerely,

Bud

Bud Nicola, M.D.
Director of Public Health

BN:SC:rh
Enclosure

cc: Steven Call, Manager, Emergency Medical Services Division
Katie Chaney, Director, Land Use Division, Department of Construction and Land Use
Jim Kruger, King County Council Staff

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WSMA
Washington State Medical Association
Governmental Affairs Office, 410 East 11th Avenue, Suite 210, P.O. Box 2376, Olympia, Washington 98507-2376
(206) 352-4848 1-800-562-4546

MAR 3 1986

February 21, 1986

MEMO TO: MEMBERS, WSMA EMERGENCY MEDICAL SERVICES STANDARDS COMMITTEE

FROM: LOTHAR H. PINKERS, MD, CHAIRMAN

SUBJECT: APPOINTMENT OF TASK FORCE MEMBERS -- NON-MEMBERS, FOR INFORMATION ONLY

Following the instructions of the committee at its last meeting, I am asking the following physicians to meet as a special committee dealing with helicopter medical standards: Drs. Gregory Brown, Michael Copass, Michael Carlson, Mark Jergens, Jay Kranz, Marvin Wayne, and Ron Richeson. Dr. Richeson will be chairman.

The charge to the subcommittee is to develop medical indications or "user guidelines" for the use of helicopters in patient transportation. They should consider at least the following items:

1. The medical indications for prehospital transfer.

2. The medical indications for interhospital transfer, including the use of rotary as opposed to fixed-wing aircraft.

3. Develop descriptions for flight crews and indications for the use of the various levels. For instance, flight paramedics, flight nurses, flight physicians.

4. Effective interaction between air and land services. Among these, they need to consider:

   A. The need to have land units financially survive (they are needed to provide backup when air units cannot fly and for primary patient care before flying).

   B. The development and designation of land-air transfer points in order to reduce total flight time and total patient care time; that is, having land-based units run from an area of origination and meet with an outward-bound air transfer unit somewhere in between.

   C. Patient survival and safety specs for either roundtrip pick-up and return by the flight crew coming from their area of origin versus one-way flight from the hospital or patient origin with perhaps a slightly different level of flight crew availability.

There are several givens in this discussion. One of these is that helicopters are a useful instrument in patient care. Two is that they are expensive to operate and maintain. Three, patient care protocols must be designed such that the MAST continues to function in Western Washington.

I would like to set a tentative reporting schedule of progress report at the end of April 1986 and a final report to the whole committee in June 1986.

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JULIA GIBBS
DCLU
01-04-03

PUGET SOUND HEALTH SYSTEMS AGENCY
Serving The Ten-County Northwest Washington Area
601 Valley Street / Seattle, WA 98109 / (206) 464-6143

LARRY A. THOMPSON
Executive Director

February 21, 1986

Bud Nicola, M.D., M.H.S.A.
Director of Public Health
Seattle-King County Health Department
Seventh Floor
400 Yesler Building
Seattle, Washington 98104

Dear Bud:

Enclosed, as I promised, is a proposal for an intensive planning activity leading to policies which will shape the appropriate development of air ambulance services. Based on our prior discussion, I understood that a detailed proposal turned back around to you quickly was in order given the increasing gravity of the EMS situation and necessary approval lead times.

I do not have addresses for attendees at the February 5 meeting. Could you forward this proposal to them? Also, it was my understanding that you would be responsible for preparing any necessary internal reviews and ordinances. Needless to say, we are quite willing to discuss modifications or other related issues.

As you will note, this proposal has been developed at a very reasonable cost. PSHSA shares the City and County's interest in effectuating an early improvement in the development of this service.

Sincerely,

Larry A. Thompson

Larry A. Thompson
Executive Director

LAT:rs:R
Enclosure

RECEIVED
FEB 24 1986
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT OF PUBLIC HEALTH

Copies sent to: Katie Chaney
Julia Gibbs
Cynthia Sullivan
Jim Kruger
Steve Call

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PROPOSAL FOR THE DEVELOPMENT OF AIR AMBULANCE SERVICES IN KING COUNTY AND THE CITY OF SEATTLE

Puget Sound Health Systems Agency
601 Valley Street
Seattle, Washington 98109
Telephone: (206) 464-6143

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PROPOSAL FOR THE DEVELOPMENT OF AIR AMBULANCE
SERVICES IN KING COUNTY AND THE CITY OF SEATTLE

PROJECT GOALS

To develop a plan and implement strategies which will best assure the rational integration and coordination of air ambulance services with the EMS system of King County and the City of Seattle. The plan is to be developed using the advice, guidance, and involvement of affected parties, and the implementation strategies are to consider region-wide and state-level alternatives and impacts.

PROJECT OBJECTIVES

1. Assess the current status of air ambulance services in King County and describe the development trend of this service in other locations across the nation.

2. Identify and assess current and projected problems and service needs with respect to air ambulance services.

3. Develop goals for development of this service and criteria for evaluation.

4. Identify and assess a series of alternatives to meet identified problems and needs.

5. Evaluate and select from among various policy options available for implementing the plan.

PHASES OF THE PROJECT

Phase I: Preliminary Organization

The first phase of the project will allow the Puget Sound Health Systems Agency (PSHSA) to meet with the County and City to finalize the project work plan including agreed-upon methods for involving affected parties in the execution of this project. The appropriate structure for a project steering committee will be agreed upon. In addition, details of governmental agencies' involvement will be finalized.

Tasks

1-1 Review scope of the project and establish precise definitions for which the plan is being prepared with the sponsors.

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1-2 Review and agree upon tasks outlined in the proposal.

1-3 Establish role and membership of steering committee.

1-4 Establish review and comment procedures.

1-5 Clarify relationship between the affected parties, e steering committee, PSHSA as contractor, and the county and city as sponsors.

1-6 Compile an affected parties list and identify liaison persons.

1-7 Recruit and orient steering committee members.

Phase II: Develop Goals and Criteria

The first objective of this phase is to establish a statement of goals for air ambulance services which identifies the general direction and intent of the service. Second, a set of criteria will be developed which operationally defines the intended results described in the goal statement and permits the measurement of effectiveness of the service.

Tasks

2-1 Draft goal statements for air ambulance services.

2-2 Draft a set of criteria to measure the effectiveness of air ambulance services.

2-3 Conduct a review with affected parties.

2-4 Conduct steering committee review, modification and adoptions of the criteria and goals.

Phase III: Conduct Inventory and Analysis

The third phase of the project will establish an inventory of current service providers and baseline information with respect to the air ambulance services.

Tasks

3-1 Identify current service providers including modalities offered and geographic coverage.

3-2 Review transport records to determine patterns of use, numbers and types of transports, costs of service.

3-3 Review transport records from selected locations outside of King County to establish use patterns from outlying areas.

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3-4 Analyze the information gathered through the inventory and establish baseline information on air ambulance services.

Phase IV: Identify Problems and Conduct a Needs Assessment

The first objective of this phase is to identify problems with the current system especially the existing relationships of air ambulance services to the County/City EMS system and the total health care system. Second, a needs assessment to determine the gaps in service will be conducted. To accomplish this objective a review of literature and existing systems throughout the country will be completed. Third, a method to assess the needs of the city and county's population will be developed. Finally, using a "key informant" survey, local key problems and issues will be identified.

Tasks

4-1 Review industry and clinical literature.

4-2 Assess and/or shape local clinical consensus on indications for air transport.

4-3 Develop need projection model and make preliminary estimate of need for services.

4-4 Conduct a key informant survey to identify local problems.

4-5 Using literature review, key informant survey, and needs assessment, develop a listing of key problems and policy issues involving air ambulance services.

4-6 Steering committee review of problems and needs assessment.

Phase V: Development and Analysis of Alternatives

The objective of this phase is to identify a series of policy alternatives which could address the problems and goals identified through earlier tasks in this planning process. Examples of such alternatives might include various types of franchising, licensure and certification laws, land use controls and influence over third-party reimbursement.

Alternatives will be analyzed in terms of their probable short and long range impact and in view of their political and technical feasibility. Competing and complementary alternatives will then be screened in view of their desirability as measured by the project's adopted criteria.

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Tasks

5-1 Develop alternatives through discussion with various regulatory and non-regulatory authorities and with affected parties.

5-2 Measure each alternative against the established criteria and analyze the effect of each alternative.

5-3 Steering committee selects desired alternatives.

Phase VI: Develop and Adopt Plan for Air Ambulance Services

The objective of this phase is to bring together in a comprehensive plan all of the information gathered on the current situation and projected needs; the identified problems and potential strategies with policy implications; and the desired alternatives with rationale. Time has been allocated during this phase for review by both the affected parties and the general public.

Tasks

6-1 Combine information and decisions from prior steps in a draft plan.

6-2 Steering committee review of draft plan.

6-3 Release draft plan for public review.

6-4 Conduct public hearing and consider comments received.

6-5 Steering committee approves redrafted plan.

6-6 City and County comment and propose revisions.

6-7 Final adoption by steering committee.

6-8 Plan transmitted to city and county for policy use.

Phase VII: Develop Implementation Action Plan

The objective of this phase is to make specific suggestions about who should be responsible for implementing the plan and what action steps will be needed in order to implement the plan.

Tasks

7-1 Identify organizations which are responsible for implementing each of the principal recommendations in the plan.

7-2 Discuss recommendations with each organization, discuss implementation and suggest assignment of roles for implementing.

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7-3 For each recommendation develop a time line and action steps.

7-4 Present the implementation action plan to the city and county for follow-up and evaluation.

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BUDGET

Professional Fees	Billable Hours	Budget	
Phase I Activities	37	$ 1,387.50	
Phase II Activities	38	1,425.00	
Phase III Activities	140	5,250.00	
Phase IV Activities	306	11,475.00	
Phase V Activities	178	6,675.00	
Phase VI Activities	76	2,850.00	
Phase VII Activities	130	4,875.00	
	Subtotal		$33,937.50

Material Costs*		
Printing/Copying, Postage	$ 860.00	
Public Notices	150.00	
Travel Expenses	250.00	
Computer Time	380.00	
Subtotal		$ 1,640.00
Total		$35,577.50

* The costs shown in this section are extraordinary costs associated with steering committee activity, affected party review, analysis and development of projection method and public review. All other associated project costs are included in the hourly billing rate.

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ASSUMPTIONS MADE IN THE BUDGET

1. PSHSA will coordinate meetings and agendas for six (6) meetings of the Steering Committee. Coordination will include developing and sending the agenda; setting up meeting sites; recording and distributing meeting summaries. It is assumed that there will be between seven (7) and twelve (12) members on the Steering Committee. If PSHSA is asked to conduct additional meetings of the Steering Committee the estimated cost is $560 per meeting.

2. Budget estimates are based on involvement of affected parties during key points in the project. It is assumed that there will be approximately twenty (20) liaison individuals on the affected party list. Affected party reviews will be held three times during the project. Cost of each additional affected party review is approximately $275.

3. Budget estimates include interviews with 20 key informants to assist with problem identification. Additional key informants could be added to the survey at a cost of $87.50 per individual. If desirable a phone survey of community representatives could be included during the problem identification phase; details and costs would have to be discussed.

4. PSHSA will rely on a locally selected Technical Advisory Group (TAG) to develop the local clinical consensus on indicators for air ambulance services. The TAG will meet twice and issue a report to be used by the Steering Committee. Extensive involvement of the TAG in modifications to the report (i.e., additional TAG meetings) will require additional resources. Cost is estimated at $167.50.

5. The need projection model developed in the course of this project is not intended to be used as an air ambulance need method. Therefore the model is not intended to be used, as developed, in the Certificate of Need or regulatory review process. The development of such a need method would involve extensive involvement of the health planning community and is outside the scope of this project. The model would be an essential starting point toward the development of a need method.

6. Budget estimates are based on one (1) public review period of thirty (30) days and one (1) public hearing on the Draft Plan for Air Ambulance Services.

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AIR AMBULANCE SERVICES PROPOSAL PRELIMINARY TIME LINE*

BENCHMARKS IN:	TASKS:	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Phase I: Preliminary Organization															
Project Organization	1-1 thru 1-6	2wks													
Steering Committee Orientation	1-7		2wks												
Phase II: Develop Goals and Criteria															
Drafts Complete	2-1 and 2-2		1wk												
Affected Party Review	2-3			2wks											
Steering Committee Review	2-4				3wks										
Phase III: Conduct Inventory and Analysis															
Inventory	3-1 thru 3-3				2wks										
Analysis	3-4					1wk									
Phase IV: Identify Problems and Conduct Needs Assessment															
Literature Review	4-1					1wk									
Clinical Indicators	4-2					2wks									
Modeling	4-3						4wks								
Key Informant Survey	4-4						2wks								
Draft Prep and Affected Party Review and Steering Committee Review	4-5 and 4-6							4wks							
Phase V: Development and Analysis of Alternatives															
Draft of Alternatives	5-1 and 5-2								3wks						
Affected Party and Steering Committee Review	5-3									3wks					
Phase VI: Develop and Adopt Plan for Air Ambulance Services															
Draft Plan - Steering Committee Review	6-1 and 6-2										4wks				
Public Review	6-3											4wks			
Final Adoption	6-4 thru 6-8												4wks		
Phase VII: Develop Implementation Action Plan															
Community Implementation Discussions	7-1 and 7-2													4wks	
Timeline/Action Plan Developed	7-3 and 7-4														4wks

*Timeline has been established based on affected party reviews throughout the project and a 30-day public review during Phase III of the project.

DAVIS WRIGHT & JONES

LAW OFFICES

A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS
2600 CENTURY SQUARE · 1501 FOURTH AVENUE · SEATTLE, WASHINGTON 98101-1688
(206) 622-3150

RECEIVED
AUG 22 1986
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

MITCHELL J. OLEJKO

August 21, 1986

HAND DELIVERED

Julia Gibb
Land Use Specialist
City of Seattle
Department of Construction
and Land Use
400 Municipal Building
600 Fourth Avenue
Seattle, Washington 98104

Re: Children's Hospital & Medical Center -- Timetable for Helistop Conditional Use Permit Application

Dear Julia:

This letter will follow-up on and confirm the agreements reached at our meeting of August 13, 1986, relating to the timetable for proceeding with the processing of CHMC's Helistop conditional use permit application through both the EIS and Hearing Examiner hearing.

First, we agreed that the City and CHMC agree to adhere to the enclosed timetable for processing this application. In connection with the processing of this application, CHMC will mail notices relating to the draft EIS publication, the issuance of the final EIS and the hearing date for the Hearing Examiner's hearing.

Second, we will now seek agreement from both DCLU and the Hearing Examiner's office that the dates proposed for the hearings are reserved now so that they will be available for these hearings.

I also wanted to make one comment about the handling of the Environmental Impact Statement and the Environmental Impact Statement hearing. My understanding is that the determination of whether the project is permitted as a Council conditional use because it affects persons in "life threatening" emergencies is primarily an issue for the Hearing Examiner's

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hearing during the week of January 5, 1987, and that it is not an environmental issue.

In closing, I would ask that at any time during the schedule when it would be possible to expedite the proceedings, that those steps be undertaken; you can be assured that we will also do so.

I think it is only fair to both the applicant and those who are truly interested in a resolution of the issue to obtain a prompt and full determination.

Very truly yours,

DAVIS WRIGHT & JONES

Mitchell J. Olejko

MJO:jt
Enclosure
0245L

cc: Katie Cheney
Ann Ornsby
Nancy Greenawalt
Glen Bachman
John Keegan

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DAVIS WRIGHT & JONES

Law Offices

A Partnership Including Professional Corporations
2600 Century Square · 1501 Fourth Avenue · Seattle, Washington 98101-1688
(206) 622-3150

Mitchell J. Olejko

August 22, 1986

RECEIVED
AUG 25 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Land Use Specialist
City of Seattle
Department of Construction
and Land Use
400 Municipal Building
600 Fourth Avenue
Seattle, Washington 98104

Re: Timetable for Children's

The enclosed Timetable for Children's was inadvertently omitted from some copies of my letter dated of August 21, 1986, so i thought I would send it again in the event you hadn't received it.

Very truly yours,

DAVIS WRIGHT & JONES

Mitchell J. Olejko

MJO:jt
Enclosure
5680V

cc: Katie Cheney
Anne Ormsby
Nancy Greenawalt
Glen Bachman
John Keegan

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TIMETABLE FOR CHILDREN'S
Conditional Use Permit Application

August 19	Camera-ready (3rd draft) DEIS submitted to DCLU for approval to print
August 25	Final recommended edits returned to SHAPIRO
September 2	100 copies DEIS submitted to DCLU
	DCLU issues document
	100 additional copies DEIS submitted to DCLU, with 50 additional copies to be provided within one week
September 23	Public Hearing on DEIS
October 2	Close of Comment Period
October 3	Meeting DCLU/EIS Author
October 16	Preliminary FEIS to DCLU
October 23	Review meeting
October 30	Second preliminary FEIS to DCLU
November 6	Review meeting
November 13	Camera-ready (3rd draft) FEIS submitted to DCLU for approval to print
November 17	Final recommended edits returned to SHAPIRO
November 24	FEIS issue date
December 8	DCLU Director's report issued
	Council consideration
January 5-9	Hearing Examiner Hearing
January 21-22	Hearing Examiner Decision

0324L

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Washington Natural Gas
A Washington Energy Company

May 31, 1985

RECEIVED
JUN 4 1985
SHAPIRO AND ASSOCIATES, INC.

Ms. Susan Killen
Shapiro & Associates
Smith Tower Bldg, Suite 1812
506 Second Ave
Seattle, WA 98104

Dear Ms. Killen:

I have reviewed the forthcoming helicopter landing pad at the Childrens' Orthopedic Hospital and your request to get our comments on the natural gas facilities located in the area adjacent to the proposed helipad. Washington Natural Gas Company has an existing 4-inch main located three feet south of the asphalt driveway coming easterly from Sandpoint Way NE towards the meter house at Childrens' Orthopedic Hospital. Our line does have a shut-off valve where the natural gas system can be shut off at a point on the west side of Sandpoint Way NE. The proposed helicopter pad does not appear to cause a great deal of concern as far as the location in relationship to existing meter house. The line from the meter house to the hospital is the property of the hospital, and if your plans are to install a 60-inch thick cement pad, it would be advisable to explore the relocation of the hospital's fuel line to clear the pad. WNG's responsibility is from the main in Sandpoint Way NE, up to our meter located at the meter house.

Enclosed please find a copy of our print showing the natural gas underground facilities in this immediate area.

If I can be of further assistance, please contact me at 622-6767, Ext. 250.

Sincerely,

Joe Jainga

Joe Jainga, Supervisor
Public Improvements

Enclosure

JVJ/605

815 Mercer Street (P.O. Box 1869), Seattle, Washington 98111, (206) 622-6767

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UNIVERSITY HOSPITAL
UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

RECEIVED
JUL 08 1986
SHAPIRO AND ASSOCIATES, INC

June 27, 1986

Treuman Katz
Chief Executive Officer
Children's Hospital and Medical Center
PO Box C-5371 ZC-10
4800 Sand Point Way NE
Seattle, WA 98105

Dear Treuman:

I am writing in response to the alternative cited in your E.I.S. for University Hospital (U.H.) to serve as a helicopter landing site for C.O.H. Critically ill children landing in helicopters at U.H. to be transferred via land vehicle to the Children's Hospital would not be a feasible alternative. As you are aware, the traffic volume in front of the hospital on Pacific Ave. N.E., and that which comes north off the Montlake Bridge past the stadium is frequently extremely heavy, which would impose a transfer problem from U.H. to Childrens. This is obviously not in the best interest of a child in need of acute and emergent medical care which is dictating the need for the air transport in the first place.

I would strongly urge that this alternative not be further considered.

Sincerely,

Irma Goertzen
Administrator

/k

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UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

Office of the Vice President for Finance and Administration

July 2, 1986

Mr. Trueman Katz
Childrens' Orthopedic Hospital
and Medical Center
4800 Sand Point Way Northeast
Seattle, Washington 98105

Dear Mr. Katz:

The University of Washington has reviewed the alternatives section of the Childrens' Orthopedic Hospital (COH) preliminary draft Environmental Impact Statement for use of a helipad at COH. One of the alternatives considered is use by COH of a permanent helipad to be constructed in the University's playfield. The University cannot support this alternative.

For a number of years, and for primarily humanitarian reasons, the University has permitted occasional and informal use of its playfields for helicopter landing of COH-bound patients. However, this location is far from ideal, and the University is anxious to regain its playfields for their intended purpose. The University has resisted numerous attempts to utilize the playfields for non-athletic purposes, and our long-range plans call for continued use of the fields for sports activities.

We urge that no further consideration be given to use of the University's playfields as a site for a permanent COH helipad. While we understand that consideration of alternatives is an important element of the review process, the University's position is that continued use of our fields, or construction of a helipad on them, are not feasible alternatives.

If you have any questions, please contact Sally Marks of our Campus Planning Office at 543-9071.

Sincerely,

Tallman Trask III
Vice President for Finance
and Administration

cc: Mr. James Collier
Mr. John Coulter
Ms. Sally Marks
Dr. Ernest Morris
Mr. Alan Tarr

306 Administration Building, AH-05 / Telephone (206) 543-6410

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NG

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

Office of the Vice President for Finance and Administration

August 28, 1986

Mr. Robert Klug
President, Laurelhurst Community Club
4326 N.E. 42nd
Seattle, Washington 98105

Dear Mr. Klug:

Thank you for your August 13 letter regarding a helipad in the University of Washington east campus area.

My July 2, 1986 letter to Mr. Katz of Children's Orthopedic Hospital (COH) was intended only to address the issue of a permanent helipad for COH on a University playfield. That question arose because a preliminary draft of the COH Environmental Impact Statement (EIS) for a helipad at the hospital discussed as an alternative a "Graves Field Helistop." My letter urged simply that "no further consideration be given to use of the University's playfields as a site for a permanent COH helipad"; it was not intended to necessarily rule out other sites in the east campus area, which might be used for patient transfers headed to COH, or University Hospital.

As you know, the University has begun the process of preparing an EIS on use of the helipad on the roof of the new east wing of University Hospital. That EIS will, of course, address alternatives. During our early work on the EIS, comments were received which requested specific consideration of an east campus alternative, which we will do. We now anticipate publication of the University's EIS by January 1987.

I should note, however, that some of the sites suggested in your letter do not appear to meet all the criteria for a permanent helipad. For example, sites 3, 4, and 5 are located within 1,000 feet of University housing at Laurel Village. It is also not clear that a site large enough to accommodate MAST helicopters could be provided on site 4 without encroaching on the adjacent playfield. Other considerations will have to be taken into account, including impact on the ecological research and wildlife areas, impact on the Center for Urban Horticulture, parking loss, and space demands of other University units.

306 Administration Building, AH-05 / Telephone: (206) 543-6410

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Work is proceeding on the University's EIS, but a determination of the site-specific alternatives to be considered probably cannot be made before the September 8 meeting of the Laurelhurst Community Club Board. I regret that a previous engagement will not permit me to attend that meeting, but I have asked Sedge Thomson to be there to answer any questions your group may have. We will keep you informed of our progress and notify you of the alternatives selected for discussion in the EIS as soon as that determination has been made.

I hope you find this letter responsive to your concerns. If you have any questions, please let me know, or call Sedge Thomson (543-4828) or Sally Marks (543-9071).

Sincerely,

Tallman Trask III
Vice President for Finance
and Administration

cc: Mr. James Collier
Mr. John Coulter
Mr. Treuman Katz
Ms. Sally Marks
Dr. Ernest Morris
Mr. Robert Muilenburg
Mr. Alan Tarr
Mr. Sedge Thomson

bcc: Mr. Kellor
Ms. McCray
Ms. Shawcroft

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Affairs Com.

AUG 20 1986

LAURELHURST COMMUNITY CLUB

Serving over 1600 homes.

August 13, 1986

Tallman Trask III
Vice President for Finance
and Administration
University of Washington
Seattle, Washington 98195

VICE PRESIDENT FOR
FINANCE AND ADMINISTRATION

AUG 19 1986

Dear Mr. Trask:

The Laurelhurst Community Club Board of Trustees has reviewed your letter of July 2, 1986 to Treuman Katz, Chief Executive Officer of Children's Hospital, regarding the possibility of locating a helipad in the Graves Field area to serve Children's Hospital needs. In your letter, we see no evidence that the University has closely examined some possible locations for a helipad that would meet Children's needs. Children's needs a paved, lighted and secure helipad that can be reached over a paved road. Further, the helipad should not be clearly visible from any heavily travelled road, should not be on a playing field, should not be closer than about 1000 feet to any residential buildings and should be easy to land on and take-off from in all types of weather.

We have identified five locations that appear to satisfy these criteria on enclosure I. The black circle represents approximately the area needed for a helipad (i.e., a circle with a radius of 30-40 feet). We would greatly appreciate it if the University could take a close look at these five locations to see which of them would be the best location for a helipad for Children's Hospital. If the University would allow Children's to construct a helipad on one of these locations, at its expense, it would greatly assist the solution of this issue which has generated a lot of conflict between the Laurelhurst community and Children's. Further, we think that Children's should pay the University a landing fee each time it uses the helipad to help defray the cost to the University of providing University police services as required for the safe operation of the helipad. Children's should also be responsible for maintenance or pay the University to do this for them.

Our review of the University of Washington General Physical Development Plan indicates that the outdoor storage yard in Sector E8 is to be phased out and turned into open space (see enclosure II and page 102). This proposed action would appear to make the location of a permanent helipad in this area even more feasible in the future. Flight paths could be designed over the playing fields so that the noise and vibration impact in the wildlife areas would be minimized.

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We expect that Children's will continue to land helicopters on its campus, when absolutely necessary, as they do now. For cases where time is not so critical, we would like them to land at Graves Field and transfer the patient to an ambulance for a 3 minute ride to the hospital. As you may know, all patients who arrive at Harborview by helicopter now are transferred to an ambulance for a short trip to the Harborview emergency room or to other nearby hospitals. During the past 12 months, there have been 85 helicopter flights made by Airlift Northwest with patients bound for Children's Hospital. About 70 of these landed at Harborview and the patient was then brought to Children's by ground ambulance (a 20-30 minute trip). Current projections are that the number of helicopter flights to Children's could rise to 35-40 per month by 1990. Some would still land at Harborview, others at Graves Field and a few, really critical cases, would be landed at the Children's campus as they do now.

Another reason to have a helipad constructed in the Graves Field area is to provide a safe and adequate landing facility for MAST helicopters. MAST and other military helicopters have been landing infrequently on this area for the past 11 years and should be allowed to continue to do so. MAST hopes to obtain new Blackhawk helicopters in the near future. These machines are much larger than the "Hueys" currently in use. It is probably inappropriate, because of weight and size, for MAST to land on the University Hospital's rooftop helipad. It is clearly inappropriate for them to land at Children's proposed helipad on their campus. MAST landings in the Graves Field area have sometimes been hindered by muddy conditions. They, too, have an obvious need for a paved, lighted, and secure helipad.

We believe that allowing Children's to build and use a helipad at Graves Field would be consistent with the long history of cooperation between Children's and University Hospitals, the desire of the University to be a good neighbor, and the clear need for a helipad that can be used by MAST helicopters bringing critically ill patients to both Children's and University Hospitals.

We invite you to respond to this letter by presenting your findings to our Board at its next meeting on September 8, 1986. Please let me know if you will be able to do so as soon as possible. I can be reached at 447-4054 (office) or 527-4892 (home).

Sincerely,

Robert N. Klug

Robert Klug
President
4326 N.E. 42nd
Seattle, WA 98105

8/19/86 Copies to: Al Tarr
✓John Coulter
Rolfe Kellor

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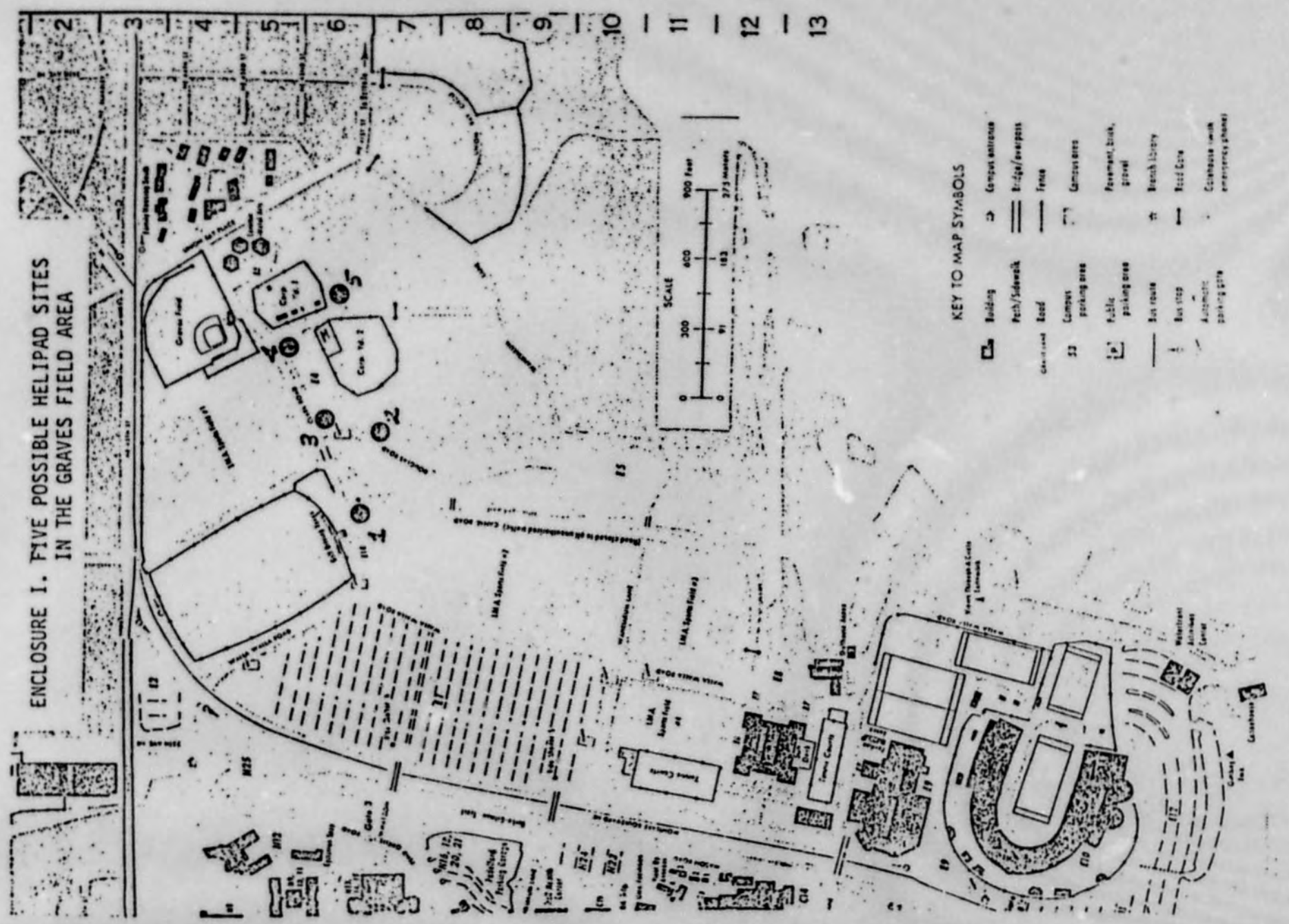

ENCLOSURE I. FIVE POSSIBLE HELIPAD SITES IN THE GRAVES FIELD AREA

ENCLOSURE II. PLAN FOR SECTION E8, UNIVERSITY OF WASHINGTON GENERAL PHYSICAL DEVELOPMENT PLAN, VOL. I, MAY, 1984

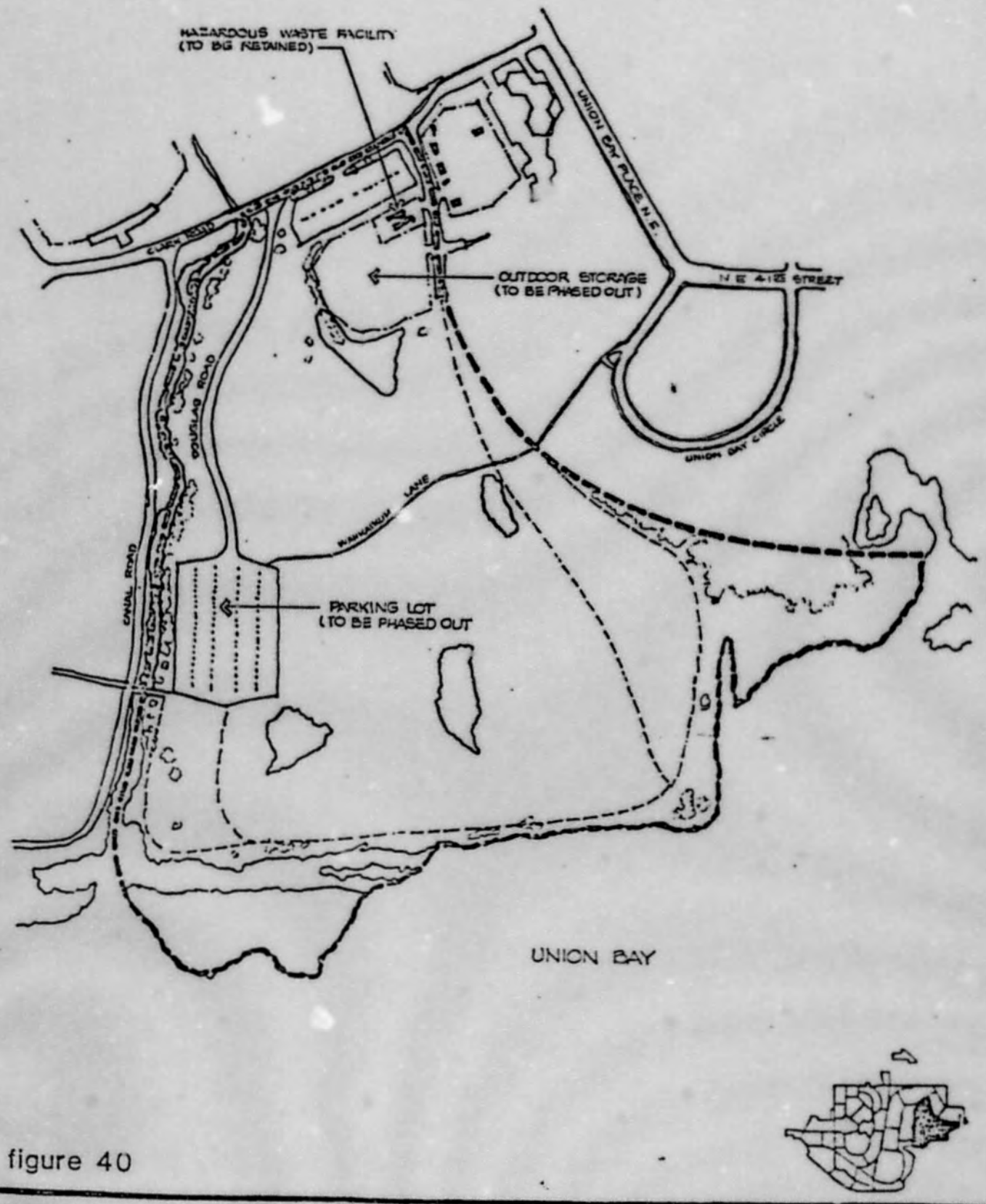

figure 40

SCALE 0 200 400 600 800 N

103

SECTOR E 8

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RECEIVED
OCT 0 1 1986
SHAPIRO AND ASSOCIATES, INC.

Washington State
Department of Transportation
Transportation Building KF-01
Olympia, Washington 98504-5201
206 753-6005

Duane Berentson
Secretary of Transportation

September 29, 1986

Mr. Ray Sachs
Shapiro & Associates, Inc.
Suite 1812, Smith Tower
506 Second Avenue
Seattle, WA 98104

Ambulance Accidents within
Seattle City Limits

Dear Mr. Sachs:

As you requested in your letter of September 18, we are enclosing a listing of reported accidents involving ambulances in the city of Seattle from January 1, 1977 to May 31, 1986.

The records show a total of 46 accidents, resulting in 34 injuries and no fatalities, during the approximate 9-1/2 year period.

We do not carry in our computer system the location of accidents which occur on city streets; consequently, we are only able to indicate the location of state highway accidents.

None of the ambulance accidents appear to be within one mile of the Children's Orthopedic Hospital. As a point of reference, the SR 520 interchange on I-5 is located at Milepost 167.80 to Milepost 168.83, and the N. E. 45th Street interchange on I-5 is located at Milepost 169.02 to Milepost 169.93.

Should you need the location of those accidents which occurred on city streets, we suggest you contact either the City of Seattle Engineering Department at 625-2000 or Dave Bozak, of the Washington State Patrol Accident Records Section, at 753-5161. The accident report number on the listing we are providing you is used by the State Patrol to retrieve a copy of the accident report.

If we can be of further assistance, please contact Brian Limotti at 753-2935.

Sincerely,

DUANE BERENTSON
Secretary of Transportation

By: JAMES P. TOOHEY
Assistant Secretary
Planning, Research and
Public Transportation

DB:jnp
JPT
Attachments

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CITY OF SEATTLE AMBULANCE ACCIDENTS
CITY STREETS ONLY
JANUARY 1, 1977 TO MAY 31, 1986
SORTED BY DATE

ACCIDENT REPORT NUMBER	DATE	TIME	SEV	INJ	FAT	#VEH	SURFACE	MOST ALCOHOL IMPAIRED DRIVER	COLLISION TYPE	LIGHT CONDITIONS
001992	01/14/77	16:55	2	2	.	2	DRY	UNK	REND SD 1 ST	DUSK
022546	03/18/77	17:15	1	.	.	2	WET	HNBD	ENT AT ANGLE	DUSK
040097	05/03/77	16:10	1	.	.	2	WET	HNBD	REND SD 1 ST	DAYLIGHT
098570	10/15/77	14:00	1	.	.	2	DRY	UNK	SD ALL OTH	DAYLIGHT
025457	03/24/78	15:35	2	3	.	2	WET	HNBD	ENT AT ANGLE	DAYLIGHT
103976	09/28/78	16:45	1	.	.	2	DRY	HBD N IMP	SDSWIP SD BK	DAYLIGHT
124602	12/02/78	03:40	2	1	.	2	WET	HBD SDB UNK	REND SD 1 ST	DARK ST LT
053267	04/20/79	18:00	2	2	.	2	DRY	HNBD	ENT AT ANGLE	DAYLIGHT
083218	07/24/79	17:00	1	.	.	2	DRY	UNK	REND SD 1 ST	DAYLIGHT
100920	09/10/79	09:15	2	1	.	3	DRY	HNBD	ENT AT ANGLE	DAYLIGHT
111065	10/08/79	16:30	1	.	.	2	DRY	UNK	PARKING LEAVE	DAYLIGHT
134658	12/17/79	19:30	1	.	.	2	WET	HNBD	SS SD BK BTH RT	DARK ST LT
022508	02/04/80	23:50	2	2	.	3	DRY	HBD N IMP	ENT AT ANGLE	DARK ST LT
043139	04/07/80	16:15	1	.	.	2	DRY	HNBD	SDWP OD BK	DARK ST LT
058309	05/27/80	11:30	2	1	.	2	WET	HNBD	REND SD 1 ST	DAYLIGHT
110719	10/30/80	13:10	1	.	.	2	DRY	HNBD	ENT AT ANGLE	DAYLIGHT
130798	12/26/80	20:20	1	.	.	2	WET	UNK	RT TURN SD 1 STR	DARK ST LT
016394	02/04/81	09:50	2	1	.	3	DRY	HNBD	ENT AT ANGLE	DAYLIGHT
025398	02/25/81	19:00	2	2	.	2	DRY	HNBD	ENT AT ANGLE	DARK ST LT
028123	03/05/81	07:30	2	1	.	2	WET	HNBD	ENT AT ANGLE	DAYLIGHT
034097	03/16/81	09:30	2	1	.	2	DRY	HNBD	ENT AT ANGLE	DAYLIGHT
047570	04/27/81	18:57	1	.	.	2	DRY	UNK	LT TRN SD 1 STR	DAYLIGHT
085507	08/27/81	17:53	1	.	.	2	DRY	UNK	ENT AT ANGLE	DAYLIGHT
120091	12/05/81	14:45	2	3	.	2	DRY	HBD SDB UNK	ENT AT ANGLE	DAYLIGHT
057030	06/09/82	15:25	1	.	.	2	DRY	HNBD	REND SD 1 ST	DAYLIGHT
098529	10/25/82	16:24	1	.	.	2	DRY	HNBD	ENT AT ANGLE	DAYLIGHT
112749	12/14/82	21:40	1	.	.	2	WET	HNBD	REND SD BK	DARK ST LT
046298	06/11/83	21:08	1	.	.	2	DRY	HNBD	REND SD 1 ST	DARK ST LT
093895	11/10/83	14:00	1	.	.	2	DRY	HNBD	SDSWIP SD BK	DAYLIGHT
104037	12/09/83	11:40	1	.	.	2	WET	HNBD	ENT AT ANGLE	DAYLIGHT
077262	09/12/84	00:05	1	.	.	2	DRY	HNBD	SDSWIP SD BK	DARK ST LT
142950	05/06/85	11:00	1	.	.	2	DRY	HNBD	ENT AT ANGLE	DAYLIGHT
156409	06/05/85	11:20	1	.	.	2	DRY	HNBD	HIT PKD CAR	DAYLIGHT
189405	08/28/85	12:30	1	.	.	2	DRY	HNBD	SS SD BTH LTRN	DAYLIGHT
330665	03/20/86	20:57	2	2	.	2	DRY	HNBD	REND SD 1 ST	DARK ST LT

NUMBER OF ACCIDENTS

35

TOTAL INJURIES

22

SEVERITY CODES - (1)PROPERTY DAMAGE ONLY
(2)INJURY (3)FATAL

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CITY OF SEATTLE AMBULANCE ACCIDENTS
STATE HIGHWAYS ONLY
JANUARY 1, 1977 TO MAY 31, 1986
SORTED BY DATE

ACCIDENT REPORT NUMBER	LOCATION	STATE ROUTE MILEPOST	DATE	TIME	SEV	INJS	FATLS	#VEH	SURFACE	MOST ALCOHOL IMPAIRED DRIVER	COLLISION TYPE	LIGHT CONDITIONS
091784	900	.40	09/23/77	18:25	2	3	.	2	DRY	HBD N IMP	REND SD BM	DAYLIGHT
025242	005	161.88	03/21/79	16:05	2	1	.	2	DRY	HNBD	REND SD 1 ST	DAYLIGHT
045147	522	1.82	03/31/79	00:40	1	.	.	3	WET	HNBD	ENT AT ANGLE	DARK ST LT
047904	005	161.61	05/24/79	02:55	1	.	.	2	DRY	HNBD	SDSWIP SD BM	DARK ST LT
124751	005	160.79	12/21/79	19:10	1	.	.	2	WET	HBD ABIL IMP	SD ALL OTH	DARK LT OFF
017999	005CDD	164.62	01/19/82	00:57	2	1	.	2	DRY	HNBD	SD ALL OTH	DARK ST LT
030497	900	.91	03/12/83	06:40	1	.	.	2	WET	HNBD	ENT AT ANGLE	DAYLIGHT
030501	099	35.59	03/13/83	03:20	2	3	.	2	DRY	HBD SDB UNK	REND SD 1 ST	DARK ST LT
030838	520	2.38	04/22/83	14:45	1	.	.	2	DRY	HNBD	REND SD 1 ST	DAYLIGHT
025169	900	.03	03/25/84	11:30	2	1	.	2	WET	UNK	REND SD 1 ST	DAYLIGHT
181219	005	166.32	08/04/85	14:10	2	2	.	2	WET	HNBD	STRK OBJ THEN VEH	DAYLIGHT

NUMBER OF ACCIDENTS

11

TOTAL INJURIES

11

TOTAL FATALITIES

.

SEVERITY CODES - (1)PROPERTY DAMAGE ONLY
(2)INJURY (3)FATAL

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The Siqueland Partnership
Attorneys at Law
1200 Westlake Avenue N., Suite 801
Seattle, Washington 98109-3530
Telephone (206) 283-6069
Telex 32-0266

RECEIVED
JAN 15 1986
DEPT. OF CONST. & LAND USE

Partners
Peter LeSourd
Herman S. Siqueland

January 14, 1986

Director
Department of Construction and Land Use
Room 400, Municipal Building
Seattle, WA 98104

RE: Childrens' Orthopedic Hospital Master Use Permit Application
Described as "NORTHEAST -- 4800 SAND POINT WAY NE, ZONE I-4/1-2/SF
5 PROJ *3405870/KROLL 16W TO CONSTRUCT AN EMERGENCY HELISTOP
FACILITY ACCESSORY TO AN EXISTING HOSPITAL/MEDICAL CENTER

Gentlemen:

This letter is written in response to your notice, dated January 13, 1986, inviting the public to specify specific environmental impacts and issues which should be addressed in the environmental impact statement in connection with the referenced project.

In actual fact, operation of the proposed helistop would involve a "trade-off" between an alleged improvement in the lifesaving capabilities of Childrens' Orthopedic Hospital in emergency cases involving children, on the one hand, and a detriment to the mental and physical health and well-being of the senior occupants of the Laurelon Condominium Apartments, and perhaps to their longevity, on the other hand.

The Laurelon Condominium Apartments, located less than a few hundred feet from the proposed helistop facility, contains an unusually large concentration of senior citizens, including occupants who are in their seventies, eighties and nineties. Those occupants have been residents of the Laurelon Condominium Apartments for twenty years and longer. For even more years than that, the Laurelon Apartments have served in fact as a retirement village.

The extreme noise and vibration levels which would be incident to the operation of the proposed helistop facility would have a serious detrimental effect on all nearby residents of the proposed helistop, but would have an especially serious and adverse impact on the mental and physical health and well-being of the Laurelon Condominium Apartments' senior residents, who, because of their age, are especially susceptible to those adverse impacts.

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The detrimental effect of operation of the proposed helistop on such senior citizens is a specific significant environmental impact, an issue which should be addressed in the environmental impact statement.

I have personal experience with helicopter operations as the result of my past military experience. In addition, and more recently, in October or November of 1985 I personally experienced, in the Laurelon Condominium Apartments, the effects of an actual helicopter operation at the proposed Childrens' Orthopedic Hospital helistop facility. To my recollection, extensive federal, state and local governmental studies were made in the 1960's and 1970's as to the adverse health effects of airport landing and takeoff noise. Those studies were considered in connection with the expansion of the SeaTac Airport and other airports in this country. If my memory serves me correctly, those studies were instrumental in the Port of Seattle's subsequent program under which it acquired, by condemnation and negotiated purchases under threat of condemnation, residential properties adjacent to SeaTac Airport. Presumably those governmental studies were expressed in terms of decibel levels and the correlation between such decibel levels and public health and safety of nearby residents. Presumably those studies would be meaningful and helpful in considering the present helistop facility application of the Childrens' Orthopedic Hospital. The Seattle Department of Construction and Land Use should research to locate existing governmental studies of the adverse impact of airport and other noise sources on the health of nearby residents, should require the Childrens' Orthopedic Hospital to present information in substantiation of any claim that the proposed helistop would improve the lifesaving capabilities of the Childrens' Orthopedic Hospital, and should compare and evaluate the alleged capability on the one hand with the detrimental impact on the senior residents of the Laurelon Condominium Apartments and other nearby residents.

I believe that there are published studies concerning the adverse impact on the health, well-being and longevity of senior citizens who are forced, for one reason or another, to move out of their long-term residences. Such studies should also be researched and made part of the environmental impact statement because of the high probability that if the helistop facility permit were issued, a number of the senior residents of the Laurelon Condominium Apartments would subsequently find it necessary to move out of their homes because they found the noise and vibration of the helistop facility operation unbearable.

If the Seattle Department of Construction and Land Use is not responsible for either performing, or requiring that the Childrens' Orthopedic Hospital perform the research and evaluations which I have discussed, above, then I would appreciate your advising me of that fact at your earliest convenience. In that case, I will attempt to research the issues myself, and submit them to your department.

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My immediate concern and reason for interest in this application is the fact that my mother is a resident of the Laurelon Condominium Apartments, is 90 years of age, and has been successfully living on her own in those apartments for over 18 years.

Very truly yours,

Herman S. Siqueland

HSS:ceb

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January 14, 1986

RECEIVED
JAN 15 1986
DEPT. OF CONST. & LAND USE

DIRECTOR
Dept. of Construction & Land Use
Room 400, Municipal Building
Seattle, Washington 98104

Re: Helistop- Children's Orthopedic Hospital

Dear DIRECTOR:

Thank you for your notice of decision, dated 1-13-86 and opportunity to address the issue of environmental impact of the proposed helistop at COH.

My first letter related to the helicopter site at COH was written 11-15-84 to the president of the Board of Trustees at COH. Subsequently I have written dozens of letters and copies which have been sent to city, county, state officials and departments and which should be on file in the various offices. I have copies of these letters. I have attended many, many meetings.

I am a member of the Board of Trustees of Laurelhurst Community Club and the Laurelon Terrace Homeowners Board of Trustees; but I speak as a concerned, individual citizen here. (I have lived in Laurelhurst since 1953.)

My concerns, which I suggest ought to be included in the environmental impact statement, are as follows:

1. Safety - Let's stop tragedy from occurring before it happens. We read about helicopters and other small planes crashing within city neighborhoods across our nation. The COH helipad site is within a high density residential neighborhood. Approximately 150 feet from Laurelon Terrace condominium complex, consisting of 136 units, the flight pattern will cut a diagonal path across these condos. It is within 1½ blocks of an elementary school as well as a block from many single family residences. Site allows no margin of error--engine failure, malfunction, poor weather conditions (visibility), etc. These residents are not expendable.

2. Vibration and noise factors - Low-flying and landing helicopters cause very real disturbance and pose unhealthy conditions as noise decibels are well above acceptable level for healthful endurance. Vibrations are felt and are disturbing especially to all within the flight pattern across Laurelon Terrace but also to all nearby residents. Flights will be anytime during day or night disrupting not only peace of mind but sleep, too.

3. MAST helicopters - The proposed site is not large enough to accommodate these large planes. On 12-6-85 at 10:17 a.m., a low-flying (approximately 200 feet) MAST helicopter circled several times over the Laurelhurst area, the Laurelon Terrace Condominium area, and the Laurelhurst Elementary School. School was in session. Hundreds of children's lives were endangered as well as hundreds of residents' lives. The MAST helicopter could not land on site repeatedly used by other helicopters at COH because of inadequate space; therefore, it landed in the parking area after circling several times. Time was lost and extra transfer of patient required.

4. Alternate sites - Several other sites are available and adequate. There are no problems on record, no loss of life has been documented for landings (past and present) at UW soccer field with transfer by ambulance within two minutes from COH. Another site is Sand Point Naval Station which is just five minutes from COH. In addition, a helipad is to be soon in place at University Hospital a short distance from COH, also.

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The quality of life, the health and safety of residents whose homes are contiguous to COH and those within a block or two ought to be considered as high priority. For many residents the helicopter landing at COH would be like it landing on their roof top or in their front yard. Is COH, is the City of Seattle prepared to take responsibility and pay for loss of life and property in case of crash? The rights of these residents are being abridged and/or ignored.

Within the past five to six months, repeated helicopter landings have occurred and have been documented by residents. These landings have occurred without permit; these landings are illegal. The impact has been felt.

Please consider the above-mentioned factors carefully. This institutional encroachment in a densely populated residential neighborhood is a clear endangerment of life, property, and environment. Of course, it likewise is a horrendous duplication and excessive expenditure -- these impacts are economic and must be considered by another department as rise in medical costs escalates.

Thank you.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

524-4151

cc:mes

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Julia 4 ✓

METRO
Municipality of Metropolitan Seattle

Exchange Bldg. • 821 Second Ave., Seattle, Washington 98104

RECEIVED
JAN 21 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

January 16, 1986

Beatrice Ryan, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Declaration of Significance and Scoping Notice:
8405870: Helistop Facility Accessory

Dear Ms. Ryan:

Metro staff has reviewed this request for scoping comments and anticipates no significant adverse impacts to wastewater facilities or water quality.

Thank you for the opportunity to participate in this scoping effort.

Very truly yours,

Gregory Bush

Gregory M. Bush, Manager
Environmental Planning Division

GMB:dww

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OLIVER LAWRENCE
10660 Lakeside Ave. N.E.
Seattle, Wa. 98125

NANCY LAWRENCE
10660 Lakeside Ave N.E.
Seattle, WA 98125

J6 5

January 20, 1986

Director
Dept. of Construction and Land Use
Room 400 Municipal Bldg.
Seattle, Wa 98104

RECEIVED
JAN 23 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

To Whom It May Concern:

I strongly recommend that you allow the Children's Orthopedic Hospital to construct an emergency helistop facility accessory to the hospital. When patients need helicopter transportation time is of the essence. An ambulance ride from Harborview to 4800 Sandpoint Way may well mean death, rather than life, for the child. I would much rather hear the helicopter now and then rather than delay treatment for a sick patient.

I wonder if the people who are trying to prevent the construction of the helistop facility lived where they now live when the Naval Air Station was active and Friday nights & Saturday nights for years lines of planes practiced landing and immediate takeoff on the north end of Lake Washington-weekend after weekend. No one asked us whether we'd approved. I worked full time 5 days a week and part-time Saturdays and Sundays. Many weekends I was

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sleepy from virtually sleepless nights. If you have any more questions, feel free to phone me at 364-8026.

Sincerely,

Nancy Lawrence

RECEIVED
JAN 23 1986
LAND USE DIVISION

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JG 6

Director
Dept. of Construction and Land use
Room 400 Municipal Bldg
Seattle, Wa. 98104

RECEIVED
JAN 23 1986

Dear Sir:

On Dec 6th, 1985 at about 10 A.M. a large med helicopter flew directly over house, even circled around the area twice before landing at the Childrens Orthopedic Hospital. The noise and vibration was very disturbing.

We ask you to take into consideration the impact on the neighborhood as well as the young patients in the hospital of a srvice like that.

Yours truly -
Edith A. Klaasen
Arthur J. Klaasen

5011 - 45th Ave N.E
Seattle, 98105

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No one I know is against children - all love them. No one wants children neglected or abused. I raised four.

But the noise, the possible safety hazards, the expense, the traffic - please reconsider.

Also concerning your other permits - please visit this area and reconsider granting permits on 45th N.E. just ended.

Thank you.

Sincerely yours,

Jean Karlsen

(A former nurse and wife of a doctor.)

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RECEIVED

JAN 24 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mrs. Phyllis L. Jackson
4307 N. E. 57 St.
Seattle, Washington 98105

Jan. 22, 1986

To Whom it May Concern;

I certainly do believe that Children's Orthopedic Hospital should have a helipad for transporting children in critical or acute condition. I cannot imagine anyone objecting if it were their child or grandchild, where minutes count.

Fire engines, ambulances and Medic One are noisy too, but they do save lives. It is a very poor trade-off when the noise consideration comes first!

Mrs. Phyllis L. Jackson

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January 23, 1986 V 9 Jdla

RECEIVED

JAN 27 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Seattle Department of Construction
and Land Use
Beatrice Farrar Ryan, Interim Director

Re: COHMC Helicop

Dear Ms Farrar:

1- We are concerned about the use of helicopters over two schools, thickly populated residential areas and a much used city playfield.

2. What rights and protection do home owners have in protecting their quality of life from constant zoning exceptions and changes being made.

3- The present Mast system and its location serves two hospitals, U of W and COHMC. Is the competition for business between hospitals going to be allowed to impact everybodys lives?

4. We are concerned about duplication of services. Will each hospital want their own helicopter service? This needs to be studied and controls be established. The Trauma center at Harborview Hospital has an excellent record for treating children and adults - treating - stabilizing and then transporting children to COHMC by ground service.

by

5- We attended the September 9, 1985 meeting called/the Health and Human Services Committee of the Washington State Legislature. It was our understanding that the Free service Mast provides will not be able to continue to serve the area if a private helicopter service is established. (They cannot compete with private business) Who then will pay the bill? The patient?

6- We understand that the Doctors are divided on the issue of necessity.

7- We are concerned about the abuse of the use of the helicopter service. This is a big concern. Who will monitor and decide what is or isn't an emergency. Once the service is allowed to begin and the six month trial period is over, who willthen monitor to see if the system is being abused.

8- With helicopters, traffic watch planes and the constant sea-plane activity over the area, it indicates to us that some form of control of air traffic over residential areas is necessary.

Yours truly

Patricia O. Wright

Patricia O. Wright

Fred M. Wright

Fred M Wright

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Seattle Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

MASTER USE PERMIT

January 13 1986

NOTICE OF DECISION (DECLARATION OF SIGNIFICANCE & SCOPING)

The Director of the Department of Construction and Land Use has reviewed the Master Use Permit application described below and has issued a Declaration of Significance (DS) on this project.
The public is invited to identify specific significant environmental impacts and issues which should be addressed in the Environmental Impact Statement
If an EIS is prepared, you will be notified of the time, date and place of the public hearing.

see attached

Comments on the scope of the Environmental Impact Statement are to be sent to the following address by FEBRUARY 03, 1986 :

Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

The Declaration of Significance is a part of the file on this matter and is available for public viewing in Room 408 of the Seattle Municipal Building

NORTHEAST

4800 SAND POINT WY NE ZONE I-4/I-2/SF 5 PROJ #8405870/KROLL 16W
TO CONSTRUCT AN EMERGENCY HELISTOP FACILITY ACCESSORY TO AN EXISTING HOSPITAL/ MEDICAL CENTER.

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Patricia O Wright
3925 48th Ave N.E.
Seattle, WA 98105

10

RECEIVED
JAN 27 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

4554 45th Ave NE
Seattle WA 98105
25 January 1986

Director, DCLU
Municipal Building #400
Seattle WA 98104

Julia

Dear Director:

As an across-the-street neighbor of the Childrens Orthopedic Hospital I wish to record my strong opposition to the construction of a helipad and the introduction of regular helicopter service by the COH. I have had no part in the actions of the Laurelhurst Community Club; hence my opinion is not a repetition, but an independent and additional expression of opposition.

If the helipad is constructed, it is perfectly obvious what will happen: (1) after that expenditure, there will never be a subsequent vote of disapproval; and (2) the expenditure will have to be justified by maximizing the use of helicopters. Whatever the Hospital people may say now, and may honestly believe, all the psychological forces will be toward increased use of helicopters for all kinds of purposes. There will be no way of monitoring these flights. There will inevitably be a very bad effect on a residential neighborhood already suffereing from the constantly increasing density of traffic generated by hospital business.

Please note this: some time ago a hospital employee was heard to remark that she hoped the helicopter flights would soon be in so that she could use them for commuter service to Sea-Tac airport. That is precisely the kind of thing that there will be no way of stopping if helicopters are ever permitted.

There has been a great deal of doomsday talk about "saving a life." Even the hospital, however, though it is given to translating things into life-and-death terms, has not claimed that a life has ever been lost under the present system. The present system has obviously worked very well indeed. The desire for helicopter landings here clearly reflects, though the motive may be unconscious, not a dire need but a desire for, and a fascination by, new techniques, mechanical aids, sheer convenience, etc.

"Saving a life" is simply not relevant. But talk about it obscures another value which gets lost in the excitement--namely, the quality of life for hundreds, and probably thousands, of people in a residential neighborhood which should be saved from further inroads of a business-and-industry way of life.

I hope that your division will rule against the construction of the helipad.

Sincerely yours,

Robert B. Heilman

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12 J6 ✓

4036 N.E. 45
Seattle, Washington
January 27, 1986

RECEIVED
JAN 29 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Beatrice Ryan
Interim Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

RE: Helipad, 4800 Sandpoint Way N.E. PROJ #8495870/Kroll

I have lived in Laurelon Terrace (at two different addresses) since 1955. I am a Medical Technologist (recently retired) and have worked at the University of Washington in medical research for 25 years, followed by 10½ years as supervisor of a division in the clinical laboratory. Thus I have some background, knowledge and understanding of: (1.) the development and past changes in the residential area surrounding Children's Orthopedic Hospital and (2.) the changing patterns and pressures of health care and health care delivery.

I have attended every meeting regarding the helipad issue for the past two years and, though I feel well informed on the pros and cons of the issue, I do still have some concerns:

Laurelon Terrace is a condominium of 136 units covering a three block area immediately west of COH. The buildings were built in the late 1940's (prior to COH's move into the area) and converted to a condominium in 1978, well in advance of any public knowledge that a helipad might be in the picture.

The enclosed map shows the 19 buildings that comprise Laurelon Terrace and demonstrate its proximity to the hospital. Also, the complex is downgrade from the hospital (separated only by a firelane) so that the helicopter approach to the proposed pad has a significant bearing on the noise level, vibration and safety hazard to various homeowners.

There have been at least seven unauthorized landings at COH since November. Instead of the helicopter following the prescribed flight path---which we understand to be over Sandpoint Way NE and up the COH drive to the 'Kitchen Garden"---it has been coming in LOW at an agle over buildings 13, 14, 9, 10 and 18. Again, because of the topography, when the helicopter comes in so low it is not only much more dangerous to us, but the reverberations are intensified! From talking with some people at the hospital we understand: (1.) the new helicopter does not have to circle; it can come in high and drop straight down to the pad; (2.) there is no reason for the pilot not to take the prescribed route over Sandpoint Way rather than over residences.

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The items we feel should be addressed in the Environmental Impact Statement are:

1. NEED. If the community could be assured that the helicopter would be used only for truly critcal cases, we would live with that. At the same time, if the pad permit is granted we request that there be a workable, effective and timely process to assure the helicopter is not being misused. There should be knowledgeable community representatives included in any such "Peer Review" committee.

2. FREQUENCY: This is an adjunct of 'Need'. One can predict that if there are 15 flights the first year, the number of flights in subsequent years will increase even if the tool is not abused, simply because of increasing advances in technology. This expected growth underlines the importance of only one flight per patient, having the medical crew picked up either at the 'soccer field' or at Harborview (rather than the possible two flights per case into COH).

3. FLIGHT PATH: We strongly urge the pilots be instructed to adhere to the prescribed flight path, and come in high rather than almost level with our roofs which has happened on several recent occasions. The solid red line on the enclosed map indicates the presecribed flight path; the broken red line denotes the path taken by 5 of the last 7 flights. We realize that adhering to the Sandpoint Way route may impact other neighbors. We have no desire to better our situation at the expense of others. The chosen route should take all residents' situations into account. We do feel, however, that our topography makes it mandatory that the helicopter come in high!

4. SAFETY: Helicopters, unfortunately, do crash. The hospital assures us that the statistics indicate there would be only one crash in 64 years. Please note the recent crash of a medical emergency helicopter (in another state) 5 minutes from its landing. Who is going to pay for is insurance? Even without helicopter hazards the current state of insurance premiums is a disaster in itself! Another strong point, we think, for restricted flights and controlled flight paths.

5. VIABLE ALTERNATIVES: The UW 'soccer field' has served for some years as an emergency landing field for both UW and COH. Here the approach can be over water, marsh, parking lots---not homes. Rather than say the field is too soggy, a decent, lighted helipad could be constructed here to serve both institutions. Helipads should be looked at as regional facilities---no matter what the future medical technology, can we afford to have the service at every hospital?

Enclosure

Sincerely

Patricia Ann Wood

Patricia Ann Wood

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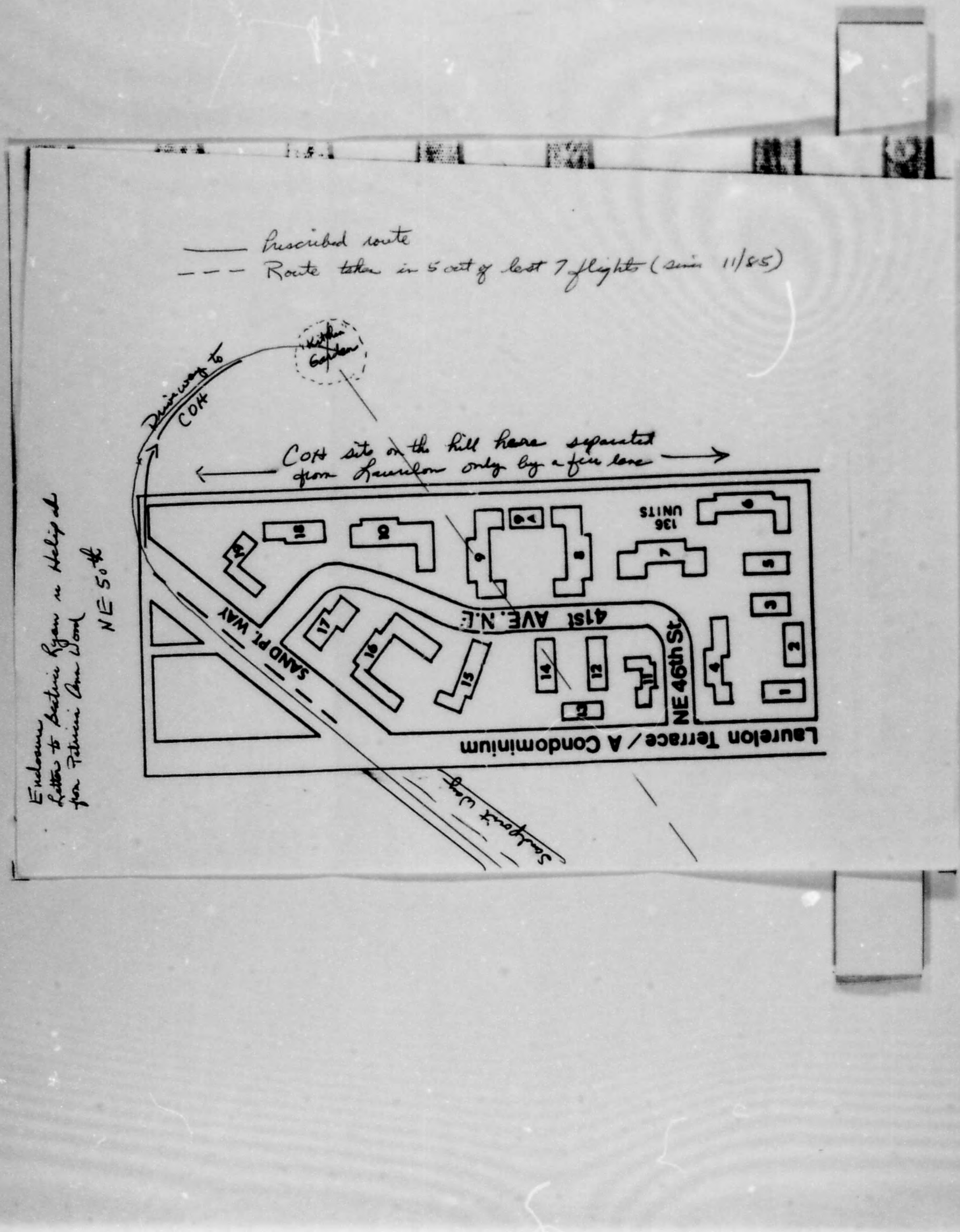
Prescribed route
Route taken in 5 out of last 7 flights (since 11/85)
Driveway to COH
Kitchen Garden
COH site on the hill here separated from Lauralon only by a few lane
136 UNITS
41st AVE. N.E.
SAND PT. WAY
NE 46th St
Lauralon Terrace / A Condominium
Sandpoint Way
Enclosure
Letter to Doctrine Ryan re Helipad
from Patricia Ann Wood
NE 50th

M Julia

1 February 1986

Beatrice Ryan, Interim Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

RECEIVED
JAN 30 1986
DEPT. OF CONST. & LAND USE

Dear Ms. Ryan,

The purpose of this letter is suggest a scope and content for the Environmental Impact Statement that DCLU has asked Children's Hospital to prepare in connection with its application to construct a helistop on its campus. These suggestions have been developed by several members of Citizens Concerned about Helicopter Transportation and represent the views of those living in the impacted neighborhoods. We believe that the EIS should cover five areas: noise, vibration, safety, air quality and alternatives. Further, we believe that the term alternatives should not to be limited only to landing sites but that alternative service alternatives should be considered as well. We urge DCLU to include the following requirements in their definition of the scope and content of this EIS:

1. The noise measurements should be made at several different landing sites and should include several landings at each site. One needs several landings in order to get enought data to derive statistically significant results. All types of helicopters that might be using the landing sites should have their noise measured. This is especially true for the Huey and Blackhawk helicopters that are now being (or are likely to be) operated by MAST. The background noise measurements at each site should be made at homesites in the neighborhoods directly adjacent to the proposed landing sites, not by busy adjacent arterials. Several noise measurement instruments should be used to record the noise instead of using just one and extrapolating its results to other locations. The number of people living within various contour levels of noise should be determined for each alternative landing site. The demographic characteristics of these people should be determined. The flight path and landing profile to be used by the helicopters during the noise testing should be carefully worked out and strictly adhered to. A noise expert from the Seattle-King County Health Department should be present as an observer during all noise tests and should approve the procedures to be used before they are implemented. The residents of the impacted neighborhoods should be given at least two days advance notice as to when the noise tests are to be conducted and should be invited to observe them as well. The helicopters should be loaded in the same way that they will be loaded when flying actual missions. Fuel levels, a full medical team and special equipment should be on board during the noise tests.

2. All vibration measurements should be conducted at the same time as the noise tests are made. Suitable instruments should be placed in several homes in adjacent impacted neighborhoods and vibration levels recorded during multiple landings at each of the proposed sites. Background vibration measurements should also be made at each of the residential sites to provide baseline data.

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3. The safety analysis should be customized to each proposed landing site as each will have special characteristics that need to be taken into account. Safety levels are closely associated with the frequency of flights and the types of helicopters and pilots used. Estimates of the number of flights to be made should be based on a careful analysis of the population that can be served better by helicopters than by ground transport or fixed-wing transport. To do this, one must first estimate the number of people that live in areas that can be served better and faster with ground transport. Then one needs to add those that are beyond the flying range of each of the helicopters that are likely to be used. The remainder is the population that could benefit from helicopter transport and appropriate incidence ratios can be applied to them to derive estimates of flight frequencies. Once these are known for 5 and 10 years in the future, some risk factors can be derived that can define the safety levels associated with each alternative site. Other factors that should be investigated include pilot capabilities and training, the availability of specialized equipment for dealing with adverse weather conditions, appropriate communications equipment, suitable levels of liability insurance and definitions of the parties that are responsible for any accidents that may occur.

4. One can expect that there will be significant amounts of jet engine exhaust gases blown into the surrounding neighborhoods while the helicopter is landing, running on the ground and taking off. We know from observing landings at the intramural field and at COH that these gases smell very bad and presume that they can be expected to have some adverse health effects. What is the content of the exhaust gases from twin jet engines like those on the Agusta and MAST helicopters? What are the likely health effects of these exhaust gases on the residents of the neighborhood? These estimates should be based on the projections of use and detailed analyses of jet engine exhaust gases from the machines most likely to be used at the various alternative sites. A model of dispersion should be used to estimate how the gases can be expected to move from the landing site into the neighborhoods.

5. There are several alternatives that should be investigated as follows:

a. The do-nothing alternative. A clear and detailed description of the way that MAST helicopter service has been provided to COH during the past five years should be presented to provide baseline data to use in the evaluation of the do-something alternatives. The benefits, costs and impacts of continuing past practices for another 10 years should be presented in this section.

b. Landing MAST and Airlift Northwest helicopters at the UW intramural field. There are several suboptions under this general heading. They involve locating a site suitable for all-weather operations that have good access to ground transportation vehicles. Careful noise and vibration measurements need to be made at all alternative landing site locations in this area. The University of Washington should be an active participant in these investigations because of the UW's responsibility for the safety of the people that are often involved in sports activities at their intramural fields. This section should describe the benefits, costs and environmental impacts of using

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feasible intramural field sites for landing helicopters.

c. Landing MAST and Airlift Northwest helicopters at Children's Hospital. There are two suboptions under this general heading. One would be to land on the roof of the hospital and the other would be to land on a specially constructed helipad located near the entrance to the emergency room on the north side of the COH complex. Extensive noise and vibration studies should be conducted at both sites. Since a helicopter cannot presently land on the roof of the hospital, such landings should be simulated as closely as possible in order to get adequate noise, vibration and safety data.

d. Landing MAST and Airlift Northwest helicopters at a site at the Sandpoint Naval Support Facility There are several landing site options that should be investigated by the applicant at the Sandpoint NSF. Extensive noise and vibration studies should be conducted at all sites found to be feasible at the NSF.

e. Concentrating all initial care for critically ill neonates and children at Harborview Hospital. This alternative would assume that all children arriving by helicopter be seen first at Harborview and then be transferred to COH or other locations by ground ambulance if appropriate. Such an arrangement would concentrate all helicopter landing activity at Harborview and eliminate the problem at COH and University Hospitals. A careful investigation of this alternative is needed to determine its benefits, costs and environmental impacts to both providers and consumers of emergency medical services.

It is recognized that the University Hospital intends to operate a helicopter service with a landing site on the roof of its new East Wing in the near future. We believe that it would be beneficial for all concerned to have both of these proposals revieved concurrently. If this is not possible, the COH EIS should contain as complete a description of the proposed UW helicopter service and its relationships to the service proposed by COH. If any way can be found for the two hospitals to share a helistop, such an alternative should be given careful study.

Yours sincerely,

Jerry Schneider Anita Francis

Jerry Schneider and Anita Francis, Members
Citizens Concerned about Helicopter Transport

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B Julia ✓

4652 - 41st Ave N.E.
Seattle, Wash. 98105

RECEIVED
JAN 29 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Director
Dept. of Construction & Land Use
Room 400 Municipal Bldg
Seattle, Wash. 98104

Dear Sirs:

This is to protest the permit for a Heliotop at the Orthopedic Hospital at 4800 Sand Point Way N.E. Zone 1-4-1-2/SF 5 Dvaj + 8405870/K Roll-14 W

We are concerned not only about the noise, but also about the fact that they sometimes crash. Just last week a helicopter crashed at the Meat Packing Plant in Austin, Minn.

They have been flying very low here right over our apartment.

I sincerely hope you will consider the plight of all the people who live here as it is a high density population area.

Very truly yours,
Anil G. Nelson

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3650 42nd Ave. N.E.
Seattle, Washington 98105
January 29,1986

Ms. Beatrice Farrar Ryan
Interim Director
Seattle Department of Construction and Land Use
Room 400, Municipal Building
Seattle, Washington 98104

Dear Ms Ryan:

Thank you very much for being as watchful as you are over the proceedings Children's Orthopedic Hospital is using to get permission to construct a helipad. A private helicopter service in any residential neighborhood should always be looked at very carefully before permission is granted. We urge you to include in the environmental impact statement considerations regarding noise, safety of the area residents, and the increased fire hazard that a low flying aircraft would surely bring with it. I am not against helicopter service for sick children. I have lived in this neighborhood for five years and have been awakened by the MAST helicopter many times as it brings sick children to the emergency room. To the best of my knowledge, this service has worked admirably over the last ten years and I believe that no child's life has ever been lost in the three minute transfer between the playing field at UW and the emergency room at COH. I am convinced that no other means of emergency transport is needed and I hope your department will scrutinize this issue very carefully.

Sincerely yours,

Carolyn Margon

Carolyn Margon

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CITY COUNCIL TRANSMITTAL

C. F. # N/A

TO: Beatrice Ryan, Interim Director
OCLY

Date Sent: 2/3/96

Reply Requested By: N/A

FROM: Jim Stuhl, Chair, Land Use

Subject: All attached

RECEIVED
FEB - 3 1996

ACTION — required

- [ ] Review and Return File With Your Answer to Sender
- [ ] Review and Answer Petitioner, Return File and Copy of Answer to Sender
- [ ] Review and Make Recommendations, Return File and Recommendations to Sender
  ( ) In Duplicate
- [ ] Prepare Legislation and Return File to Sender
- [ ]

Additional Information: please add to file

Karen L Campbell
Signature

LDI – 110–5002 CS 20.19

RECEIVED
FEB 3 1986
SEATTLE CITY

3757 45th Ave. N.E.
Seattle, Wn. 98105
January 30, 1986

Dear Mr. Street,

This letter is to express the grave concern of the entire neighborhood regarding the extreme danger of helicopter landings at Childrens' Orthopedic Hospital (COH).

It has been determined after exhaustive study by experts that a helipad at COH is entirely unnecessary, that it would duplicate services already being provided. Our apprehension is for the safety of people living in the proximity of the hospital whose homes, limbs and very lives are at risk every time a helicopter attempts to land or take off .This area is zoned First Class Residential and there are children playing nearby. Laurelhurst Elementary School is just 2 blocks from COH.

There have been several extremely noisy helicopter landings in the past few months, hazardously close to houses and trees. The helicopters have not followed a previously prescribed landing approach. Their landings have been haphazard, unpredictable, sometimes 50 feet above a house. Thus far they have not been impacted by wind. However, sudden downdrafts caused by a south wind over COH could have disastrous consequences as the helicopted approaches the pad. Let's not create "an accident waiting to happen"!

Please take immediate action to permanently deny a permit for a helipad at COH.

Urgently,

Helen and David Belvin

Helen and David Belvin

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JG

RECEIVED
FEB - 3 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

4757 45th Ave. N.E.
Seattle, Wn. 98105
January 30, 1986

Dear Mrs. Ryan,

This letter is to express the grave concern of the entire neighborhood regarding the extreme danger of helicopter landings at Childrens' Orthopedic Hospital (COH).

It has been determined after exhaustive study by experts that a helipad at COH is entirely unnecessary, that it would duplicate services already being provided. Our apprehension is for the safety of people living in the proximity of the hospital whose homes, limbs and very lives are at risk every time a helicopter attempts to land or take off .This area is zoned First Class Residential and there are children playing nearby. Laurelhurst Elementary School is just 2 blocks from COH.

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Urgently,

Helen and David Belvin

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Duplicate

Julia

Seattle City Council

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

February 4, 1986

RECEIVED
FEB - 5 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Helen and David Belvin
4757 45th Avenue N.E.
Seattle, Washington 98105

Dear Mr. and Ms. Belvin:

Thank you for your recent letter regarding the Children's Orthopedic Hospital heliport application.

The application is for a Council Conditional Use permit and at present is being reviewed by the Director of the Department of Construction and Land Use (DCLU). Her recommendation will be reviewed by the Hearing Examiner who will conduct a public hearing and prepare a recommendation for the City Council. A record is now being formed, and I am forwarding your correspondence to DCLU so that it may be included in that record. The Council will take it into consideration when we come to review this application.

I appreciate your interest. Thank you for taking the time to write.

Respectfully,

PAUL KRAABEL, Member
Seattle City Council

PK:cm

Cc: Beatrice Ferrar Ryan, Interim Director
DCLU

An equal employment opportunity—affirmative action employer
Eleventh Floor, Municipal Building, Seattle, Washington 98104

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4757 45th Ave. N.E.
Seattle, Wn. 98105
January 30, 1986

Dear Mr. Kraabel,

This letter is to express the grave concern of the entire neighborhood regarding the extreme danger of helicopter landings at Childrens' Orthopedic Hospital (COH).

It has been determined after exhaustive study by experts that a helipad at COH is entirely unnecessary, that it would duplicate services already being provided. Our apprehension is for the safety of people living in the proximity of the hospital whose homes, limbs and very lives are at risk every time a helicopter attempts to land or take off .This area is zoned First Class Residential and there are children playing nearby. Laurelhurst Elementary School is just 2 blocks from COH.

There have been several extremely noisy helicopter landings in the past few months, hazardously close to houses and trees. The helicopters have not followed a previously prescribed landing approach. Their landings have been haphazard, unpredictable, sometimes 50 feet above a house. Thus far they have not been impacted by wind. However, sudden downdrafts caused by a south wind over COH could have disastrous consequences as the helicopted approaches the pad. Let's not create "an accident waiting to happen"!

Please take immediate action to permanently deny a permit for a helipad at COH.

Urgently,

Helen and David Belvin

Helen and David Belvin

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Seattle Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

MASTER USE PERMIT

January 13 1986

RECEIVED
FEB - 5 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

NOTICE OF DECISION (DECLARATION OF SIGNIFICANCE & SCOPING)

The Director of the Department of Construction and Land Use has reviewed the Master Use Permit application described below and has issued a Declaration of Significance (DS) on this project..
The public is invited to identify specific significant environmental impacts and issues which should be addressed in the Environmental Impact Statement.
If an EIS is prepared, you will be notified of the time, date and place of the public hearing.

Comments on the scope of the Environmental Impact Statement are to be sent to the following address by FEBRUARY 03, 1986 :

Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

The Declaration of Significance is a part of the file on this matter and is available for public viewing in Room 408 of the Seattle Municipal Building

NORTHEAST

4800 SAND POINT WY NE ZONE 1-4/1-2/SF 5 PROJ #8405870/KROLL 16W
TO CONSTRUCT AN EMERGENCY HELISTOP FACILITY ACCESSORY TO AN EXISTING HOSPITAL/ MEDICAL CENTER.

In view of the close proximity of school, churches and residences and the availability of the helicopter landing spot at the U of W, I do not feel that this construction is necessary. I live within three blocks of the proposed site and have been quite aware of the noise during landings also.

Mrs Eleanor R Emery
4814 NE 44th St, Seattle, Wa. 98105

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FEB - 5 1985

DEPT OF CONSERVATION & LAND USE
Olympia, Washington

Eleanor R Emery
4814 N.E. 44th St
Seattle, WA 98105

MARVIN O. CHRISTMAN

4350 53rd N.E.
Seattle, Washington 98105
206-525-6966

RECEIVED

FEB - 3 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

January 31, 1986

Dear Mrs. Ryan:

In accordance with your recent request for comments from neighbors living adjacent to the Children's Orthopedic Hospital, 4800 Sand Point Way N.E., I have a copy of a recent letter sent to Mr. Robinson of the Seattle Times.

The comments apply as much today as they did on November 13.

I trust you will give the community as much consideration as possible in this most sensitive area.

Thank you.

Sincerely,

M. O. Christman

MOC:bh

Enc.

Director
Department of Construction and Land Use
Room 400, Municipal Building
Seattle, WA 98104

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Evergreen Safety Council

November 13, 1985

Mr. Herb Robinson
Editorial Page Editor
Seattle Times
Seattle, WA. 98111

Subject: Childrens Orthopedic Hospital Heliport

Dear Herb:

My family and I have lived in the Laurelhurst community for 35 years.

We have raised three children, all of whom have been treated at the Childrens Orthopedic Hospital.

My wife and I have raised money for COH, we have worked in auctions, I have spoken in behalf of the Orthopedic (I drive by the hospital complex five to six times daily), have held meetings in their auditorium, a grandson spent two weeks in intensive car; Tom Young, Sr., the senior partner of the architectural firm who designed Childrens Orthopedic to be a small, well integrated, but complimentary to the neighborhood facility, was a three-door neighbor, and an early director, Dr. Doctor, was a four-door neighbor.

I guess what I am saying is that the Orthopedic Hospital has been a close and good neighbor of my family.

Therefore, I take issue with the Childrens Orthopedic Hospital's Heliport plan.

I have an 85 year old mother, who lives in the shadow of Childrens Orthopedic, in the Laurelon condominium. She is extremely hard of hearing but can feel and hear the vibration of a helicopter, when it lands at COH.... and it troubles her and other seniors living there.

This area is single dwelling, duo apartment living, and the city derives a handsome tax base from the Laurelhurst, Windermere, Hawthorne Hills, and immediate areas.

If the preponderance of high pitched noise and the insecurity of low flying helicopters over our homes and families cause a decay in the neighborhood, then even the

7600 Sand Point Way NE • C-15700 • Seattle, WA 98115-0070 • (206) 526-1670

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city loses, as neighbors have, if we are forced to move to a less dense community.

Helicopters have been known to crash, especially upon take-off and landing, and we have a strong concern that the Laurelhurst School is one block away, with classrooms filled with our children. What a tragic fate to injure or kill a number of children by a helicopter crash while it was landing at COH with one child aboard for treatment.

We are but a few neighbors, not necessarily affluent, who live with the Childrens Orthopedic's continuing expansion into a larger institution ..... no longer small and nestled appropriately into the community surrounding it.

Thank you for listening.

Sincerely,

M. O. Christman
President

MOC/mc

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Read after scoping comment period over (2-3-86) JG ✓

ALBERT A. FELDMANN
P. O. BOX 85568 UNIVERSITY STATION
SEATTLE, WASHINGTON 98105 (206)525-5610

Feb. 1. 1986

RECEIVED
FEB - 4 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

The Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle,WA 98104

Sir:

As Vicepresident of the Laurelcrest Condominium Owners Association I speak for eighty (80) families in identifying significant issues involved in the planned construction of a helistop facility on the grounds of Childrens Orthopedic Hospital and Medical Center.I was also present at the public hearing conducted by Dr. Nicola,City Health Officer,on October 24. 1985.

1. At no time during 1½ hours of testimony did spokesmen for Childrens Orthopedic Hospital present evidence that one single life was endangered, let alone lost,by landing a helicopter at the nearby University of Washington field and transferring the patient by ambulance to the hospital less than 2 miles away.Arguments about landing difficulties at night,or in inclement weather,totally ignored the existence of a heliport at the nearby Sandpoint Naval Base,available for such emergencies.

2. The numerous occasions during the past three months when helicopters landed on the hospital grounds,in violation of city ordinances,at all hours demonstrated just how bad the noise level is.The fact that within the same time period two helicopters carrying patients to hospitals crashed, killing patients and crew,demonstrates that such disasters are not so farfetched and are most likely to occur during inclement weather.

3. The public declaration by an administrative officerof Childrens Orthopedic Hospital that the hospital must fulfil its mission as regional resource, which is more important than any significant environmental impact on the residents of the surrounding area,makes any promise to use the planned helistop for emergencies only quite suspect.Misrepresentation of the costs of the helicopter service by Childrens Orthopedic Hospital,to avoid having to apply for a Certificate of Need ,is another proof of its bad faith.

The Board of the Laurelcrest Condominium Owners Association strongly opposes any permission by the Department of Construction and Land Use to construct an emergency helistop facility accessory to Childrens Orthopedic Hospital and Medical Center.

Sincerely yours
Albert A Feldmann
Albert A. Feldmann

4873 Terrace Dr. NE
Seattle, WA 98105

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May 9, 1986

4022 Eastern Avenue North
Seattle, WA 98103

RECEIVED
MAY 12 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Miss Gibb:

I am a resident of Seattle (Wallingford District). I have been reading with interest all of the editorials and letters to the Seattle Times editor with respect to the emergency helicopter flights landing at Children's Hospital. One thought strikes me: Why do the residents of the Laurelhurst area not complain so bitterly when media and traffic helicopters from KING, KOMO, or KIRO stations randomly fly over all of the city at all hours of the day and night?

Interestingly enough, I am sure that each of these media flights can be explained in a business sense. However, I can think of no other local air carrier, other than Airlift Northwest, the clearinghouse for all emergency flights, that can justify emergency flights and landings other than for life-saving purposes.

Seattle is a city that has always taken immense pride in its emergency services. We pioneered Medic I; and the Trauma and Burn Centers at Harborview are unexcelled anywhere. Those residents of Laurelhurst who oppose these emergency landings (and, I assure you, not all of them do!) are attempting to prevent the final leg of Seattle's emergency services from being successfully completed. Landing on a hospital campus is the natural progression of an emergency flight carrier. Denying this possibility is equivalent to purposefully withholding medical services in an emergency room once an accident victim gets there.

It has been proven time and again that Airlift Northwest helicopter flights are necessary and justified. I applaud Airlift Northwest for the service it provides. However, I especially applaud Children's Hospital for standing up to the only principle it has maintained is the issue here, and that is that these landings on its campus can hopefully save even one child's life. That cannot happen if these helicopter flights are not allowed to land directly at that (or any) hospital's emergency entrance.

Thank you for your time and for the opportunity to present my views.

Sincerely,

Diane Kanning

Diane Kanning

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May 8, 1986

RECEIVED
MAY 12 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb,

As the communications director for Children's, I tend to speak out on issues very rarely. Most of my work entails coordinating and facilitating communications within and outside the hospital. However, my close association with the issues and concerns over the hospital's request for a permit to build a helipad outside the emergency room compels me to write in support of this project. We have been delayed in our process for more than a year and a half, and while I can understand the concerns of those who object to the helipad, those concerns are outweighed by the medical necessity that has repeatedly been demonstrated.

As a major regional referral center for pediatrics, Children's needs a landing pad for those few but critical cases where time and speed make the difference. Rural hospitals count on being able to have helicopters land on site to pick up and transfer patients to the hospitals in Seattle that are equipped to care for their patients. Children's cannot effectively meet its medical obligations until a helipad is built on site.

There has been much concern over noise and safety, factors which the hospital has considered and resolved, to my knowledge, for the benefit of neighbors and our patients. There is concern about marketing the hospital once we have a helipad. The truth is that we do not need to market this service. Patients would come to us anyway because there is no place else for them to be treated--what suffers now is the quality of their lives in cases where transport by helicopter could make the difference.

Progress at Children's has always been carefully planned to meet the medical needs of the community and the region we serve. Seattle is fortunate to have one of the finest pediatric medical facilities in the country. The addition of a helipad to what is now a two-part transport program--ground and fixed-wing--will only enhance the services that we are obligated to provide our children.

Thank you for the opportunity to comment. I would appreciate having my opinions related to the Seattle City Council.

Sincerely,

Susan Macek
Director of Communications
Children's Hospital and Medical Center

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RECEIVED

MAY 19 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

720 University #9K
Seattle, Wn. 98101

16-86

Julia Gibb
Dept. of Construction & Land Use
404 Municipal Bldg.
Seattle, Wn.

Dear Ms. Gibb:

Please permit Childrens Orthopedic Hospital to build a helistop outside their emergency room. The probable infrequent use of this facility should not annoy nearby residents. This life saving procedure should have the highest priority.

Sincerely,
Lois C. Turner

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MARY BRANNON
642 MAULSBY LANE
EVERETT, WASHINGTON 98201

May 15, 1986

RECEIVED
MAY 19 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
400 Municiple Bldg.
Seattle WA 98104

Dear Ms. Gibb:

Though I am sensitive to the concerns of those who are pro-active against the helicopter landings at Children's Orthopedic Hospital in Seattle (having read much in the papers and seen several segments on TV), I am writing in favor of the Hospital's request for a permit to build a helistop on its campus.

As a grandmother, and concerned citizen, the case of the Federal Way child, who might have been another drowning statistic, and was saved because of the immediacy of treatment at this Children's Medical Center, brought home to me most vividly the necessity for the fastest possible transport of a child or baby (in critical cases) to a medical facility. The Federal Way child would have died, had the helicopter not been available. I would hope that any Snohomish County child would have the same access to such air transport to a children's medical center.

Please urge the City Council to grant the permit for a land use permit for the helistop — so that in emergency situations the helicopter will have a safe place in which to land, instead of having to pick out a green spot on the ground, adding to the already existing stress of the situation. I cannot believe the concerns about noise (there are many other aircraft above Laurelhurst, I am sure) or safety (when I am sure stringent route regulations must be adhered to) outweigh the porential of saving a child's life.

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Please direct these comments to the Seattle City Council.

With thanks for the opportunity to comment,

Mary Brannon

(Mrs. Richard)

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RECEIVED
MAY 19 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

1027 N.E 123rd ST
Seattle
Wash.
98125
5.15.86

Dear mrs. Gibb

I am writing in support of Childrens Orthopedic Hospital and medical centre.
Requesting conditional land use permit to build a Helistop outside of Their Emergency Room.
I am a House keeper Employee. and meet lots of Parents during my work Hours! and see the need for a Quicker way to gett children to the Hospital." The Patients that come to the Hospital. are indeed very ill, and need very Quick Treatment. and This is a way to gett the Job done faster
as for the Noise, is very little compared. to Seeing some body's

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life. and in the Summer months
to come.,
when children play in or near
the water. and get partially drowned.
This is the crucial time we need.
a helicopter to get to the hospital
as fast as can be.

Thank you for the opportunity
to comment.
Please convey my opinions
to Seattle city Council

Yours Sincerely
Mrs. Ethel Bell

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Julia ✓

Betty Girdler
2831-91st Street SE
Everett, Washington 98

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MAY 19 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 16, 1986

Julia Gold
400 Municipal Bldg
Seattle Wa 98104

Dear Madam:

I must tell you that I feel the helistop right at the emergency room at Children's orthopedic Hospital is so important when seconds count for a life saving chance for these youngsters.

I understand that the need for this is perhaps once a month or so, and I find it difficult to understand the neighborhood's expressing their "trauma," when compared to the importance of seconds in helping an emergency case.

As an orthopedic Guild member I wished to add my comments.

Sincerely, Betty Girdler

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RECEIVED
MAY 19 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

JAG ✓

Dear Ms. Gibb

I am writing in support of Children's Orthopedic Hospital & Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a concerned citizen about the welfare of our children, and feel that a matter of minutes could save their lives.

I understand the concerns of those who are objecting but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital, also I dont believe the concerns about some noise, could outweigh the good, & safety that will be realized.

Sincerely

Mrs Wallace Taylor
4701 - 109th pl. NE
Kirkland Wa.

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827 - Lake Street S. ✓
Kirkland, Wa. 98033
May 15, 1986

RECEIVED
MAY 19 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Wa. 98104

Dear Ms. Gibb,

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room. I am a parent.

I understand the concerns of those who are objecting, but I want to know that if my grandchildren need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Janet S. Kristianson

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julia

5-15-86

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MAY 19 1986
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

To whom It May Concern:

This letter expresses my support of the Children's Hospital and Medical Center's request for a land use permit to build a helistop outside their emergency room.

I understand the objections of some people but I do not believe that the noise and safety are great enough to outweigh the good that will be engendered by the installation of the helistop.

Sincerely,

Alma Griffin
1613-10th Street West
Kirkland WA 98033

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9025 N.E. 24
Bellevue, Wa 98004
May 15, 1986

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MAY 19 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Dept of Construction + Land Use
400 Municipal Bldg
Seattle, Wa 98104

Dear Ms. Gibb.

I am writing in support of the helistop pad that C.O.H. have requested to be built outside of their emgency room.

As a grandparent I would like to feel that I could get my grandchild - or any child - to a hospital as quickly as possible. Minutes are vital in many cases + I feel this pad for landing would be a great help.

Thank you very much for conveying my feelings to the Seattle City council.

Sincerely
Lucille Bottone

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MAY 16 1986

DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

10016 N.E. 122nd Pl N.C ✓
Kirkland, Wa 98034

May 15, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am a resident of the Eastside and am very concerned over the argument over the heliport for the Orthopedic Hospital. According to reports, the port was used only five times last year. I think a little noise to save five children's lives certainly could be tolerated by the complaining neighbors!

Please tell the city council of my concern.

Sincerely yours,
Ellien H. Worden

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Danny R. Rude, D.D.S.

RECEIVED

MAY 16 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Julia,

I am a very concerned parent and I am writing in support of Childrens Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

We need this service for our children.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,
Linda Rude

22142 S.E. 237th. Maple Valley, Washington 98038 Phone 432-1292

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5007 - 112th Ave. N.E.
Kirkland, WA 98033

May 15, 1986

RECEIVED
MAY 16 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gill,

I am writing in support of Children's Orthopedic Hospital & Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a parent, and a grandparent of a former patient at the Hospital.

I really don't understand the complaints of some people in regard to helicopters making emergency and, in some cases, life-saving trips. Anyone living in the Seattle area should be proud and supportive of all improvements to the care of children at this world-famous hospital!

Sincerely,

(Mrs.) Marjorie T. Reese

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RECEIVED
MAY 30 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb.

This letter is in regard to the Helistop for Children's Hospital and Medical Center. I have been fortunate to have been there during one of the landings and have seen first-hand how very necessary this is.

Helicopters fly all over Seattle as well as this area all the time so the concerns of noise and safety utterly pale besides the possibility of saving lives.

Please count me as a strong vote in favor of the Helistop. Thank you.

May 29, 1986

Jean Maines

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Mrs. J. W. Rose
~~5005 - 39th Ave. N.E.~~
~~1116 - 51st Ave. N. E.~~
Marysville, Washington 98270

Dear Ms. Gibb:

As a long time member of an Childrens Hospital Guild I wish to express my support for Children's Orthopendic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I recognize the concerns of those that live in the area but I feel that those extra minutes of the use of a helicopter could save a child's life. I do not feel the hospital would abuse this privilege. Their concern is for the health and welfare of children in need.

Thank you for your time and please express my opinion to the Seattle City Council.

Gratefully.
Lenore M. Rose

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MAY 29 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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May 24, 1

RECEIVED
MAY 26 1993
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of the Children's Hospital request for a helipad outside the emergency room.

I am a pediatric resident in my third year of training at Children's Hospital. I am also a resident of Laurelhurst, living on Sand Point Way about one block from the hospital. As a physician at the Children's Hospital I have spent a great deal of time caring for critically ill children. I have also had considerable experience transporting sick children and infants as a member of the Infant Transport Team and as a flight physician for Airlift Northwest.

There are numerous occasions when the ability to land directly at the hospital can be potentially life saving for a desperately ill child. The ability to land directly at the hospital saves precious minutes and minimizes the number transfers of a patient from one mode of transport to another. I have personally had the experience of having a child arrest (his heart stopping) in the back of an ambulance enroute to the hospital, this child died. If we had the child in the hospital several minutes sooner, where a complete team of physicians, nurses, and technicians were waiting, he might have lived. The ability to care for a sick child in any transport vehicle is limited and must be minimized when possible.

I do appreciate the concern of my neighbors about the potential noise, but, having worked near and in the helicopters used for transporting sick children, I believe this problem is far outweighed by the good that having a helipad will provide. Living within a block of the hospital I have been at home during several of the landings at the emergency room and have found them no more disturbing than the sound of sirens of ambulances, police cars, and fire trucks that pass frequently.

Thank you for the opportunity to comment. Please convey my opinions to those who will be deciding this important issue.

Sincerely,

Thomas P. Strandjord, M.D.

Thomas P. Strandjord, M.D.

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May 25, 1986

RECEIVED

MAY 28 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gobb
Dept of Construction & Land Use
400 Municipal Bldg
Seattle, Wash. 98104

I am writing in support of the Children's Orthopedic Hospital's need for helicopter service .

I realize there are valid objections from nearby residents; however, as a grandmother who has had a seriously ill grandchild brought back to good health by the staff at the hospital, I feel there is a special need for helicopter service. Also as a Children's Orthopedic Guild member I have been aware of the wonderful things that have been done for ill children. Many times speed in getting the child to the hospital is very essential.

Please convey my support for the helicopter service to the City Council.

Thank You.

Sincerely,

Mrs. W. W. Waak

Mrs. W. W. Waak

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EVERGREEN PARAMEDIC ASSOCIATION

Julia ✓

RECEIVED
MAY 23 1986
PAUL KRAABEL
SEATTLE CITY COUNCIL

Council Conditional Use Application of Childrens Orthopedic Hospital

May 20, 1986

Mr. Bill Reams, Councilman
King County Council
King County Court House
Seattle, WA. 98104

Dear Councilman Reams:

As you may be aware, there has been increasing focus by the City of Seattle on the use of helicopter transport and landing at Childrens Orthopaedic Hospital in Seattle. The resulting furor from a small group in the nearby neighborhood of Laurelhurst has so far managed to sidetrack formal approval by the Seattle City Council for a helicopter landing facility at C.O.H. We find the Laurelhurst community position to be incredulous in thier disregard for common human decency and the value of a human life.

As things stand now every time the Airlift Northwest helicopter lands at C.O.H. they are fined by the City of Seattle for an unauthorized landing. Airlift Northwest only lands at C.O.H. when it is a life threatening emergency that cannot be safely delayed using the current makeshift landing area at the University of Washington ball field and the transport being completed by Ambulance or Medic unit.

not true dlg

As we see it, the City of Seattle is at this point deciding that offering the immediate advanced capabilities of Childrens Orthopaedic Hospital should be only available to those who can survive the drive to the front door. In effect this area encompasses only the City of Seattle and it's close northern border areas. For those of us on the Eastside this makes C.O.H. all that more inaccessable, or accessable only with great delay. Even though Evergreen Hospital in Kirkland does have an advanced Level Two Nursery facility there are still patients that do need to go directly to C.O.H. and with the lake bridges almost impassable at rush hour and slow the rest of the time, the availability of rapid helicopter transport is a quantam leap forward in emergency medical care of the pediatric and other patients.

For those of us living in the eastern part of King County the use of the Airlift Northwest helicopter would reduce the transport time to C.O.H. to about 10 minutes from as much as 45 minutes or longer depending upon the bridge traffic. This reduction in transport time could truly mean the difference between life and death for some of the patients we see on the Eastside even though Airlift may take them to an Eastside Hospital rather than to a downtown facility.

12040 NE 128TH KIRKLAND WA 98034

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As a spokesman for our community we hope that you will take the time to investigate this matter and contact the Seattle City Council and Mayor Royer to express your concerns about this most important issue.

Thank you for input into this issue that effects all of us.

Sincerely:

David Knight, Paramedic
for the Evergreen Paramedic Association
12040 NE 128th
Kirkland WA. 98033
821-1111

cc/Mayor Royer
Seattle City Council
King County Executive Tim Hill
Mayor Marcione, City of Redmond
City Manager Ellis, City of Kirkland
City Manager Osterman, City of Bothell
Mayor Harder, Town of Duvall
Andrew Fallat Administrator, Evergreen Hospital
Michael Copass M.D. Airlift Northwest
Truman Katz, Administrator, Childrens Orthopaedic Hospital

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EVERGREEN PARAMEDIC AS

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MAY 27 1986
DEPT. OF CONST. & LAND USE

May 20, 1986

RECEIVED
MAY 23 1986
MAYOR'S OFFICE

Mr. Bill Reams, Councilman
King County Council
King County Court House
Seattle,WA. 98104

Dear Councilman Reams:

As you may be aware, there has been increasing focus by the City of Seattle on the use of helicopter transport and landing at Childrens Orthopaedic Hospital in Seattle. The resulting furor from a small group in the nearby neighborhood of Laurelhurst has so far managed to sidetrack formal approval by the Seattle City Council for a helicopter landing facility at C.O.H. We find the Laurelhurst community position to be incredulous in thier disregard for common human decency and the value of a human life.

As things stand now every time the Airlift Northwest helicopter lands at C.O.H. they are fined by the City of Seattle for an unauthorized landing. Airlift Northwest only lands at C.O.H. when it is a life threatening emergency that cannot be safely delayed using the current makeshift landing area at the University of Washington ball field and the transport being completed by Ambulance or Medic unit.

As we see it, the City of Seattle is at this point deciding that offering the immediate advanced capabilities of Childrens Orthopaedic Hospital should be only available to those who can survive the drive to the front door. In effect this area encompasses only the City of Seattle and it's close northern border areas. For those of us on the Eastside this makes C.O.H. all that more inaccessable, or accessable only with great delay. Even though Evergreen Hospital in Kirkland does have an advanced Level Two Nursery facility there are still patients that do need to go directly to C.O.H. and with the lake bridges almost impassable at rush hour and slow the rest of the time, the availability of rapid helicopter transport is a quantam leap forward in emergency medical care of the pediatric and other patients.

For those of us living in the eastern part of King County the use of the Airlift Northwest helicopter would reduce the transport time to C.O.H. to about 10 minutes from as much as 45 minutes or longer depending upon the bridge traffic. This reduction in transport time could truly mean the difference between life and death for some of the patients we see on the Eastside even though Airlift may take them to an Eastside Hospital rather than to a downtown facility.

12040 NE 128TH KIRKLAND WA 98034

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As a spokesman for our community we hope that you will take the time to investigate this matter and contact the Seattle City Council and Mayor Royer to express your concerns about this most important issue.

Thank you for input into this issue that effects all of us.

Sincerely:

David Knight, Paramedic
for the Evergreen Paramedic Association
12040 NE 128th
Kirkland WA. 98033
821-1111

cc/Mayor Royer
Seattle City Council
King County Executive Tim Hill
Mayor Marcione, City of Redmond
City Manager Ellis, City of Kirkland
City Manager Osterman, City of Bothell
Mayor Harder, Town of Duvall
Andrew Fallat Administrator, Evergreen Hospital
Michael Copass M.D. Airlift Northwest
Truman Katz, Administrator, Childrens Orthopaedic Hospital

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May 21, 1986

Ms Julia Gibb
Dept. of Construction & Land Use
400 Municipal Bldg.
Seattle, WA 98104

RECEIVED
MAY 23 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a concerned parent residing in King County.

I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital. I do not believe the concerns

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about noise and safety outweigh the good that will be realized.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Judy Field
12926 NE 136th
Kirkland WA 98034

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RECEIVED

MAY 23 1985

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb,

I am writing in support of Children's Orthopedic Hospital & Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a Seattle resident. I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,
Joy Smith
4505 So. 160th
Seattle, Wa 98188

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RECEIVED
MAY 23 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

5-21-86

Dear Ms Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a parent, I understand the concerns of those who are objecting, but I want to know that if my children need to come to CHHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Nancy Garnett

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5/23/86

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mrs. Virginia C. Rohde
14208 N. E. 40th Place
Bellevue, Washington 98007

5/21/86

Dear Julia Gibb -

I am writing in support of COH's request for a conditional land use permit to build a helistop outside their emergency room.

I am a parent and understand the concerns of those objecting, but I believe strongly that their concerns about noise and safety do not outweigh the good that will be realized for the emergency patients.

Thank you for my opportunity to comment. Please convey my opinions to Seattle City Council. Sincerely, Virginia Rohde

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MAY 23
DEPT OF CONSTRUCTION
LAND USE DIVISION

4733 54th Ave S.
Seattle, Washington 98118

May 22, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Wash. 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a nurse and resident of south Seattle and am well aware of the driving time to Children's Orthopedic Hospital from our area and the very common traffic congestion problems the University area, bridges, and rush-hour traffic pose. I cannot fathom objections posed by residents of the area who would so infrequently have their privacy invaded by helicopter noise that they value this above the healthcare of seriously ill children.

I have lived near air bases, airports, and freeways in the past and know very well that constant noise can be troublesome, however, in this case, the helicopter noise would be minimal, infrequent and understandable when the needs of ill children are concerned.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Roger Monson

Roger Monson, RN, MN

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May 20, 1986

RECEIVED
MAY 27 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Wa. 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

As a parent, I am concerned that children in areas other that the Hospital, especially out of state, must receive the most efficient means of transport for emergency care that is facilitated by C.O.H.M.C.

I understand the concerns of those who are objecting, but I feel that our number one concern should be that of those who are in need of this most valuable service--the children. This need far outweighs those concerns of noise that seems to be occupying the minds and time of people in the surrounding area of the hospital. When we speak of the value of human life and the care we should have for each other, it saddens me to think the objectors can only think of noise!

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Karen L. Hoffman

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Sharon B Dittenberger
13802 67th Ave W
Edmonds, Wa 98020

RECEIVED
MAY 27 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 21, 1986

Dear Ms. Gibb:

I am writing in support of CHMC's request for a conditional land use permit to build a helistop outside their emergency room.

I am a parent, a guild member, and a former Seattle resident.

I want to know that if my children need to come to CHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Sharon Dittenberger

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RECEIVED
MAY 27 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 21, 1986

Julia Gibb
Department of Construction & Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Julia

I find it hard to believe that there are actual people who could careless about the life of a infant or child. The helicopter service is such a plus for COH, it gives nothing more than prompt care for that sick child.

A few of our members from our guild had a tour of the hospital at which time we were told that the helicopter only landed 4 time last year. Seems like a minor inconvenience on the surrounding residence, when it's all for a life.

incorrect JIK.

I wonder if these people have thought that maybe it could be them, that have only minutes before death or some other serious injury. Of course when one talks of themselves it would be nothing but the best, so these infants and children who are hanging onto their lives with possibly only minutes to spare, should not be given the best treatment, or should they too be given nothing but the best and if the best means bringing them to COH via helicopter, then that option should be available.

I SUPPORT THE HELICOPTER SERVICE FOR COH. I wish you the best of luck in the dispute against some very selfish residence.

Sincerely

Christopher Funk Guild

Jan I. Kipperberg

P.S. We have army helicopters fly over our house every evening for several minutes like 30 and we seem to survive, the word is flexibility. The COH helicopter is not a everyday occurance but if need daily should also be accepted.

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RECEIVED

MAY 27 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

5-21-86

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a parent, and I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Theresa Frey

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VICTORIA S. GALANTI
3617 N. E. 50TH STREET
SEATTLE, WASHINGTON 98105

RECEIVED 1986
MAY 22 1986
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction & Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb,

I live near Children's Orthopedic Hospital, and I am writing to you to let you know I support the Helistop that COH wants at the hospital. I have heard the helicopters on their trips already, and though I understand that other neighbors object to the noise, it is of such short duration that I have never been "disturbed" by them.

I must admit that I have a 7 year-old daughter, and I can only be grateful that the airlift service is available in case some day she might need it.

I hope you can approve the continued use of the helistop at Children's. It definitely fills a community need.

Victoria Galanti

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May 18, 1986

Julia Gibb,

Because the Children are our future I have great concern for their health. Please allow the Helistop to exist at Children's Hospital. It can save lives!

Dale Christensen

Christensen
19461 Normandy Park Drive S.W.
Seattle, WA 98166

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MAY 21 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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RECEIVED

MAY 19 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 15, 1986

Dear Ms. Gibb,

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am an interested grandparent. I understand the concerns of those who are objecting, but if any of my grandchildren need to come to COH MC I want to know the helicopter can land directly at the hospital

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,
Ruth C. Herron

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May 16, 1986

RECEIVED
MAY 19 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb,

I am writing to express my support for Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop.

As a Seattle resident, I would hate to see neighborhood pressure prevent construction of a life-saving heliport. I feel that if any child's life were saved as a result of this, it would be worth any amount of noise. I am sure any other neighborhood in Seattle would not hesitate to permit construction of a heliport.

I am also an employee of the hospital who has seen and heard the helicopters land. The noise has been minimal.

We all understand the issues regarding neighborhood noise, etc, but the facts far outweigh these issues. These helistops do save lives. This is the issue for me.

Thank you for allowing me to comment. I would appreciate your relaying this information to the City Council.

Very sincerely,

Linda A. Smith

Linda A. Smith
9014 Evanston North
Seattle, WA 98103

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May 14, 1986

RECEIVED
MAY 15 1986
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Dept. of Construction & Land Use
400 Municipal Bldg.
Seattle, WA 98104

Dear Ms. Gibb:

I suppoort Children's Hospital's request to build a helicopter landing pad next to their emergency room.

Easy for me to say, I live thirty miles from the noise, right? But as the parent of two small children, that distance is exactly the reason I'd like to see it built. I want to know that when seconds count, I could get my kids to the miracle workers at Children's without delay.

I understand the concerns of the nearby residents. But in my opinion, the good outweighs the bad.

Sincerely,

Ron Christiansen

Ron Christiansen
2429 140th Pl. S.E.
Mill Creek, WA 98012
(206)775-6491

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May 13, 1986

RECEIVED
MAY 15 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Dept. of Construction & Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a neighbor, or pretty close (Wallingford) and know that I would feel even more secure in an emergency situation that the helistop was close at hand when seconds really do count.

I understand the concerns of those who are objecting, but I do not believe that the concerns about noise and safety outweigh the good that will be realized. We are talking about a child's life, the most precious gift given to us.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Sue Lyon

Sue Lyon
4658 Eastern Avenue N.
Seattle, WA 98103

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RECEIVED
MAY 13 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

April 21, 1986

Dear Ms. Gibb:

I am writing you to express my support of Children's Orthopedic Hospital and Medical Center in their effort to build a heliport on their campus. As both a nurse and a very soon to be parent, I feel this service is essential to the community. I can understand that the neighborhood may object to the noise and potential danger, but feel that COHMC and Airlift Northwest have more than answered these concerns with the traffic patterns they use, the most modern and safe equipment and their committment to using hospital landings as emergency rather than convenience. I have personally been at COHMC during many on the landings and not realized they occurred until someone later told me. This means to me, that while the noise may be inconvenient, it is not overwhelming.

As a parent, I want this available for my child should an emergency occur. I have seen instances where time and movement have meant the difference between life and death. We often have children who are too unstable to move down the hallway for a special test. How ludicrous to think they should be able to survive being stuck in the mud in

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a soccer field.

Thank you for considering my opinion. I would like to state again my complete support for the COHMC Helipad. Please convey my opinions to the Seattle City Council.

Sincerely,

Nancy Nelson, R.N.
14002 80th Ave. NE
Bothell, WA 98011

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RECEIVED
MAY 20 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 19, 1986

Dear Ms Gibb,

I am writing in support of Children's Orthopedic Hospital's request for a conditional land use permit to build a helistop outside their emergency room.

I am president of Issaquah Orthopedic Auxiliary and I and all my 55 members care very deeply about the care of <u>critically</u> ill children. I <u>know</u> the hospital would be very discriminate on the helistops use.

(over)

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Thanks for listening. Please convey my opinion to the Seattle City Council. Many Thanks

Sincerely

Frances Nightingale

19631 SE 24th Way

Issaquah Wa. 98027

phone 392-3323

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MAY 20 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

5/20/86



Dear Mrs

I am writing in support of Children's Orthopedic Hospital Medical Center's request for a conditional use permit to build a helistop outside their emergency room.

I am an employee and I understand the problems of those who are objecting but I believe any life that can be saved is worth every effort to bring it about.

Thankyou for the opportunity to comment & hope this new will help expedite any problems

Sincerely

Phyllis Spencer
4224 4th Ave
Seattle Wa 98105

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MAY 20 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 17, 1986

Julia Gibb
Dept. of Construction and Land Use
400 Municipal Bldg.
Seattle, WA 98104

Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a resident of a neighboring community.

I understand the concerns of those who are objecting, but I want to know that if children need to come to CO+MC in a

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RECEIVED

Hurry, the Helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinion to the Seattle City Council.

Very truly yours,
Susan M. Nadon
16924-161st Ave SE
Renton, WA 98055

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Dear Julia: 5-20

Because I am so concerned, I am writing in support of a land use permit for the planned Helistop, next to the emergency room at Orthopedic Hospital in Seattle (for emergency only)

I am a member of the Sequamish-Suquamish Auxiliary.

Mrs Norma (Rutt) Hokanson
P.O. Box 196
Sequamish, WA.
98392

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MAY 22, 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Charles Carroll — Patriot

U.S. Domestic Rate

Julia Gitt
Dept. of Construction & Land Use
400 Municipal Bldg.
Seattle, WA
98104

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RECEIVED April 1986

APR 23 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms Gibb:

I am writing to you in support of the request by Children's Orthopedic Hospital for a conditional landuse permit to build a helistop adjacent to the emergency room.

I support this request for the following reasons:

① I'm the parent of an infant who needed emergency transportation to Children's some years ago but it was not possible because this service did not exist then. I know the value of this service from very personal experience.

② I now am an employee here at Children's for the Chief of emergency services. I have personally witnessed take offs & landings of Airlift N.W. It is not an offensive carrier whatsoever - either noisewise or esthetically.

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③ Most importantly, it is saving children's lives. I wasn't so lucky. My daughter died.

④ The fact that Children's has joined with 3 other major medical facilities: Harborview M.C.
Providence M.C.
and University of Wash. Hospital to provide this service, and the fact that they have left the decision as to which children are transported by Airlift N.W. directly here to C.O.H. to another source other than our Staff Physicians speaks well for the Hospitals intent to only transport children who have life-threatened conditions best taken care of here.

I urge you to convey my message to the Seattle City Council.

Sincerely,
Mrs. Lota J. Waller

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EDGAR K. MARCUSE, M.D.
2153 East Shelby Street
Seattle, Washington 98112

April 8, 1986

RECEIVED
APR 11 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Seattle Department of
Construction and Land Use
402 Municipal Building
Seattle, Washington 98104

Attention: Julia Gibb

Dear Ms. Gibb:

As a long-term resident of Montlake and pediatrician at COH&MC, I am familiar with "both sides" of the arguments about the proposed helipad at COH.

I krow from my own experience that residing next to any institution - the Museum of History and Industry, the University of Washington's hospital or football stadium, or COH&MC - creates some special problems. At times, there is real conflict between the interests of these institutions and the residential communities which surround them. There should be very careful scrutiny of such institutions' plans to assure that when tney adversely impact residential communities, their proposed activities are consistent with their proper missions and that steps are taken to minimize negative consequences for the community.

I believe that COH&MC requires a helipad to fulfill its mission of making specialized medical services available to children throughout the Northwest. A helipad will allow prompt, safe transportation of critically ill children. While I am confident that economic factors alone would limit its use to those who require it, I believe that careful monitoring of utilization by the city and Laurelhurst community is appropriate.

I have watched helicopters fly over my home in Montlake en route to the hospital. I have participated in the care of children transported by helicopter, have ridden with critically ill infants,transported by helicopter to the athletic field, during their transport by ambulance to COH&MC. I believe COH's application for a helipad should be approved.

Sincerely,

Edgar K. Marcuse, M.D.

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~~Hand~~ cc City Council Sty
file

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APR 24 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

April 21, 1986

Julia Gibb
Dept. of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helipad outside their emergency room.

I am an RN, employed by COHMC and am also the former Flight Nurse Coordinator for the hospital. I have had opportunity to visit several other flight programs in Spokane, WA, Denver, CO and Salt Lake City, UT.

I understand the concerns of those who are objecting, but I know from experience there is a definite need for a helicopter service in the transport of critically ill infants and children. Naturally, rapid transport is important as time is a critical factor for some of the children, especially those with surgical emergencies. Another factor that often gets overlooked is the decreased amount of patient handling and transfers by utilizing a vehicle that pick a critical child up at their referral hospital or an accident scene and deliver them to our emergency room with essentially only 2 transfers. When the helicopter lands some place other than the ER, it adds 2 additional transfers. The mere handling can cause significant problems for many of the patients that we service as well as tack on several minutes.

I am aware that some institutions around the country, namely California, have abused air transport with rotary wing craft. The fact that we are invovled in a city wide consortium of hospitals sharing an air service and have agreed to let our helicopter transports be monitored by outside medical experts demonstrates to me that the hospital does not have marketing or financial gain in mind.

Thank you for the opportunity to express my opinions. Please convey my comments to the Seattle City Council.

Sincerely,

Rita S McClarty

Rita S. McClarty, RNC
Outreach Coordinator
COHMC - Nursing Office

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MEADE EMORY
2400 COLUMBIA CENTER
SEATTLE 98104

RECEIVED
APR 29 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

April 28, 1986

Ms. Julia Gibb
Dept. of Construction and
Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing to you on the issue of the accessibility to COH by helicopter. In the management of public affairs, generally, all issues tend to involve weighing the welfare of the public at large versus the situation of a considerably smaller segment of society. Access to health facilities (and access which is quick enough to accomplish the intended objective) should be a mainstay of public policy planning. If we were writing on a "blank tablet", and we knew then what we know now, it might not have been the wisest choice to place the COH on the edge of an up-scale and well-to-do residential neighborhood. That choice, however, was made long ago and there is nothing (practically) that we can do about that now.

Despite the choice that was made, long ago, regarding the location of COH, we must do everything, today, to ensure that those in need of quick and speedy medical care at its fine facilities, can have the access that is necessary to obtain the treatment. In many situations, given the distance from which patients come for the specialized treatment which COH offers, helicopter offers the best, the fastest, the most reasonable and the most appropriate way in which to transport the patient to the care site. The minor disruption that the helicopter fly-over may pose to those in the gardens of Laurelhurst should not be allowed to stand in the way of the public good.

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Health care is something that all in our society, regardless of political affiliation, or ideological association, regard as an essential benefit which must be available. When children are involved the need becomes even more manifest.

I urge your department to approve necessary access to COH by helicopter. If I can speak with anyone in your department about this issue, in order to elaborate my views, or be of any assistance in your decision making, please do not hesitate to contact me (624-1040).

Yours very truly,

Meade Emory

ME:tl

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RECEIVED
APR 29 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms Gibb.

I am writing in support of Childrens Orthopedic Hospital and Medical Center request for a Conditional land use permit to build a helistop outside there emergency rooms.

I am a parent and also a resident of King Co. and have used the hospital a few years ago

Thank you for the opportunity to comment Please Convey my opinions to the proper People

Thank you
Sincerely Yours
William F Lotsbaum

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Julia Gibb
Dept of Construction and Land Use
400 Municipal Bldg
Seattle, WA 98104

RECEIVED
MAY 19 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb

I am writing in support of Children's Orthopidic Hospital's request for a conditional land use permit to build a heliport outside their emergency room.

I am a parent whose child was treated at CO+ many years ago and now the grandmother of several who might need emergency care some day. A few minutes saved could mean a life saved.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely
Joanne B Chandler

618 - 11th Ave West
Kirkland, WA
May 15, 1986

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Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

RECEIVED
APR 28 1995
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb

As a grandparent and a Seattle resident, I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I have heard and can understand the objections of the neighboring homes, but I believe that the possibility of saving a child's life through rapid transport to emergency care far outweighs the concerns.

I appreciate the opportunity to voice my opinion and would like my comment passed on to the Seattle City Council.

Sincerely,

Nancy Harkness
17433 Sylvester Rd SW
Seattle WA 98166

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4-23-86

Dear Ms Bebb.

I am writing in support of CHOMC's request for a permit to build a helistop outside their emergency room.

I am a parent and have been personally involved when a family member needed emergency medical treatment - so I understand how important the correct medical care can be and what the difference even a few minutes can make.

I cannot understand how anyone could place noise above the possibility of saving a life.

Please convey my opinions to the Seattle City Council.

Sincerely,
Susan Armstrong

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APR 28 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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April 25-86

Dear Ms Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a resident of King County.

I understand the concerns of those who are objecting, but I have heard the helicopter & do not believe that concerns about noise & safety outweigh the good that will be realized.

Thank you for the opportunity to comment. Please convey my opinion to the Seattle City Council.

Sincerely

Mrs. David Leonhardt

12684 S.E. 161

Renton, WA. 98058

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APR 28 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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April 22, 1986

RECEIVED
APR 23 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA. 98104

Dear Ms. Gibb:

I am aware of the Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop near their emergency room, and I am writing to you in support of this request.

I understand the concerns of those who are objecting. However, I feel it is important to put these objections in perspective. When one considers that a human life is at stake, then such issues have little relevance. In addition, COHMC is acting in a responsible manner to reduce noise and increase safety measures. I feel it is medically imperative that critically-ill children are provided access to treatment as quickly as possible.

As an employee of Children's Orthopedic Hospital, I urge you to give the permit request serious consideration. Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Marjan Petty

Marjan C. Petty
3720 Sunnyside Ave. N.
Seattle, WA. 98103

MP/s

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HERBERT T. ABELSON, M.D.
Pediatrician-in-Chief
CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER
4800 Sand Point Way N.E. / P.O. Box C–5371
Seattle, WA 98105 / Phone: (206) 526–2150

Professor and Chairman
UNIVERSITY OF WASHINGTON
School of Medicine
Department of Pediatrics / RD–20
Seattle, WA 98195 / Phone: (206) 543–3180

RECEIVED
APR 15 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

April 14, 1986

Julia Gibb
402 Municipal Building
Seattle, WA 98104

RE: Proposed Helipad at Children's Orthopedic Hospital and Medical Center

Dear Ms. Gibb:

As Pediatrician-in-Chief at Children's Orthopedic Hospital and Medical Center, I am writing to encourage you to act favorably on the proposed helipad at Children's Orthopedic Hospital and Medical Center. The helipad will be used for patients requiring emergent transport to Children's Orthopedic Hospital and Medical Center, and in some of these cases, it will be livesaving. The minor inconvenience that the helipad will cause to members of the Laurelhurst community will be more than offset by the benefit to those children. I urge your approval.

Sincerely,

Herbert T. Abelson, M.D.

HTA:dw

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APR 15 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

RECEIVED
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

April 14, 1986

Julia Gibb
402 Municipal Building
Seattle, WA 98104

RE: Proposed Helipad at Children's Orthopedic Hospital and Medical Center

Dear Ms. Gibb:

As a citizen of the surrounding community (Windermere), I write to urge you to support the proposed helipad at Children's Orthopedic Hospital and Medical Center. As a Seattle citizen, a concerned parent, and member of a community adjoining Children's Orthopedic Hospital and Medical Center, I urge you to act favorably on the proposed helipad since it will further enhance our community's dedication to and participation in the very best medical care available for our city and region's children.

Sincerely,

Herbert T. Abelson, M.D.

HTA:dw

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RECEIVED

APR 15 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

5003 45th N.E.
Seattle, WA 98105
April 11, 1986

Julia Gibb
Land Use Analyst
Dept. of Construction and Land Use
Seattle, Washington 98104

Dear Ms. Gibb:

We request that DCLU include in the environmental impact statement being prepared on the Children's Hospital helipad proposal an evaluation of the alternative that would have all helicopter-transported patients delivered to Harborview Hospital for initial diagnosis and treatment. This is a reasonable and logical alternative to additional hospital helistops such as the one proposed at COH.

Harborview Hospital is recognized as the regional trauma center. If need be, equipment could be added to deal with the requirements of neonatal cases and very young children. Personnel from COH and University Hospital pediatrics and neonatal departments could support the Harborview emergency care on those few occasions when they were needed. If they were dispatched at the same time as the helicopter was launched they would arrive at Harborview before the patient.

The literature on emergency care is clear on one point: Good trauma care is possible only in places where the volume of patients is high enough to provide the caregivers with the opportunity to develop and maintain their special skills. If Dr. Nicola's estimate of 2 emergency pediatric cases per month is correct, it is only prudent to have them go to Harborview for diagnosis and initial treatment.

As you know, a development proposal for a regional plan for emergency medical services in the Central Puget Sound area has been drafted by the Puget Sound Health Systems Agency. We expect that this study will give serious consideration to centralizing hospital-based helicopter operations as a means of assuring quality medical care and controlling costs, both financial and environmental. The City should examine this alternative in the EIS as well.

We look forward to reviewing the draft EIS.

Sincerely,

Jerry B. Schneider
Citizens Concerned About
Helicopter Transport

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RECEIVED

APR 21 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

April 18, 1986

Julia Gibb
Department of Construction and
Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

The issue of the approval of a helistop for Children's Orthopedic Hospital and Medical Center is an issue which has too long been held prisoner to the vocal minority in the Laurelhurst Community. The various smoke screens held up by this group such as noise levels, safety issues and the potential use of an extremely expensive emergency service as a marketing frill have been answered many times over. The time to make an affirmative decision is now.

The implicit and explicit threats of the Laurelhurst partisans must finally be dealt with. No sensible person could argue with the need for a safe place to land critically ill children. The delay in creating such a place is more of a safety hazard than all the issues raised by the opponents of this plan.

I urge you to make the only decision possible for the health and safety of the children of the Northwest. What is clear is that this decision will save young lives. To make any other choice might cut-off a young life. Please make your final decision quickly so that we may move on to other issues and cease the histrionics of a small group determined to delay and oppose any issue of safety and progress.

Thank you,

Ira M. Duden
16033 SE 46th Place
Bellevue, Washington 98006

IMD:lp

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RECEIVED
APR 21 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
402 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing to ask that you support the proposed construction of a helipad at Children's Orthopedic Hospital. Air transport directly to the hospital in life threatening situations is a vital service that should not be denied to infants and children of this region.

Sincerely,

Sally Ragsdale

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RECEIVED

APP 24 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

3042 12th Ave. West
Seattle, WA 98119
April 22, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing to register my support of the request of Children's Orthopedic Hospital and Medical Center to build a helipad on the hospital campus.

As the mother of a seven-month old girl, I am deeply concerned about the quality of pediatric care in the Northwest. If my daughter's life or health were in danger, I would want her transported to COHMC as quickly and safely as possible. If a helicopter were needed, I would want it to be able to land at the hospital if that should be medically necessary.

As a grantwriter for the Children's Orthopedic Hospital Foundation, I frequently see the premature infants in the Intensive Care Unit, with tubes and wires attached to every part of their tiny bodies, struggling for breath or lying so still it is hard to believe they are alive. It is easy to see that any extra motion could endanger the lives of some of these infants.

While it is true that the University of Washington soccer field is not far from the hospital, the difference between a landing at the field and a landing at the emergency room door can be more than a few minutes' drive. Most critical is the fact that the drive necessitates an extra transfer of the patient--from helicopter to ambulance and from ambulance to emergency room--before the child can reach the hospital. This means disconnecting and reconnecting the life support systems an extra time. A child could die or suffer permanent brain damage in the process.

I can understand why no one wants to live next to a helipad. But if the neighbors who worry about helicopter noise could see what fragile lives hang in the balance, I am sure they would be willing to put up with a little inconvenience for the sake of these children and their families. If even one child is saved from death or brain damage because of the helipad, its construction will have been worthwhile.

Please add my name to the list of supporters of COHMC's request when this issue comes before the Seattle City Council.

Sincerely,

Goodwin S. Deacon

Goodwin S. Deacon

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April 23, 1986

RECEIVED
APR 25 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, wA 98104

Dear Ms. Gibb:

Please add my support of the propose helistop for and by Children's Orthopedic Hospital and Medical Center.

As a parent it is reassuring that my child would have available to him the most advanced medical assistance possible in the case of an emergency.

Sincerely,

Nancy M. Freeman

6321 E. 144th St.
Puyallup, WA 98373

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RECEIVED

APR 25 1986

DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

April 24 1986

Dear Ms Gibb

I am a critical care nurse in the Pediatric Intensive Care Unit at Children's Orthopedic Hospital. I am writing in support of COHMC's request for a conditional land use permit to build a helistop outside the ER.

I am also a long term resident, actually native of Seattle. The Childrens Hospital has for over 75 years offered specialized care for the sick infants and children from all our our state and those around us and some even from international countries. We have an obligation to provide tertiary care to those who come through our doors because we are a regional medical center. It is our responsibility to offer and deliver the best possible care we can provide. I am also a member of the code team and respond to those emergencies of respiratory and cardiac failure. I am in the ER when these critically unstable children arrive. I know what it is like to take care of children who have not been initially assessed, properly treated and stabilized prior to arrival at our hospital. I have participated as an active team member of both the neonatal & pediatric ground (ambulance) transport teams. Time is of the absolute essential, along with the expertise of trained personnel to care for this special population.

I understand the concerns of those who are objecting but I took care of the 19 month old near drowning victim as she arrived via chopper to our doors. Had it not been for that decision there would have been the valuable time wasted to further stabilize, get her immediately to the operating room for treating her head swelling. It was, she has lived and survived remarkably from this tragic accident because she was able to land directly at our hospital. I believe that

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physicians involved weigh all the odds and make the appropriate decisions, that sometimes necessitates the helicopter landing at our ER

To continue to provide this critically valuable service we need to have the ability to bring only those children who require the specialized and emergency treatments to our front door.

Thank you for the opportunity to comment. All you need to see is the interaction of those children reunited with their families to know that what we are attempting to do is so very important. How would you feel if we airlifted a child and the parents asked (or answer) you "well, you are going directly to the hospital, aren't you?" !! Please convey this thought and these feelings to the Seattle City Council.

Sincerely,
Sue Ferrell RN

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RECEIVED

APR 25 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

April 21, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in response to and support of the issue regarding COHMC's request for a conditional land use permit for the helicopter landing outside the Emergency Room.

As a Pediatric nurse of over 10 years and an employee of Children's Orthopedic Hospital and Medical Center I feel such a landing permit is essential to the patients being transported here. As a person who lives in a rural community and abhors noisiness, I have stood in the street at COHMC as a helicopter has approached and landed. The noise is not loud standing outside and lasts only 20-30 seconds.

Please submit my support to the Seattle City Council.

Sincerely,

Lee Bossung-Sweeney, BSN, RNC

Lee Bossung-Sweeney, B.S.N., R.N.C.
Apnea Nurse Clinician
Children's Orthopedic Hospital
and Medical Center

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~~4-24~~ cc to City Council Hsg
& file

✓

4-22-86

DEAR MS GIBBS,

I AM WRITING IN SUPPORT OF CHILDREN'S ORTHOPEDIC HOSIPTAL AND MEDICAL CENTERS REQUEST FOR A CONDITION LAND USE, PERMIT TO BUILD A HELISTOP OUTSIDE THEIR EMERGENCY ROOM. I AM A EMPLOYEE— I UNDERSTAND THE CONCERNS OF THOSE WHO ARE OBJECTING ~~OUT~~ BUT I —— I SEE THE TREATING THESE CHILDREN'S GET EVERY DAY. I THINK NECESSARY FOR THE HELISTOP TO BE BUILD FOR THE SAKE OF THE CHILDREN'S. I SUPPORT THIS ALL AWAY

THANK YOU FOR THE OPPORTUNITY TO COMMENT.
PLEASE CONVEY MY OPINIONS TO THE SEATTLE CITY COUNCIL.

SINCERELY YOURS

Elorryce Smith
Elorycee Smith

RECEIVED
APR 24 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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Danny R. Rude, D.D.S.

RECEIVED
MAY 20 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Dept. of Construction & Land Use
400 Municipal Bldg.
Seattle, WA. 98104

May 20, 1986

Dear Ms. Gibb,

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside the emergency room.

I am the father of three children. Although I appreciate the concerns of the local residents who are opposed due to noise considerations, I cannot understand how that concern could overshadow the possibility of saving a child's life.

Please convey my opinion in support of the hospital's request to the members of the Seattle City Council in whose hands rest the lives and well-being of the children of this community.

Sincerely,

Danny R. Rude, D.D.S.

22142 S.E. 237th. Maple Valley, Washington 98038 Phone 432-1292

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Seattle
Department of Construction and Land Use

Concurrence Prior to Signature
AO 4-8
JK 4-8
CC

April 7, 1986

Liz Anderson, Co-Chairperson
Laurelhurst Community Club
4746 45th Avenue Northeast
Seattle, Washington 98105

Dear Ms. Anderson:

I am happy to hear that the Laurelhurst Community Club is working with Children's Orthopedic Hospital on development issues.

When the City adopted the major institution zones, our Department requested each major institution to complete and return to us a Baseline Data sheet; a copy of Children's Orthopedic Hospital's Baseline Data sheet is enclosed for your information. The Baseline Data sheet indicates that as of June 1, 1983, their gross floor area was 418,67[illegible] Sq. Ft. and their lot coverage was 115,236 Sq.Ft. or 12.17% of their lot area.

The information provided on the Baseline Data sheet has not been verified by survey but is based solely on the information as provided by an administrator at the hospital. We would not ask for a survey or verification unless questions were apparent or we were otherwise informed that the information submitted was erroneous.

If we can be of further assistance, please call Alan Oiye at 625-2781.

Sincerely,

HOLLY MILLER
Director

AO:mbb

cc: Allan Oiye
Julia Gibb

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MEDICAL INSTITUTION

JUNE 1, 1983, BASELINE DATA

Seattle
Department of Construction and Land Use

Show data by building and in total	Existing lot area	Lot coverage (sq. ft.)	Lot coverage (%)	Existing GFA	# staff doctors	# hospital-based doctors	# employees peak hours
Children's Orthopedic Hosp. & Medical Ctr.	946,700 s	~~114,433~~	~~12%~~	~~417,975~~	900	83	1050
Parking Garage	946,700	60,080	6.4%	316,955			
TOTAL	946,700	~~174,513~~	-	~~734,930~~	900	83	1050
TOTAL (more than one page, give on last page)							

March 27, 1986

RECEIVED
APR 2 - 1986
DEPT. OF CONST. & LAND USE

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Miller:

The Laurelhurst Community Club's Land Use Committee is working with the Children's Orthopedic Hospital on a number of development issues. We are anxious to have the Hospital disclose its master plan for development so that we can understand the big picture and avoid reacting inappropriately to piecemeal development projects which may not be a problem.

We are requesting the verified data on gross floor area and lot coverage as it existed on June 2, 1983. We understand this data will be used as a baseline for DCLU determinations of whether or not specific projects will trigger the requirement of a masterplan.

We are concerned that there may have been no survey of the property to satisfy the need for accurate data. Please reassure us on this point as soon as possible.

Sincerely,

Liz Anderson

Liz Anderson, CoChairman
Land Use Committee
Laurelhurst Community Club
4746 45th Northeast
Seattle, WA 98105

Logged

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February 12, 1986

Jim Street, Chairman
Land Use Committee
Seattle City Council
1100 Seattle Municipal Building
Seattle, WA 98104

Dear Councilmember Street:

At its last Board meeting, the Laurelhurst Community Club adopted a resolution supporting amendments to the Land Use Code which would implement the City's objectives to decentralize development of uses not essential to the performance of the basic mission of the institution, would set development standards for preserving open space on the campus, and would encourage development of a master plan in which the height, bulk and setback standards are tailored to the surrounding neighborhood.

It has been a year since we requested Committee review of the Code provisions regulating major institutions. While we realize that the Committee has been very busy with other important issues, we need to remind you that the major institutions zoning has been declared unconstitutional. We recognize it to be a serious threat to our community.

Please schedule reconsideration of the zoning as soon as possible. Let us know what we can do to help identify the problems and effect solutions.

Sincerely,

Liz Anderson, Chairman
Land Use Committee
Laurelhurst Community Club
4746 45th Northeast
Seattle, WA 98105
522 2944

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Julia
✓

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

January 10, 1986

Bernice Stern, Chair
Transportation Commission
Washington Department of Transportation
Division of Aeronautics
8600 Perimeter Road
King County International Airport
Seattle, Washington 98108

Dear Ms. Stern:

Thank you for your letter commenting upon statements made by Citizens Concerned About Helicopter Transport (CCAHT). As your letter suggests, many differing points of view are strongly held concerning this proposal.

The City is closely reviewing the proposal and letters such as yours raise important issues which are being carefully considered. The Department of Construction and Land Use (DCLU) will be applying the State Environmental Policy Act (SEPA) and provisions of the Land Use Code to make a decision. These laws require DCLU to evaluate land use and environmental impacts, the issue of medical need, and the implications of this specific proposal for future hospital development.

Beatrice Ryan, Interim Director of DCLU, tells me that her staff is currently reviewing the proposal and will soon make a threshold determination under SEPA on whether there is a need for further environmental review. DCLU has also issued a Notice of Violation to COH for landing helicopters without a permit.

I appreciate you sharing your comments with me. Your letter will be included in the file, and you will be notified of future public hearing schedules and decisions. If you have questions, please call Julia Gibb, Land Use Specialist, at 625-4509.

Sincerely,

Charles Royer

CR:jgg

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CLU MAYOR'S RESPONSE DUE 1/7 LOG 2889

DUANE BERENTSON
Secretary

STATE OF WASHINGTON

DEPARTMENT OF TRANSPORTATION

Division of Aeronautics • 8600 Perimeter Road, King County Int'l Airport
Seattle, Washington 98108 • (206) 764-4131 • (Toll Free) 1-800-552-0666

December 16, 1985

TB
MB
OIR
Health
CR
CL
MS
DCLU
GAM
Response?

RECEIVED
DEC 18 1985
MAYOR'S OFFICE

The Honorable Charles Royer
Mayor of Seattle
Municipal Building
Seattle, WA 98104

Re: Heliport
Children's Orthopedic Hospital

Dear Mayor Royer:

The Washington State Department of Transportation is concerned that emotional and irrational statements are being put forward by the Citizens Concerned About Helicopter Transport (CCAHT) to defeat a proposal by Children's Orthopedc Hospital (COH) to establish a heliport on their property.

In a letter to the Department of Construction and Land Use (DCLU) dated November 15, CCAHT has attacked several aspects of a study done for COH by Shapiro and Associates. As an example of some of their misleading statements relating to the use of the helicopter they state:

1) That the noise monitoring locations do not measure the noise in the residential areas they are concerned with. They fail, however, to recognize that the helicopter noise will be higher at these monitoring sites and will diminish to lower readings in a measureable amount (similar to the stated background noises) in the residential areas of concern.

2) They question a one landing test and accuse Airlift Northwest of causing false results because a patient was not onboard and full fuel "may" not have been used. Their weight calculations are wrong because an Agusta does not use aviation gas and normally would not operate with full fuel. The difference in noise measurement at any weight would be negligible.

3) MAST helicopters are noisier, but their use is limited, by statute, to critical life threatening emergencies where no alternative exists. Their criticism of their occasional use completely ignores the concern for patient survival.

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4) Their criticism of future expansions of COH does not logically relate to the helicopter proposal since they will occur even if no heliport is provided. They should be disregarded in your decision.

5) CCAHT criticizes the use of air taxi accident figures from the National Transportation Safety Board, but Airlift Northwest is a Part 135 air taxi operation. For this reason the rest of their argument, especially relating to search and rescue is non-sensical. They obviously have no knowledge of what is involved in search and rescue operation versus Airlift Northwest's operation.

6) CCAHT states that the FAA only monitors the safety of Airlift Northwest operations on a "limited basis". This is totally untrue. The FAA aggressively monitors the safety, training and maintenance of Part 135 operators.

7) CCAHT illogically states that the insurers required $20,000,000 insurance. As everyone who has bought insurance knows, it is the insured that sets the limit to be purchased. An examination of relative premiums charged would be the only basis for assessing risk.

Throughout the narrative supplied by CCAHT, there is a constant thread of accusation that ignores common sense and demonstrates no concern for the needs of children in need of critical transport. Helicopter transport services have gained nationwide popularity because they have demonstrated their worth in saving lives.

Children's Orthopedic should be supported in its decision to provide this vital service at a very small cost to the local residents.

Sincerely,

Bernice Stern

Bernice Stern, Chairman
Transportation Commission

BS:bw

GCi7

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Kelly / Julia FYI

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

January 10, 1986

Bernice Stern, Chair
Transportation Commission
Washington Department of Transportation
Division of Aeronautics
8600 Perimeter Road
King County International Airport
Seattle, Washington 98108

Dear Ms. Stern:

Thank you for your letter commenting upon statements made by Citizens Concerned About Helicopter Transport (CCAHT). As your letter suggests, many differing points of view are strongly held concerning this proposal.

The City is closely reviewing the proposal and letters such as yours raise important issues which are being carefully considered. The Department of Construction and Land Use (DCLU) will be applying the State Environmental Policy Act (SEPA) and provisions of the Land Use Code to make a decision. These laws require DCLU to evaluate land use and environmental impacts, the issue of medical need, and the implications of this specific proposal for future hospital development.

Beatrice Ryan, Interim Director of DCLU, tells me that her staff is currently reviewing the proposal and will soon make a threshold determination under SEPA on whether there is a need for further environmental review. DCLU has also issued a Notice of Violation to COH for landing helicopters without a permit.

I appreciate you sharing your comments with me. Your letter will be included in the file, and you will be notified of future public hearing schedules and decisions. If you have questions, please call Julia Gibb, Land Use Specialist, at 625-4509.

Sincerely,

(SIGNED) CHARLES ROYER

Charles Royer

CR:jgg

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THE
CHILDREN'S
ORTHOPEDIC
HOSPITAL
AND MEDICAL CENTER

February 25, 1986

Ms. Julia Gibb, DCLU
402 Municipal Building
Seattle, Washington 98104

Mr. Donald McGregor, DCLU
408 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb and Mr. McGregor:

Enclosed please find copy of February 21, 1986 letter from Mrs. Frank MacKenzie, President, Eula Lee Guild of Children's Orthopedic Hospital and Medical Center for your information.

Sincerely,

Nancy Greenawalt

Nancy Greenawalt
Director of Government Affairs

Encl.

ce

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P.O. BOX C5371 • 4800 SAND POINT WAY N.E. • SEATTLE, WASHINGTON 98105 • (206) 526-2000

2020 E. Calhoun St.
Seattle, WA 98112
February 21, 1986

Shirley Cockrill
President, Board of Trustees
Children's Orthopedic Hospital & Medical Center
Seattle, WA 98105

My Dear Mrs. Cockrill:

The Eula Lee Merrill Guild, which includes Laurelhurst residents, has voted requesting me to tell you that it is not against the proposed helipad on the Hospital property.

As one member expressed it, "If a helipad will save the life of even one child, I am quite willing to put up with any noise I may experience on a helicopter's few visits to the Hospital."

We are sure we speak for many, many Guild members outside our own membership.

Sincerely,

Nona MacKenzie

c/file

Nona MacKenzie
(Mrs. Frank MacKenzie)
President,
Eula Lee Merrill Guild

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Orig to Hsg/Urb
Dor Nbe grdg

Seattle Wn.
Feb. 13-86.

RECEIVED
FEB 20
DEPT. OF INTERIOR & LAND USE

Dear Mr Bottmax,

I wish to register a complaint. The Helicopter came in at 9:45 P.M. lifted Off at 10:18 P.M. on the 12th Feb. came in at 10:45 A.M — lifted Off at 11:15 - on the 13th at Orthopedic Hospital.

Please consider the noise and pollution we have with this and danger, coming in over and down so close to our homes - where else in any city in this permitted?

Thank you

Marvel Stackenburg
4705 - 45th N.E.
Seattle

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Julia ✓

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

January 10, 1986

Victoria King, President
View Ridge Community Club, Inc.
P. O. Box 15218
Seattle, Washington 98115

Dear Ms. King:

Thank you for writing me about the Children's Orthopedic Hospital application for a helistop permit. Beatrice Ryan, Interim Director of the Department of Construction and Land Use (DCLU), tells me that her staff are considering the suggestions in your letter.

I have enclosed a copy of the report of Dr. Bud Nicola, Director of the Seattle-King County Department of Public Health, on the issue of medical need.

Thank you for keeping me informed of the View Ridge Community Club's comments and concerns about this proposal. I appreciate the View Ridge Community's support for regional planning for all emergency helicopter services, for operational guidelines and for citizen participation in the process.

If you have questions, please call Julia Gibb, Land Use Specialist, at 625-4509.

Sincerely,

Charles Royer

CR:jgg

Enclosure

bc: Bud Nicola

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CLU MAYOR'S RESPONSE DUE 1/7 LOG 2903

VIEW RIDGE COMMUNITY CLUB, Inc.

"For the Community and by the Community"

PO Box 15218, 98115

December 21, 1985

RECEIVED
DEC 27 1985
DEPT. OF CONSTR. & LAND USE

RECEIVED
DEC 24 1985
MAYOR'S OFFICE

AK
TB
MB

Office of the Mayor
600 4th Floor
Municipal Building
Seattle, WA 98104

Dear Mayor Royer,

At the November 20, 1985, meeting of the View Ridge Community Club, the Board of Trustees of the Club passed a unanimous resolution supporting regional planning of all emergency helicopter transfer services. This resolution grew out of concern over proposed heliports at Children's Orthopedic Hospital (COH) and University Hospital -- hospitals that are less than a mile apart.

The Trustees also spoke in favor of having citizen participation on any Review Board which will oversee emergency helicopter transfer operations; such participation would inspire citizen confidence that such service was only being used in true emergencies. (We understand that this procedure has been adopted by a helicopter service which serves the eastern Pennsylvania region.)

View Ridge's concern over the heliport issue dates back to the fall when, at our September meeting, a majority of the Board of Trustees adopted a resolution opposing the COH heliport until a medical need was demonstrated. The Trustees also commissioned a poll of the residents of View Ridge to learn their opinions of the proposed heliport. (I am enclosing a copy of the information which was sent to all the residents informing them of the Club's resolution and soliciting their response.) Of the 277 responses returned to the Club, 196 supported the Club's resolution., opposing the heliport until a need for it was proved.

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If such a need is demonstrated, we urge that regional planning precede approvals of applications for such helicopter service, to avoid its unnecessary proliferation. We also urge that operational guidelines be adopted to ensure that this service is used only in emergencies and that adequate citizen participation is assured so that the interests of those living near the heliports and those in the flight path of the helicopters are given appropriate attention.

Thank you for your attention.

Sincerely yours,

Victoria A. King, President

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VIEW RIDGE COMMUNITY CLUB, Inc.

"For the Community and by the Community"

The COH Heliport, the VRCC and You

At the September 18, 1985, monthly meeting of the VRCC Board of Trustees, a majority of the trustees adopted the following resolution:

> The Board of Trustees of the VRCC opposes the COH heliport until a medical need has been demonstrated.

The issue of the heliport is not simply a question of noise pollution vs. saving lives of critically-ill children. The trustees would like to share with you the reasoning which led to their adoption of this resolution.

Medical Need: In general trustees felt that helicopters should not be permitted in residential areas. Those in the flight path and residents nearby the landing site, in this case including an elementary school, are all put at additional risk. If there were overwhelming medical need for such a service, then we as citizens might decide the additional risk was justified. Unfortunately the State process (called the Certificate of Need process) which might have established an overwhelming need was avoided by COH and thus there has been no determination at the state level that there is a medical need to justify a heliport at COH. Such a determination will have to be made instead by Seattle's Department of Construction and Land Use which can grant a permit for the heliport only if the heliport is clearly needed to save lives. (UW Hospital is also trying to secure a heliport using the same procedure that COH has.)

Economic considerations: Private medical helicopter service, which provides transfer service between hospitals not from accident scenes, is very expensive (the helicopter portion of Airlift NW's annual budget is just under half, or $375,000 of $800,000), with individual flights costing patients an average of $1500-1900. These helicopter services across the country are, with rare exceptions, unable to operate in the black and must be subsidized by the hospitals which use them. This raises the question of what services COH will have to cut back or eliminate if it decides to subsidize this very expensive new service. Furthermore, since this service becomes cheaper the more it is used, what safeguards or operational guidelines are there to ensure that this service will only be used in true emergencies?

MAST (Military Assistance to Safety and Traffic): This service is currently provided free of charge in our area. (Helicopters land at Graves field on the

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UW intramural fields and patients are then transported to COH or UW via ground transport.) It has a very good safety record and a study of its service over the most recent three years indicates that it has not resulted in any fatalities. However, by military rules, MAST cannot compete with private entrepreneurs; so, if there are additional companies set up to operate medical helicopter transfer service, MAST must abandon its civilian medical transfer operations.

The Club is asking your response to this action for two reasons. First, the heliport has been the subject of great controversy, and we want to make sure that the trustees are, in fact, representing your views. Second, the Club (a volunteer organization with admittedly limited manpower and resources) has by tradition not taken stands on issues which have not had some direct impact on View Ridge and its residents.

The heliport is not, of course, within our boundaries but a majority of the trustees felt that what happens along Sand Point (one of the main approaches to our community) and in nearby communities does have an impact on us and that we should extend our purview in such cases. Moreover, COH now owns property in View Ridge (at NE 70th and Sand Point) and we of course will be concerned if and when COH decides to develop that property. A strong minority of trustees opposed the Club's taking a position in this instance, because they felt that we did not know how the community as a whole felt about this issue; moreover they questioned whether the heliport would have a significant impact on View Ridge. However, having adopted the resolution, all of the trustees thought it essential to poll the community to learn your opinion.

The strength of the VRCC derives from the fact that it reflects the consensus of View Ridge's residents on issues. To maintain this tradition, we are offering you an opportunity to register your feelings both on the resolution itself and on the broader question of the range and breadth of issues which you want your Club to consider.

Responses will be gathered through October 16 (Candidates' Night). You may return them by mail, by giving them to your block trustee or by bringing them to Candidates' Night.

Vicki King, President

(ballots were on a separate piece of paper.)

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Kathy / Julia FYI

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

January 10, 1986

Victoria King, President
View Ridge Community Club, Inc.
P. O. Box 15218
Seattle, Washington 98115

Dear Ms. King:

Thank you for writing me about the Children's Orthopedic Hospital application for a helistop permit. Beatrice Ryan, Interim Director of the Department of Construction and Land Use (DCLU), tells me that her staff are considering the suggestions in your letter.

I have enclosed a copy of the report of Dr. Bud Nicola, Director of the Seattle-King County Department of Public Health, on the issue of medical need.

Thank you for keeping me informed of the View Ridge Community Club's comments and concerns about this proposal. I appreciate the View Ridge Community's support for regional planning for all emergency helicopter services, for operational guidelines and for citizen participation in the process.

If you have questions, please call Julia Gibb, Land Use Specialist, at 625-4509.

Sincerely,

Charles Royer

CR:jgg

Enclosure

bc: Bud Nicola

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FL 84-022

Seattle
Department of Construction and Land Use

Note

(Use for handwritten messages)

Date 1/28

To: Hanna

From: Chris

Dr James Bingham
4112 43rd N.E.
Seattle 98105

Add to CDH List

"OK if used rarely."
Wants FEIS

DS 5.214

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February 3, 1986

Director,
Department of Construction and Land Use
Room 400
Municipal Building
Seattle Washington 98104

RECEIVED

FEB 10 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Sirs:

I was pleased to learn that DCLU has ruled that Children's Orthopedic Hospital must file an environmental impact statement before proceeding with plans for a helicopter landing pad at the hospital. This will allow the significant aspects of noise, vibration, safety, alternative sites and shared usage to be explored in detail before a decision is made.

Our house is located approximately two blocks North and one block East of the proposed landing site. On December 6, 1985, the MAST helicopter elected to land at the hospital instead of at Graves Field. Every part of our house shook terribly for several minutes while the helicopter made its approach to the landing site. I can well imagine the structural damage to our house if this were to become a regular practice.

I believe the location of such a helicopter landing site in close proximity to a residential neighborhood and school would severely impact the safety of the surrounding neighborhood. The enclosed article from the Seattle Times (Dec 11, 1985) shows the consequences of a helicopter crash. It is easy to visualize a number of homes in the area of such a crash being demolished, along with the attendant loss of life to people on the ground as well as the flight crew and patient.

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Statistics relating the time between such incidents are typical average values. Also, it is well known that the most critical times for such an incident are during the take-off and landing phase (i.e., near the hospital). The point is that such a crash will happen and cause extensive property damage and loss of life. The question is not "if" it will happen, only "when".

The headlines of an article in the Nov 16, 1985 Seattle Times by Dr. John Neff, Medical Director of COH, posed the question - "If the Helipad saves the life of just one critically ill child, then won't it be worth it?". I would turn the question around and ask - "Is the improvement in life saving capability (compared to the current MAST helicopter/ambulance system) worth subjecting the surrounding community to a sure loss of life and property at some point in time?". The answer, for those of us living under the proposed flight path, is a resounding "NO!".

I strongly urge you to: 1) Consider the shared usage of Graves Intramural Field to serve University and Children's Hospitals and 2) Deny issuance of a helicopter landing permit at COH. If required, the site at Graves Field could be improved to provide an all-weather landing site. In addition, if the facilities aboard the MAST helicopter need upgrading in order to protect infants during transport, then this would be a logical area for improvement. This solution would have minimal impact on single family neighborhoods in Seattle and represent the safest approach to continued helicopter service for both Children's and University Hospitals.

cc: 1) Charles Royer, Mayor
2) Jim Street, Chairman
City Council Land Use
Committee

Very Truly Yours,
Dale Swanson

Dale Swanson
5036 45th Ave N.E.
Seattle Wash 98105

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Pilot and doctor killed in crash of emergency medical copter

Rescue craft flying in dense fog hits tree

ADDISON, Mich. (UPI) — Two people were killed yesterday when an emergency medical helicopter on its way to pick up a traffic-accident victim at a hospital crashed in dense fog just short of its destination yesterday.

The wreckage of the Life Flight helicopter from St. Vincent Medical Center in Toledo, Ohio, was found in a wooded area near Devil's Lake about a mile southeast of Addison in Lenawee County, police said.

The pilot, John Harrison, 39, and doctor, Jean Hollister, 27, both of Toledo, were killed.

The only survivor, flight nurse Julie Miller, 28, also of Toledo, was taken to St. Vincent for surgery.

Hospital officials said the helicopter left Toledo at 3:49 a.m. in rain and fog for the 35-mile flight to Addison Community Hospital to pick up the traffic victim. The patient was taken to Foote Hospital in Jackson, Mich., when the helicopter failed to arrive as scheduled.

The helicoper's last radio transmission was heard at 4:02 a.m. The wreckage was found six hours later.

Deputy Capt. Robert Sinks of the Lenawee County Sheriff's Department said it appeared the pilot was making a banking turn when the helicopter struck a large tree and skidded into the woods.

The first person to see the wreckage was Otis Chatfield, a 71-year-old farmer who heard the helicopter go by and was later told by a neighbor that it had crashed about a mile east of Chatfield's home.

When he saw the wreckage, Chatfield called out, asking if anybody was inside. He said a woman shouted back that she was inside with a broken leg. Chatfield said he found Miller in the center portion of the helicopter.

Hospital officials said the Life Flight service — the only such service in the Toledo area — has flown more than 5,000 missions since 1979 without a serious accident before yesterday's crash.

The Federal Aviation Administration was investigating the cause of the crash.



The wreckage of a relief helicopter rests in dense woods.

United Press International

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Julia

January 31, 1986
4712 - 33rd NE
Seattle, WA 98105

Beatrice Farrar Ryan
Director of DCLU
Rm. 400
Municipal Building
Seattle, WA 98104

RECEIVED
FEB - 5 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Beatrice Farrar Ryan,

I am writing to you concerning the environmental impact statement Childrens Orthopedic Hospital is required to complete before they can construct their proposed helipad.

My home is located on the hillside overlooking the present landing site at the University. Two things have always bothered me about the way the helicopters use this area not whether they use it. The approach of the craft could be over essentially non-residential areas, such as the lake from the north or south, or the Montlake cut from the east or west. The irritating thing is they come over the tree tops disregarding their effect on people and buildings. Rattling dishes, shivering walls & buzzing windows are not needed to get a craft, as capable of vertical flight as they are, safely to the ground. People don't need to be shaked, rattled & rolled to adequately address speedy delivery of needy patients to the hospital. The second aspect, particularly acute at nighttime is how long the helicopter remains idling their noisy engine after delivering their patient. I have been kept awake for over 1½ hrs. waiting for the craft to depart so I could fall asleep. It seems reasonable if there is a need to remain on site they could shut the engine down. These craft are extremely noisy in their designed use & I encourage you to define standards stringent enough to control

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the very intrusive nature of their use.

In all the arguments I have read & heard discussed I am not convinced of the <u>general</u> need for helicopters to provide life saving intervention to patients. I am convinced the hospital is trying to keep up with the "latest" developments in <u>attracting new patients</u>.

In all your consideration of the problems involved please reflect on the effect your decisions have on all people - patients <u>and</u> residents.

Sincerely,

Greg Schell

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FEB 18 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Feb. 13

Dear Julia,

Thanks alot for your help regarding COH helipad matters.

Regards,

Scott Boyd

FLAHERTY NEWSPAPERS

University Herald
The Outlook
Lake City News
Beacon Hill News
South District Journal
Capitol Hill Times
Madison Park Times

Scott Boyd
Reporter

1225 N. 43rd. Seattle, Washington 98103
(206) 545-7173

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JAG
Jan. 25/86

Dear Mr. Portman-

I wish to state my objections to the use of helicopters at COH.

They have been using Graves field which is not directly within a residential area. They have not had any deaths related to the 3 to 5 min drive to COH from this site, which I believe is much safer.

I live within 300 ft. of the main parking lot. I've seen the helicopters land and take off. The take off usually takes place over the filled parking lot. I believe the safety of this is questionable.

Also the noise! One would gladly put up with it in a life or death situation but I do not believe this is the case. This will be made moe of to the extent that it is financially rewarding, and I resent the use of Childrens lives to promote its approval

Sincerely
Lola Hoelz
4708 - 44th N.E.
523-5010

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Seattle City Council

RECEIVED

MAR - 3 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

February 26, 1986

Chris and Sharon Beasley
5132 46th Avenue N. E.
Seattle, Washington 98105

Dear Mr. and Mrs. Beasley:

Thank you for your letter to the City Council in support of the application of Children's Orthopedic Hospital to construct a helipad.

While this issue will eventually come before the City Council's Urban Redevelopment Committee, the helipad application is currently being reviewed by the City's Department of Construction and Land Use (DCLU). I have taken the liberty of forwarding your letter to DCLU so it can be taken into consideration during their review.

Again, thank you for taking the time to forward your support for the helipad application requested by Children's Orthopedic Hospital.

Sincerely,

Jeanette Williams
Seattle City Council

JW:lm
cc: Beatrice Ryan, Acting Director
Department of Construction and Land Use

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1-31-86

To: City Council Members

As a resident of the Laurel Vista area, I wanted to lend our support for the Heli-Port being built at Children's Orthopedic Hospital.

FEB 6 1986

JEANETTE WILLIAMS
CITY COUNCIL MEMBER

We are within 4 blocks of C.O.H and as parents feel that the benefits of this Heli-Port can provide far out way any momentary inconvenience the helicopter may produce. We urge your support on this matter.

Chris and Sharon Beasley

Chris and Sharon Beasley
5132 46th Avenue N.E.
Seattle, Wa. 98105

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Julia

Seattle
Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

MEMORANDUM

TO: Dr. Bud Nicola, Director
Seattle-King County Health District

FROM: Holly Miller, Director Holly Miller

DATE: December 24, 1986

SUBJECT: Comments on Your December 4, 1985 Report to DCLU
- Children's Hospital's Helistop Application,
MUP 8405870

The enclosed set of comments, suggestions and questions on your report to Beatrice Ryan (dated December 4, 1985) have been derived by assembling the comments of a number of sources. These include comments from:

- Children's medical and administrative staffs
- Individuals who have been assisting COHMC in preparing the Environmental Impact Statement (EIS)
- Representatives of the City of Seattle
- The community at large (both in letters to DCLU as well as letters and testimony received during the public comment period following the issuance of the Draft (D) EIS)

General Comments on Report

1. Please append B. Ryan's letter of 8/30/85 so that the reader has a context for considering the results of this report. State the qualification of the author(s) in preparing the report. Identify or refer to the land use standards used for the consideration of the conditional use permit application.

2. The second paragraph contains an introduction to the report methodology. The report should expand upon this information to detail the specifics of the people who were contacted (this could be done by appending a reference section).

   The survey technique used to interview the various resource people should be identified (i.e., a listing of the questions that were asked and the measures taken to control bias).

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The public hearing should be identified as a fact-finding tool. The recording of the testimony and its availability should be noted.

Section - Existing Pediatric EMS System in Seattle

1. First paragraph: Explain the capabilities affiliated with the Mary Bridge NICU beds. Is there a duplication of service with those offered by COHMC?

   In what service capabilities should there be overlap? Are unique services offered by COHMC? by Mary Bridge?

2. Second paragraph: Should this paragraph be the introductory paragraph for this section of the report?

   COHMC can be called out as a tertiary care center. Nancy Greenawalt of COHMC can provide source materials that indicate that COHMC is a tertiary care center.

3. The referral program, whereby a patient is referred to medical institution, should be explained to the lay reader.

Section - Helicopter Transport

1. Comment: Nancy Greenawalt can provide an updated summary of the conditions of patients being transported via helicopter directly to COHMC (see Table 2 on pages 14-16 of the DEIS). She can also make available a medical description of all patients destined for COHMC that are being flown to Harborview and then being ground transported to COHMC. Additional information on the specific care (both during and after transport) can be made available as well--either in summary form or in the case file for each patient. Please let Nancy know what specific information you will require (Nancy's number is 526-2505).

2. The journal article, "Guidelines for Air and Ground Transportation of Pediatric Patients," from the American Academy of Pediatrics should be reviewed for applicability to this report. (Provided to Steve Call.)

   The references section of the article should be reviewed for additional sources of information or contact people who may be able to lend a different perspective. (SHAPIRO is securing the referenced articles for Steve.)

3. The status of Dr. Pinkers' Subcommittee Guidelines should be updated.

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4. What types of patients warrant the use of air transport, as opposed to ground transport? That is, in addition to trauma patients, what categories of presenting conditions and/or illnesses are candidates for helicopter transport?

5. Particularly for those patients within the 70-mile radius identified in the first report, how does one strike a balance between transport time and transport distance?

6. Much of the existing data appears to be based on literature that deals primarily with aeromedical transport of trauma patients. We understand that this is attributable to the fact that there is little published information on non-trauma cases. Does a more recent literature search confirm this? What can be concluded from a review of the existing ALNW flight logs?

   Can conclusions from a review of literature on trauma patients be drawn and applied to neonatal and pediatric populations? to patients with presenting conditions identified in question 4 above?

7. The last sentence of this section assumes that for patients being airlifted to Intramural Field and then ground transported to Children's, there would be a 3-5 minute delay in treatment at COHMC. Rose Andrews, ALNW's Chief Flight Nurse, estimated that because of transfer time, this delay is longer (a total delay of about 10 minutes; see pages 53-53 of the DEIS). This change in assumption should be confirmed and examined for its potential influence on the conclusions.

<u>Section - Current Data</u>

1. The first paragraph can be updated to reflect more current information. Nancy Greenawalt can provide you with this information as soon as it becomes available.

2. Similarly, the second paragraph can be updated to reflect up-to-date information.

<u>Section - Recommendations</u>

1. In Glen Bachman's interview of you and Steve Call, you and Steve spoke extensively of the need for guidelines, not criteria, to assist medical personnel in making the decision to helitransport or not helitransport. That is, the medical team may be confronted with a complex set of conditions with a given patient. In a situation where life and death decisions are being made, is it important that the medical personnel's judgment be used--and that their authority to

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make decisions not be diluted by guidelines that would reduce their ability to take action swiftly?

Steve also pointed out that the number of separate presenting conditions is enormous. The potential number of combinations of presenting conditions is even greater, such that to create clear criteria could be overly restrictive, and not provide the medical personnel with the flexibility they require. The report may need to articulate this issue more clearly.

2. Again, please review assumption regarding 3-5 minute transfer time.

3. Second paragraph: Clarify what 5-10% refers to. Is it helicopter-transported children?

4. It is estimated that somewhere between 15-20 children per month will be transported by helicopter. These transports would involve 30-40 flights: one flight in and out for the pickup of the pediatric medical transport team, and a second flight in and out for the delivery of the patient. Children's is in the process of designing a "hybrid" alternative, whereby the medical team would be picked up either at Harborview or (if built and if allowed by the University) at the Intramural Field). Most airlifted patients would be brought to Harborview or Intramural Field--only the most serious (an estimated 3-5) patients would be landed outside the Emergency Room Entrance at COHMC.

   A point of note is that it has been difficult to derive reliable estimates of total numbers of patients who would be transported by helicopter. The numbers presented in the DEIS reflect estimates from both COHMC and ALNW medical and administrative staffs. They should be considered as advisory--in part because of uncertainty whether a medical breakthrough, catastrophe, addition of competing helicopter service, or some other situation would alter these estimates.

5. Has the introduction of helicopter transport of non-traumatized patients, whether pediatric or not, established a new standard of care?

6. Fourth paragraph: Has any other source (apart from the literature review) supported the conclusion that "there are no definitive predictive clinical indicators of prognosis . . . ."?

7. What areas of uncertainty exist in the overall opinion/report?

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8. Do you maintain your recommendation for a review panel? If so, what should their mission be? Who should be represented on the panel?

Addenda

1. Attachments 1 and 2: Should be updated; source(s) should be identified.

2. The time and cost analysis provided by Craig Jackson to Lothar Pinkers is valuable; however, the economic analysis may be too discrete for inferential purposes. COHMC believes that there is an ultimate economic benefit to heli-transported patients because of diminished medical care requirements and shorter stays. This issue could be explored if you think it is appropriate.

Thank you so much for your consideration of these items. Please feel free to telephone Glen Bachman or Julia Gibb at 625-4509 with any questions.

JAG:js
\viv3\nicola

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Seattle
Engineering Department

RECEIVED
OCT 3 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

MEMORANDUM

Date: October 2, 1986

To: Julia Gibb, Land Use Specialist, DCLU

From: Mark Clemmens, Sr. Civil Engineering Specialist, OFP

Subject: Draft Environmental Impact Statement Children's Hospital Helistop

We have reviewed the Draft Environmental Impact Statement for the Children's Orthopedic Hospital Helistop and have determined that the proposal should not significantly affect Engineering Department operations or areas of concern. We have no comments on the proposal.

MC:vc

cc: James M. Bourey, Director, Office for Planning
Eugene V. Avery, Manager, Property & Court Services, OFP

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OCT 3 1986
DEPT. OF CONST. & LAND USE

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

Robert Haney Scott, Ph.D.
Professor of Economics and Finance
Schools of Business Administration, DJ-10

Phone: (206) 543-4867 office
(206) 523-2941 home

Telex: (910) 474-0096 UWUI

October 1, 1986

Ms. Holly Miller, Director
Department of Construction and Land Use
408 Municipal Bldg.
Seattle, WA 98104

Re: COH's Proposed Helipad Draft Environmental Impact Statement

Dear Ms. Miller:

One environmental impact that should be addressed, because it is of great concern to the city and its people, is the liability incurred by the City if the Impact statement were approved.

Does the City have liability insurance? Would the insurance premiums rise if the Helipad goes into operation? Would the city incur liability in case an accident occurred -- liability because the City failed to enforce its laws on land use.

I believe the City may currently be exposed to great risk of liability because knowledge of risk exists but landings are now taking place. Even if permits were issued, the City would still be at risk because it could be argued that the City was negligent in issuing a permit. Just what is the City's exposure and what is its insurance situation?

These questions should be addressed and brought to the attention of those responsible for making decisions about land use.

Sincerely yours,

Robert Haney Scott

RHS:js

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

RECEIVED
DEC 1 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

November 25, 1986

Julia Gibb, Land Use Specialist
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington

Dear Julia:

Thank you for meeting with John Keegan, Glenn Bachman and me on Wednesday, November 19 to discuss the time frame for completing the final environmental impact statement (FEIS). Basically, it is our understanding that we will continue to use the timetable and events as specified in Mitch Olejko's letter to you of August 22, 1986 (attached) with the addition of one month to the November 24 FEIS issue date. This additional time will accomodate the extension of the DEIS comment period by two weeks and two weeks to clarify and expand Nicola's recommendations on medical need. Correspondingly, the Director's report and Hearing Examiner decision will also be delayed by one month.

If this is not your understanding, please contact me at 526-2505.

Sincerely,

Nancy

Nancy Greenawalt

c Mitchell Olejko
John Keegan
Katie Cheney
Anne Ormsby
Glenn Bachman

nmg

Enclosure

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P.O. BOX C5371 • 4800 SAND POINT WAY N.E. • SEATTLE, WASHINGTON 98105 • (206) 526-2000

ANDREA BEATTY RINIKER
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

September 30, 1986

RECEIVED
SEP 30 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb
City of Seattle
Department of Construction
and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

Thank you for the opportunity to comment on the draft environmental impact statement (EIS) for the Children's Hospital and Medical Center Helistop. From the information supplied in the draft EIS, it appears that no permits/approvals are required from the Department of Ecology for this proposal and, therefore, we have no jurisdiction.

If you have any questions, please call me at (206) 459-6025.

Sincerely,

Barbara J. Ritchie

Barbara J. Ritchie
Environmental Review Section

BJR:bjw

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JACOB THOMAS
Director

STATE OF WASHINGTON

OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION

111 West Twenty-First Avenue, KL-11 • Olympia, Washington 98504 • (206) 753-4011

RECEIVED
SEP 10 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

September 9, 1986

Ms. Julia Gibb
Construction and Land Use
Room 408, Municipal Building
Seattle, WA 98104

Log Reference: 821-C-KI-09
Re: Children's Hospital and
Medical Center Helistop

Dear Ms. Gibb:

A staff review has been completed of your draft environmental impact statement. Based on the information provided for our review, in our opinion the proposed project will have no effect on presently known archaeological or historic resources included in or eligible for inclusion in the National Register of Historic Places.

Thank you for this opportunity to comment.

Sincerely,

Robert G. Whitlam, Ph.D.
State Archaeologist
(206) 753-4405

dw

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City of Seattle
Charles Royer, *Mayor*

King County
Tim Hill, *Executive*

Seattle-King County Department of Public Health
Bud Nicola, M.D., M.H.S.A., *Director*

M E M O R A N D U M

TO: Julia Gibb, Seattle Department of Construction and Land Use

FROM: Bud Nicola, M.D., Director BN

DATE: August 6, 1986

RE: Comments On the Preliminary Draft EIS Regarding a Helipad at Children's Orthopedic Hospital

Please find enclosed the Seattle-King County Department of Public Health's preliminary comments on the draft environmental impact statement for siting of a helipad at Children's Orthopedic Hospital.

Thank you for the opportunity to comment. If you have any questions, please contact Steven Call, Manager, Emergency Medical Services Division, at 344-4293.

BN/SC:ss

Enclosure

cc: Steven Call
Chuck Kleeberg

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AUG 11 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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400 Yesler Building Seventh Floor Seattle, Washington 98104 (206) 587-4600

Page 14. Field Transport. This section contains two minor errors in describing hospitals in King County. The sentence preceding the list of hospitals and their location states that paramedics are based in seven area hospitals. The listed hospitals serve as "base hospitals" for paramedic units operating in King County. Paramedic units are not, in every instance, physically based in those hospitals. It would be more accurate to state that in King County, seven area hospitals provide medical control to paramedics.

In the last paragraph on page 14, the statement is made that King County EMS classifies hospitals according to the services they provide. King County EMS does not classify hospitals. The scheme of hospital classification reflected in the Patient Distribution Guide was developed in 1977-78 by the Seattle Area Hospital Council, the King County Medical Society, the King County Emergency Medical Society, the King County Emergency Medical Services Coordinating Council and the EMS Division. The King County Medical Society has assumed responsibility for periodically updating the Guide. The EMS Division has assumed responsibility for distribution of the Guide to all pre-hospital emergency medical providers and it has been incorporated into King County's patient care protocols.

Page 25. The reference to Dr. Nicola's response to DCLU contains the statement that he concluded ". . . that of the ten patients that he estimated would be transported to Children's by helicopter each month, three or four "may have a medical need for helicopter transport to the doors of the hospital."

Page 55. The statement is made that, "Nicola estimates that three or four would have a clear medical need for direct transport to Children's Emergency Room entrance--such that delays or transfers could affect patient outcome."

It must be understood that the estimate of three to four patients per month was not definitive. The following paragraph in Dr. Nicola's recommendation to DCLU states that, "The literature review indicated that there are no definitive predictive clinical indicators of prognosis; that is, any number would have to include an additional number of patients whose condition at time of referral was appropriate for air transport . . .".

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The number of patients for whom the most appropriate method of transport at time of referral is judged to be a helicopter may be greater. Other factors that may impact the number of patients transported by helicopter include changing hospital referral patterns and changing capabilities of community hospitals resulting in increased reliance on tertiary centers throughout the Puget Sound region.

Pages 43 & 44. The status of the Puget Sound Health Systems Agency proposal to investigate issues regarding helicopter transport is unclear at this time. The State of Washington's commitment to participate in the development of the PSHSA proposal has been withdrawn. Apparently, the State has decided to pursue a more cautious approach to the development of policies regarding air ambulance services.

The Seattle-King County Department of Public Health is prepared to work with the PSHSA to gather and analyze data regarding the potential need and impact of expanded EMS helicopter transport in the Puget Sound region. The State of Washington (DSHS) has indicated a willingness to cooperate in that effort.

Information regarding the impacts of noise from locating a helipad at Children's is accurate and factual. The resultant noise levels described in the document would present no known health hazard.

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840587O-CHMC

To: Katy — Jackie

Councilwoman Cynthia Sullivan
King County Council District 2

402 King County Courthouse
Seattle, Washington 98104
(206) 344-3483

RECEIVED
JAN 16 1987
DEPT. OF CONST. & LAND USE



January 14, 1986

Holly Miller, Director
Seattle Department of Construction and Land Use
Municipal Building
Seattle, Washington 98104

RE: Draft Environmental Impact Statement on Air Ambulance Service at Children's Orthopedic Hospital

Dear Holly:

The King County Board of Public Health had a public hearing on December 2, 1986, regarding the full range of issues involving air ambulances in King County.

Based on testimony we received, the Board will be making recommendations to the Department of Social and Health Services with regards to the need for state-wide planning to govern effectively the regulation of air ambulance services. I believe, however, that the information gained at our hearing may be pertinent to several of the issues posed in your environmental review of Children's Orthopedic Hospital's proposed establishment of a helipad. Attached for your review and consideration is a summary of the public testimony that the Board heard on December 2, 1986.

I would also note that subsequent to the County's hearings, the National Transportation Safety Board announced that it would conduct a year long study evaluating Emergency Medical EVAC, with the intention of establishing standards for operation. The City of Seattle may wish to have the results of such study prior to any final long term decision of their own. I hope the public testimony that we have heard may prove of some use to you.

Sincerely,

Cynthia

Cynthia Sullivan
Chair, Board of Health

CS/ar

cc: Lois North, King County Councilmember
Tim Hill, King County Executive
Bud Nicola, M.D., Director, Health Department

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Pursuant to the public hearing held on December 2, 1986, chaired by King County Councilwoman Cynthia Sullivan and attended by Board of Health members, King County Executive Tim Hill, and Councilwoman Lois North, a public hearing was held for public comment on air ambulance services in King County. The following is a summary of the testimony presented:

1. There is a need for a statewide plan and the Washington State Department of Social and Health Services is the appropriate agency pursuant to RCW 18.73 to carry out such a plan.

2. At present there is an absence of effective and comprehensive regulation of air ambulance services.

   A. While the Federal Aeronautics Aviation approves flight paths, it does not monitor compliance and there are concerns that general aviation rules may not be appropriate for the typical aeromedical mission.

   B. The Department of DSHS in its responsibility to license helicopters for patient transport appears to have standards which are too low.

   C. DSHS establishes threshold for certificates of need which hospitals must meet before receiving air ambulance services, but these requirements are perceived to be easily circumvented.

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D. The City of Seattle requires hospitals to obtain conditional use permits, but in the past the City has not always effectively enforced the requirement.

E. The Washington State Medical Association has formed an emergency medical services commitee to develop user guidelines for air ambulance services and at present there are no enforcement provisions.

3. As a consequence of the lack of integration with emergency medical system,

A. There is the risk of competition between ground and air transport for patients.

B. There is confusion in the public over which service to call in an emergency.

C. There could be a decrease in public support for EMS.

D. There is an absence of quality insurance.

4. There is the possibility of overuse of the air ambulance service.

A. The overuse could reach a factor of 10.

B. It is undisputed that the cost per flight decreases as the number of flight hours increase.

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C. Physicians may be pressured into defensive medicine and order helicopters to avoid malpractice suits.

D. Helicopters may function as flying advertising for hospitals.

E. The helicopters allow hospitals to receive the most severely injured and ill patients which increase the revenue.

F. Hospital competition motivates purchases of such services even if not essential for quality medical care.

5. There is a potential for misuse of air ambulance services.

A. Time is a critical factor in necessitating the use of air ambulance, but the hospitals closest to the referring hospital and the patient's origins are not always being utilized and in the past, up to 40% of the patients flown to COH could have received care at the Mary Bridge Hospital in Tacoma.

B. The medical effectiveness of air transport only benefits the worst trauma patients and some patients could even be harmed by air transport.

6. The costs of air transport are extremely high and nearly all operate at a loss. The cost of medical care for all consumers could rise both in hospital services and insurance rates. Other hospital services could experience budget cuts to subsidize helicopter services.

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7. There are a number of Safety issues.

A. Hospital based helicopters have a higher rate of fatal accidents compared to commercial flying; 6.5 lives lost per 100,000 flying hours compared to 2.2 lives lost per 100,000 flying hours.

B. In 1985, 1 out of 10 aeromedical helicopters lifted off had a reportable accident.

C. Between 1980 and 1985, 55 people were killed in such accidents.

D. 80% of the accidents occurred during limited visibility.

E. Weather reports come from Boeing Field or Seatac and may not be accurate for the area of transport.

F. No national operating standards govern when conditions are suitable for flight. The flights are made at the discretion of the pilot and there may be pressure from medical professionals to fly despite safety considerations.

G. There is no national training standards for aeromedical pilots and the commercial/military experience may be inadequate.

H. Most hospitals are located in urban and/or residential areas, and noise under these circumstances may constitute a significant disturbance to the neighboring community.

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Recommendations Suggested at the Hearing

A. Develop a state-wide plan for cohesive and effective system of licensing, regulating and enforcing standards for air ambulance services.

B. Integrate with the existing EMS system.

C. Develop medical/surgical criteria for determining when air vs. ground transport is necessary.

D. Determine time and distance relationships to compare the efficacy of air compared to ground transport to facilitate the use of the nearest hospitals when air transport is used.

E. Develop operating standards for determining when weather conditions are suitable for flight.

F. Require aeromedical training for pilots. — developed by the N.T.S.B.

G. Require safety standards ~~be~~ adhered to. and siting of helitop
including but not limited to issues ① lighting ~~② helitop~~
② on site weather observer

G. Conduct regular audits to assure quality and cost-effectiveness of service.

H. Explore alternatives.

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To: Katy

Your
Seattle
Community Development

David Moseley, Director
Charles Royer, Mayor

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OCT 9 - 1986
DEPT. OF CONST. & LAND USE

October 7, 1986

To: Holly Miller, Director
Construction and Land Use

From: David Moseley

Subject: Comments on the Draft Environmental Impact Statement for Children's Hospital and Medical Center Helistop

Thank you for the opportunity to comment on the Draft EIS for the Children's Hospital and Medical Center helistop. The department has the following comments.

Certificate of Need Process

The EIS states that a proliferation of helistop requests will not occur due to the rigidity of the Certificate of Need process from which the Children's Hospital helistop has been exempted. The Final EIS should state why this helistop is exempt from that process and why other hospital facilities would not have many of the same reasons for a helistop as Children's Hospital and Medical Center.

Flight Path

The Draft EIS uses the flight path for the helistop as a mitigating measure for the on-site location. That flight path is subject to FAA approval. What assurances does Children's Hospital have that the flight paths used within the SEPA process will be approved, as stated, by the FAA.

Cumulative Projects

It is the department's understanding that University Hospital is also in the process of studying the potential of a helistop. Due to the close proximity of these institutions, it would make sense to look at a common site for both. The University Hospital site may not be the most desirable site due to potential traffic impacts; therefore, the Graves field site may be the best for both. Perhaps this decision should be combined with the University's need in order to reduce the possible duplication of a helistop.

DM:cdm

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Your
Seattle
Fire Department

Claude Harris, Chief
Charles Royer, Mayor

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OCT 3 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

October 1, 1986

Holly Miller, Director
Department of Construction & Land Use
400 Municipal Building
Seattle, Washington 98104

RE: Children's Hospital Helistop - Application #8405870

Dear Ms. Miller:

We have reviewed the environmental impact statement and the effects it would have on the fire protection of the property and on the Fire Department.

We feel that the impact statement sufficiently covers the Fire Department position on fire protection.

Very truly yours,

Claude Harris, Chief
Seattle Fire Department

CH:sh
BLH:GWC

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December 16, 1986

DEC 16 1986

DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

SHAPIRO & ASSOCIATES INC

The Smith Tower
Suite 1812
506 Second Avenue

Seattle
Washington 98104

206/624·9190

Ms. Julia Gibb
Department of Construction and Land Use
City of Seattle
Seattle, WA 98104

Dear Julia:

Enclosed is a set of comments, thoughts and suggestions on Dr. Nicola's December 4, 1985 report. Steve Call has met with Dr. Nicola on at least one occasion to review and discuss a preliminary draft of the comments. In addition, Steve, Jane Gladstone and I met to talk through some of the issues raised in the earlier draft. I told Steve after that meeting that I would submit the comments to you for your consideration. It was Steve's and my belief that DCLU should probably formally (in writing) request Dr. Nicola to consider the comments and revise the December 4 report.

Steve raised two points that warrant consideration:

1. What is the Department of Public Health (DPH) and the City's potential liability associated with preparation of the revised report?

2. B. Ryan originally requested that Dr. Nicola provide an opinion regarding medical issues on the proposed helistop at Children's. Dr. Nicola responded with an informal opinion, which is different than an expert opinion, the distinction being a result of the fact that Dr. Nicola is not a neonatologist, pediatric specialist or specialist in emergency medicine. It is my understanding that DPH wants to be certain that any new (revised) report provide sufficient information to enable a recommendation to be made regarding the two medical criteria of the Conditional Use Permit. If DCLU is satisfied that an informal opinion would suffice in making a judgment, then DPH is prepared to tackle the report. If, however, an expert opinion is required, then it is my understanding that DPH would like to defer to an "outside" expert.

Steve indicated that he would be contacting you to resolve these issues so that the process can proceed expeditiously. I'll call you later this week to discuss these issues--particularly the issue of whether Dr. Nicola should proceed with the revision to his informal opinion or whether an outside expert should be hired by DCLU to render an expert opinion.

Sincerely,

SHAPIRO AND ASSOCIATES, INC.

Glenn Bachman, Vice President, Planning

GB:ble
Enclosures

cc: Steve Call, Dr. Bud Nicola, Nancy Greenawalt,
Mitch Olejko, John Keegan, Randy Revelle

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COMMENTS ON DR. NICOLA'S
DECEMBER 4, 1986, REPORT TO DCLU

The enclosed set of comments, suggestions and questions on Dr. Nicola's report to Beatrice Ryan (dated December 4, 1985) have been derived by assembling the comments of a number of sources. These include comments from:

- Children's medical and administrative staffs
- Individuals who have been assisting COHMC in preparing the Environmental Impact Statement (EIS)
- Representatives of the City of Seattle
- The community at large (both in letters to DCLU as well as letters and testimony received during the public comment period following the issuance of the Draft (D)EIS)

I have also taken the liberty of reviewing a copy of the tape from the public hearing that Dr. Nicola conducted in preparation for his determination.

The comments below reflect the discussions held at a meeting in the King County EMS offices on November 20. Those in attendance were Steve Call and Jane Gladstone of KC EMS, Patrick Dougherty and Julia Gibb of DCLU, Nancy Greenawalt of COHMC, and Glenn Bachman of Shapiro and Associates, Inc. Steve also met with Dr. Nicola following that meeting and then, along with Jane, met again with Glenn.

General Comments on Report

1. Please append B. Ryan's letter of 8/30/85 so that the reader has a context for considering the results of this report. State the qualification of the author(s) in preparing the report. Identify or refer to the land use standards used for the consideration of the conditional use permit application.

2. The second paragraph contains an introduction to the report mehodology. The report should expand upon this information to detail the specifics of the people who were contacted (this could be done by appending a reference section).

   The survey technique used to interview the various resource people should be identified (i.e., a listing of the questions that were asked and the measures taken to control bias).

   The public hearing should be identified as a fact-finding tool. The recording of the testimony and its availability should be noted.

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Section - Existing Pediatric EMS System in Seattle

1. First paragraph: Explain the capabilities affiliated wih he Mary Bridge NICU beds. Is there a duplication of service with those offered by COHMC?

   In what service capabilities would there be overlap? What unique services are offered by COHMC? by Mary Bridge?

2. Second paragraph: Should this paragraph be the introductory paragraph for this section of the report?

   COHMC should be called out as a tertiary care center. Nancy Greenawalt of COHMC can provide credible source materials that indicate htat COHMC is a tertiary care center.

3. The referral program, whereby a patient is referred to medical institution, should be explained to the lay reader.

Section - Helicopter Transport

1. Comment: Nancy Greenawalt can provide you with an updated summary of the conditions of patients being transported via helicopter directly to COHMC (see Table 2 on pages 14-16 of the DEIS). She can also make available a medical description of <u>all</u> patients destined for COHMC that are being flown to Harborview and then being ground transported to COHMC. Additional information on the specific care (both during and after transport) can be made available as well--either in summary form or in the case file for each patient. Please let Nancy know what specific information you will require (Nancy's number is 526-2505).

2. The journal article, "Guidelines for Air and Ground Transportation of Pediatric Patients," from the American Academy of Pediatrics, should be reviewed for applicability to this report. (Provided to Steve Cal.)

   The references section of the article should be reviewed for additional sources of information or contact people who may be able to lend a different perspective. (SHAPIRO is securing the referenced articles for Steve.)

3. The status of Dr. Pinkers' Subcommittee's Guidelines should be updated.

4. What types of patients warrant the use of air transport, as opposed to ground transport? That is, in addition to trauma patients, what categories of presenting conditions and/or illnesses candidates for helicopter transport?

5. Particularly for those patients within the 70-mile radius identified in the first report, how does one strike a balance between transport time and transport distance?

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6. Much of the existing data appears to be base on literaure that deals primarily with aeromedical transport of trauma patients. We understand that this is attributable to the fact that there is little published information on non-trauma cases. Does a more recent literature search confirm this? What can be concluded from a review of the existing ALNW flight logs?

   What conclusions from a review of literature on trauma patients can be drawn and applied to neonatal and pediatric populations? to patients with presenting conditions identified in question 4 above?

7. The last sentence of this section assumes that for patients being airlifted to the Intramural Field and then ground transported to Children's, there would be a 3-5 minute delay in treatment at COHMC. Rose Andrews, ALNW'S Chief Flight Nurse, estimated tha because of transfer time, this delay is longer (a total delay of about 10 minutes; see pages 52-53 of the DEIS). This change in assumption should be confirmed and examined for its potenial influence on the conclusions.

Section - Current Data

1. The first paragraph can be updated to reflect more current information. Nancy Greenawalt can provide you wih this information as soon as it becomes available.

2. Similarly, the second paragraph can be updated to reflect up-to-date information.

Section - Recommendations

1. In my interview of Bud Nicola/Steve Call, they spoke extensively of the need for guidelines, not criteria, to assist medical personnel in making the decision to helitransport or not to helitransport. As I understand the rationale, the medical team may be confronted with a complex set of conditions with a given patient. In a situation where life and death decisions are being made, it is crucial that the medical personnel's judgment be used--and that their authority to make decisions should not be diluted by guidelines that would reduce their ability to take action swiftly. As I recall, Steve also pointed out that the number of separate presenting conditions is enormous. The potential number of combinations of presenting conditions is even greater, such that to create clear criteria could be overly restrictive, and not provide the medical personnel with the flexibility that they require. I believe that the report needs to articulate this issue more clearly.

2. Again, assumption regarding 3-5 minute transfer time.

3. Second paragraph: Clarify what 5-10% refers to. I assume it is helicopter-transported children.

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4. It is estimated that somewnere between 15-20 children per month will be transported by helicopter. These transports would involve 30-40 flights: one flight in and out for the pickup of the pediatric medical transport team, and a second flight in and out for the delivery of the patient. Children's is in the process of designing a "hybrid" alternative, whereby the medical team would be picked up either at Harborview (of if built and if allowed by the University, than at the Intramural Field). Most airlifted patients would be brought to Harborview or Intramural Field--only the most serious (an estimated 3-5) patients would be landed outside the Emergency Room Entrance at COHMC.

   A point of note is that it has been difficult to derive reliable estimates of total numbers of patients who would be transported by helicopter. The numbers presented in the DEIS reflect estimates from both COHMC and ALNW medical and administrative staffs. They should be considered as advisory--in part because of uncertainty whether a medical breakthrough, catastrophe, addition of competing helicopter service, or some other situation would alter these estimates.

4. Has the introduction of helicopter transport of non-traumatized patients, whether pediatric or not, established a new standard of care?

5. Fourth paragraph: Has any other source (apart from the literature review) supported the conclusion that "there are no definitive predictive clinical indicators of prognosis..."?

6. What areas of uncertainty exist in the overall opinion/report.

7. Does Dr. Nicola maintain his recommendation for a review panel? If so, what should their mission be? Who should be represented on the panel?

Addenda

1. Attachments 1 and 2: Should be updated; source(s) should be identified.

2. The time and cost analysis provided by Craig Jackson to Lothar Pinkers is valuable; however, the economic analysis is too discrete for inferential purposes. COHMC believes that there is an ultimate economic benefit to helitransported patients because of diminished medical care requirements and shorter stays. This issue could be explored.

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DAVIS WRIGHT & JONES

Law Offices

A Partnership Including Professional Corporations
2600 Century Square · 1501 Fourth Avenue · Seattle, Washington 98101-1688
(206) 622-3150

Mitchell J. Olejko

August 22, 1986

Julia Gibb
Land Use Specialist
City of Seattle
Department of Construction
and Land Use
400 Municipal Building
600 Fourth Avenue
Seattle, Washington 98104

Re: Timetable for Children's

The enclosed Timetable for Children's was inadvertently omitted from some copies of my letter dated of August 21, 1986, so i thought I would send it again in the event you hadn't received it.

Very truly yours,

DAVIS WRIGHT & JONES

Mitchell J. Olejko

MJO:jt
Enclosure
5680V

cc: Katie Cheney
Anne Ormsby
Nancy Greenawalt
Glen Bachman
John Keegan

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JGL Acoustics, Inc.
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APR 1 1987
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

September 17, 1986

Laurelhurst Community Club Executive Board
5003 45th Ave. N.E.
Seattle, Washington 98105

Attention: Mr. Jerry Schneider
Subject: Children's Hospital and Medical Center Helistop
Review of Noise & Vibration Studies

Gentlemen:

At your request I have reviewed the following documents relative to the previous noise studies prepared for the subject project:

Helipad Noise Evaluation for Children's Orthopedic Hospital
prepared by: Seton, Johnson & Odell, Inc.
dated: October 8, 1985.

Children's Hospital and Medical Center Helistop
Draft Environmental Impact Statement, Chapter IV, pp. 74-89
prepared by: Towne, Richards, & Chaudiere, Inc.
dated: September 1986.

Based upon this review, I have the following comments:

1. Determination of the existing ambient noise characteristics of the residential properties affected by the project is inadequate to accurately determine the acoustical impact. There are several reasons for this:

   a. The instrumentation used in the measurements is not suitable for determining the acoustical parameters of interest (i.e. Leq and Lmax). The B&K 2209 sound level meter can only display the instantaneous sound pressure level (slow or fast response); it is up to the operator to view the indicating needle and estimate "by eye" the average and maximum noise levels during the measurement period.

   b. The measurement period at each location is inadequate to determine the necessary acoustical parameters with the required degree of accuracy. For this type of project the absolute minimum monitoring period should be 24 continuous hours at each location. The recommended monitoring period is 3 days at each location. The 10 to 15 minute measurement period used by Seton, Johnson & Odell cannot even begin to determine

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the necessary statistics about the existing Lmax levels in the area. The existing and predicted Lmax levels in the adjacent residential community is one of the most important parameters necessary to evaluate impact (particularly sleep interference). The DEIS suggests that existing Lmax levels are in the 75 to 85 dBA range. This should be verified by direct measurement. The short measurement period (along with the improper instrumentation) also lends considerable doubt to the accuracy of the Leq values reported. It is certainly presumptuous (and misleading) to publish an estimated monthly Ldn based upon less than 2 hours of data.

c. The ambient noise measurement locations are not adequately specified in either of the reviewed reports. The precise location of the microphone should be specified at each measurement location. From the verbal description presented in the Seton, Johnson & Odell report it appears that some of the measurement locations were inappropriate. For example, site 1 is said to be "in the parking strip on the east side of 44th Ave. N.E. between N.E. 47th St. and N.E. 50th St." Ambient noise measurements should **never** be made this close to a street because of the effect of street traffic. It is a well known fact that the Leq and Lmax levels close to the street are not representative of the levels which occur at typical house setbacks. I suspect that this same problem occurs with all of the five sites reported in the DEIS.

2. Presumably, the helicopter noise tests conducted in May of 1985 were run to determine the pertinent helicopter noise descriptors as they pertain to the impact on the adjacent residential property. Unfortunately, the measurements were taken at only one point with only one landing/take-off, and the data was not analyzed for frequency content. The frequency content of the noise is critical if projections of interior noise levels are to be made. The interior/exterior noise reduction estimates presented in the DEIS and the Seton, Johnson & Odell report are taken from the EPA Noise Guidelines Document which is based on a national average for all types of noise. It is a well known fact that typical exterior construction provides more noise reduction at high frequencies (above 500 Hz) than low frequencies. The fact that helicopter noise has more low frequency energy than typical traffic noise would suggest that the interior/exterior A-weighted noise reduction values for helicopter noise would be below that of the national average for all types of noise. The only way to legitimately estimate the interior noise levels (without direct measurement, which is the preferred technique) is to measure the frequency content of the helicopter noise at carefully selected receiving locations as the helicopter goes through its typical operating maneuvers. From these data it is possible to calculate the interior noise levels as a function of frequency assuming typical exterior building construction for the residential area in question. A minimum of three landing/take-offs should have been measured (and tape recorded) in order to get an estimate of the frequency content and range of noise levels created by the helicopter due to slight changes in flight path, approach rate, and altitude.

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3. Estimates of the average exterior Ldn from helicopter traffic using the proposed helistop are based upon FAA noise test data which provides Lmax and SEL statistics for various maneuvers with the Agusta A109 Mark II. All noise level predictions are apparently based upon 100% use of this aircraft. If other aircraft are expected to use the facility, the noise levels and percentage of use for each of these aircraft should be factored into the analysis if an accurate assessment of the impact is to be made possible.

4. Estimates of the maximum exterior noise levels from helicopter traffic are based upon the field test conducted in May 1985 as well as the FAA data on the Agusta A109 Mark II. Unfortunately, the maximum noise levels presented in this report are not clearly reported. There are three different maximum noise level statistics in common use:

   i) Lmax (slow response). This is the maximum sound pressure level detected during a measurement period with the sound level meter time weighting factor set to "slow response". The "slow response" setting causes the meter needle to respond slowly to rapid changes in the noise level (missing the true maxima) and it is normally used to determine compliance with environmental noise ordinances. It should not be used to estimate actual maximum noise levels when sleep interference is an issue. It is commonly used with non-integrating sound level meters (such as the Bruel & Kjaer 2209 which was used by Seton, Johnson & Odell) because the indicating needle movement is too rapid to follow with the eye using other settings.

   ii) Lmax (fast response). This reading is similar except the meter time weighting is set to "fast response". Lmax values determined with the "fast response" setting are almost always higher than those taken with the "slow response" setting, and the difference between the two depends upon the nature of the noise.

   iii) Lmax (peak detector). This reading bypasses the rms detector circuit in the sound level meter and captures the true "peak" sound pressure level. This setting is normally used to measure impulsive noise, but it is of interest here because some researchers have conducted laboratory sleep interference studies using the peak A-weighted sound pressure level as the primary control variable.

   There is a significant difference between each of these noise descriptors (as much as 15 dBA between Lmax (slow) and Lmax (peak) for any one single event), and unless the existing and predicted future Lmax levels are based upon the same time weighting factor, it is not possible to assess the impact.

5. The methodology used to evaluate impact in the DEIS is generally appropriate, but there are two major omissions:

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a. The DEIS fails to compensate for the character of the helicopter noise. It is a well known fact that some types of sound create higher levels of annoyance than others even if the A-weighted sound pressure level of the two sounds is the same. Sounds containing single frequency components (tones) and impulsive sounds generally fall into this category. Helicopter noise is known to possess both of these characteristics. The City of Seattle Noise Ordinance accounts for this fact by applying a 5 dBA penalty in determining compliance. Even though emergency helicopters are exempt from meeting the requirements of the noise ordinance, it would be necessary to apply a similar penalty if the intent of the study is to determine true impact by the use of Lmax and Ldn noise descriptors.

b. The DEIS fails to provide a projected helicopter noise contour map and a discussion regarding the geographical area of impact. Reading these reports one gets the impression that the helicopter noise will impact only the front row of houses directly adjacent to the helistop. This is probably not the case, and in fact, if a significant or moderate impact is expected at Site 1, I would expect the impacted area to include most of the homes bounded by N.E. 50th St. on the north, 46th Ave. N.E. on the east, and N.E. 45th St. on the south.

In summary, my opinion is that these noise studies rely too much on general data and not enough on information which is specific and relevant to the project in question. This is sometimes the case for an environmental checklist report, but it is not at all appropriate for an environmental impact statement.

If you have any questions regarding these comments, or if I can be of any further assistance, please give me a call.

Very truly yours,
JGL Acoustics, Inc.

Jerry G. Lilly

Jerry G. Lilly, P.E.
President

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Julia
To: Haley

September 29, 1986

RECEIVED
OCT 2 1986
DEPT. OF CONST. & LAND USE

Ms. Holly Miller, Director
and Ms. Julie Gibbs
Department of Construction & Land Use
Room 400, Municipal Building
Seattle, Washington 98104

Re: Helipad proposal at
Children's Orthopedic
Hospital (COH)

Dear Ms. Miller & Gibbs:

I am enclosing my correspondence with Dr. Nicola to show you my concern about disrespecting the health and lives of a whole neighborhood, including two schools, apartment buildings which border the proposed helipad site at COH. Also, electrical wiring is overhead on the parking lots of COH and a park with high trees and a substation on it is nearby.

Dr. Nicola could not or did not volunteer even how many lives were saved in endangering us all. As a matter of fact, he gave the hospital permission to land up to eight times per month, which the hospital finds unsatisfactory. They want about 50-60 landings a month. I call this an airport. And all this without knowledge of how many lives are saved.

This is incredible carelessness of the appointed health directors and shows lack of investigation into the situation.

I hope you all will intervene to make a bad situation better.

Thanks for listening.

Sincerely,

Helen Newman

Mrs. Helen Newman
4252 N.E. 50th
Seattle, WA. 98105

525-4817

CC: George Benson
Virginia Galle
Jan Noland
Paul Kraabel
Norm Rice
Dolores Sibonga
Sam Smith
Jim Street
Jeanette Williams

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City of Seattle
Charles Royer, *Mayor*

King County
Tim Hill, *Executive*

Seattle-King County Department of Public Health
Bud Nicola, M.D., M.H.S.A., *Director*

August 29, 1986

Ms. Helen Newman
4252 Northeast 50th
Seattle, Washington 98105

Ms. Helen Newman:

In your letter of August 23, 1986, you asked me to respond to three specific questions regarding the transport of patients to Children's Orthopedic Hospital by helicopter: 1) How many children have been helped by helicopter transport?; 2) How many children have died?; and, 3) What medical problems have there been with landings at the nearby soccer fields?

When I was asked by the Department of Construction and Land Use to comment on the medical need for helicopters at Children's Orthopedic Hospital, I reviewed the previous year's transport records of Airlift Northwest, talked to transporting physicians, and witnessed the helicopter and emergency department staff in operation. All of the six patients per month transported to Children's Orthopedic Hospital by helicopter during 1985 were "helped."

Was a landing at the hospital parking lot rather than the soccer field the difference between life and death? This question is not possible to answer given the number of variables involved in the care of an acutely ill or injured child. We do know that time is an extremely critical variable in determining the outcome of persons acutely ill or injured. As a generalization, helicopter transport can reduce the time for a patient to receive definitive medical care.

It is my opinion after reviewing the diagnoses of the ill children transported by helicopter and speaking to their attending physicians that one might expect 5% of comparable cases to develop life threatening complications during flight where several minutes difference in reaching care may indeed be the difference between life and death or severe disability.

400 Yesler Building Seventh Floor Seattle, Washington 98104 (206) 587-4600

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The main problem associated with landing at the soccer field has been the trauma involved on a fragile incubator baby in making mechanical connections with oxygen, ventilator, intravenous equipment between the helicopter and the ambulance in an open field. This is one more variable which may increase the risk of problems in an ill baby. I do not have sufficient information to answer your questions more definitively.

I would reiterate that the Draft Environmental Impact Statement to be released by the City of Seattle Department of Construction and Land Use addresses many of the questions you have raised.

Thank you again for writing.

Sincerely,

Bud Nicola MD

Bud Nicola, M.D.
Director of Public Health

BN:rh

cc: Seattle City Councilmembers

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UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

Office of the Vice President for Finance and Administration

August 28, 1986

RECEIVED

SEP 05 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. Robert Klug
President, Laurelhurst Community Club
4326 N.E. 42nd
Seattle, Washington 98105

Dear Mr. Klug:

Thank you for your August 13 letter regarding a helipad in the University of Washington east campus area.

My July 2, 1986 letter to Mr. Katz of Children's Orthopedic Hospital (COH) was intended only to address the issue of a permanent helipad for COH on a University playfield. That question arose because a preliminary draft of the COH Environmental Impact Statement (EIS) for a helipad at the hospital discussed as an alternative a "Graves Field Helistop." My letter urged simply that "no further consideration be given to use of the University's playfields as a site for a permanent COH helipad"; it was not intended to necessarily rule out other sites in the east campus area, which might be used for patient transfers headed to COH, or University Hospital.

As you know, the University has begun the process of preparing an EIS on use of the helipad on the roof of the new east wing of University Hospital. That EIS will, of course, address alternatives. During our early work on the EIS, comments were received which requested specific consideration of an east campus alternative, which we will do. We now anticipate publication of the University's EIS by January 1987.

I should note, however, that some of the sites suggested in your letter do not appear to meet all the criteria for a permanent helipad. For example, sites 3, 4, and 5 are located within 1,000 feet of University housing at Laurel Village. It is also not clear that a site large enough to accommodate MAST helicopters could be provided on site 4 without encroaching on the adjacent playfield. Other considerations will have to be taken into account, including impact on the ecological research and wildlife areas, impact on the Center for Urban Horticulture, parking loss, and space demands of other University units.

306 Administration Building, AH-05 / Telephone: (206) 543-6410

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Work is proceeding on the University's EIS, but a determination of the site-specific alternatives to be considered probably cannot be made before the September 8 meeting of the Laurelhurst Community Club Board. I regret that a previous engagement will not permit me to attend that meeting, but I have asked Sedge Thomson to be there to answer any questions your group may have. We will keep you informed of our progress and notify you of the alternatives selected for discussion in the EIS as soon as that determination has been made.

I hope you find this letter responsive to your concerns. If you have any questions, please let me know, or call Sedge Thomson (543-4828) or Sally Marks (543-9071).

Sincerely,

Tallman Trask III
Vice President for Finance
and Administration

cc: Mr. James Collier
Mr. John Coulter
Mr. Trueman Katz
Ms. Sally Marks
Dr. Ernest Morris
Mr. Robert Muilenburg
Mr. Alan Tarr
Mr. Sedge Thomson

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Jackie

Seattle
Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

MEMORANDUM

TO: Dr. Bud Nicola, Director
Seattle-King County Health District

FROM: Holly Miller, Director Holly Miller

DATE: December 24, 1986

SUBJECT: Comments on Your December 4, 1985 Report to DCLU - Children's Hospital's Helistop Application, MUP 8405870

The enclosed set of comments, suggestions and questions on your report to Beatrice Ryan (dated December 4, 1985) have been derived by assembling the comments of a number of sources. These include comments from:

- Children's medical and administrative staffs
- Individuals who have been assisting COHMC in preparing the Environmental Impact S atement (EIS)
- Representatives of the City of Seattle
- The community at large (both in letters to DCLU as well as letters and testimony received during the public comment period following the issuance of the Draft (D) EIS)

General Comments on Report

1. Please append B. Ryan's letter of 8/30/85 so that the reader has a context for considering the results of this report. State the qualification of the author(s) in preparing the report. Identify or refer to the land use standards used for the consideration of the conditional use permit application.

2. The second paragraph contains an introduction to the report methodology. The report should expand upon this information to detail the specifics of the people who were contacted (this could be done by appending a reference section).

   The survey technique used to interview the various resource people should be identified (i.e., a listing of the questions that were asked and the measures taken to control bias).

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The public hearing should be identified as a fact-finding tool. The recording of the testimony and its availability should be noted.

Section - Existing Pediatric EMS System in Seattle

1. First paragraph: Explain the capabilities affiliated with the Mary Bridge NICU beds. Is there a duplication of service with those offered by COHMC?

   In what service capabilities should there be overlap? Are unique services offered by COHMC? by Mary Bridge?

2. Second paragraph: Should this paragraph be the introductory paragraph for this section of the report?

   COHMC can be called out as a tertiary care center. Nancy Greenawalt of COHMC can provide source materials that indicate that COHMC is a tertiary care center.

3. The referral program, whereby a patient is referred to medical institution, should be explained to the lay reader.

Section - Helicopter Transport

1. Comment: Nancy Greenawalt can provide an updated summary of the conditions of patients being transported via helicopter directly to COHMC (see Table 2 on pages 14-16 of the DEIS). She can also make available a medical description of all patients destined for COHMC that are being flown to Harborview and then being ground transported to COHMC. Additional information on the specific care (both during and after transport) can be made available as well--either in summary form or in the case file for each patient. Please let Nancy know what specific information you will require (Nancy's number is 526-2505).

2. The journal article, "Guidelines for Air and Ground Transportation of Pediatric Patients," from the American Academy of Pediatrics should be reviewed for applicability to this report. (Provided to Steve Call.)

   The references section of the article should be reviewed for additional sources of information or contact people who may be able to lend a different perspective. (SHAPIRO is securing the referenced articles for Steve.)

3. The status of Dr. Pinkers' Subcommittee Guidelines should be updated.

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4. What types of patients warrant the use of air transport, as opposed to ground transport? That is, in addition to trauma patients, what categories of presenting conditions and/or illnesses are candidates for helicopter transport?

5. Particularly for those patients within the 70-mile radius identified in the first report, how does one strike a balance between transport time and transport distance?

6. Much of the existing data appears to be based on literature that deals primarily with aeromedical transport of trauma patients. We understand that this is attributable to the fact that there is little published information on non-trauma cases. Does a more recent literature search confirm this? What can be concluded from a review of the existing ALNW flight logs?

   Can conclusions from a review of literature on trauma patients be drawn and applied to neonatal and pediatric populations? to patients with presenting conditions identified in question 4 above?

7. The last sentence of this section assumes that for patients being airlifted to Intramural Field and then ground transported to Children's, there would be a 3-5 minute delay in treatment at COHMC. Rose Andrews, ALNW's Chief Flight Nurse, estimated that because of transfer time, this delay is longer (a total delay of about 10 minutes; see pages 53-53 of the DEIS). This change in assumption should be confirmed and examined for its potential influence on the conclusions.

Section - Current Data

1. The first paragraph can be updated to reflect more current information. Nancy Greenawalt can provide you with this information as soon as it becomes available.

2. Similarly, the second paragraph can be updated to reflect up-to-date information.

Section - Recommendations

1. In Glen Bachman's interview of you and Steve Call, you and Steve spoke extensively of the need for guidelines, not criteria, to assist medical personnel in making the decision to helitransport or not helitransport. That is, the medical team may be confronted with a complex set of conditions with a given patient. In a situation where life and death decisions are being made, is it important that the medical personnel's judgment be used--and that their authority to

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make decisions not be diluted by guidelines that would reduce their ability to take action swiftly?

Steve also pointed out that the number of separate presenting conditions is enormous. The potential number of combinations of presenting conditions is even greater, such that to create clear criteria could be overly restrictive, and not provide the medical personnel with the flexibility they require. The report may need to articulate this issue more clearly.

2. Again, please review assumption regarding 3-5 minute transfer time.

3. Second paragraph: Clarify what 5-10% refers to. Is it helicopter-transported children?

4. It is estimated that somewhere between 15-20 children per month will be transported by helicopter. These transports would involve 30-40 flights: one flight in and out for the pickup of the pediatric medical transport team, and a second flight in and out for the delivery of the patient. Children's is in the process of designing a "hybrid" alternative, whereby the medical team would be picked up either at Harborview or (if built and if allowed by the University) at the Intramural Field). Most airlifted patients would be brought to Harborview or Intramural Field--only the most serious (an estimated 3-5) patients would be landed outside the Emergency Room Entrance at COHMC.

   A point of note is that it has been difficult to derive reliable estimates of total numbers of patients who would be transported by helicopter. The numbers presented in the DEIS reflect estimates from both COHMC and ALNW medical and administrative staffs. They should be considered as advisory--in part because of uncertainty whether a medical breakthrough, catastrophe, addition of competing helicopter service, or some other situation would alter these estimates.

5. Has the introduction of helicopter transport of non-traumatized patients, whether pediatric or not, established a new standard of care?

6. Fourth paragraph: Has any other source (apart from the literature review) supported the conclusion that "there are no definitive predictive clinical indicators of prognosis . . . ."?

7. What areas of uncertainty exist in the overall opinion/report?

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8. Do you maintain your recommendation for a review panel? If so, what should their mission be? Who should be represented on the panel?

Addenda

1. Attachments 1 and 2: Should be updated; source(s) should be identified.

2. The time and cost analysis provided by Craig Jackson to Lothar Pinkers is valuable; however, the economic analysis may be too discrete for inferential purposes. COHMC believes that there is an ultimate economic benefit to heli-transported patients because of diminished medical care requirements and shorter stays. This issue could be explored if you think it is appropriate.

Thank you so much for your consideration of these items. Please feel free to telephone Glen Bachman or Julia Gibb at 625-4509 with any questions.

JAG:js
\viv3\nicola

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Seattle Police Department

Patrick S. Fitzsimons, Chief of Police
Charles Royer, Mayor

October 2, 1986

RECEIVED
OCT 3 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Attention: Julia Gibb

Dear Ms. Miller:

Reference: Draft EIS for Children's Hospital and Medical Center Helistop dated September 1986; our EI 86-306

The Seattle Police Department has reviewed the Draft Environmental Impact Statement for the Children's Hospital and Medical Center Helistop.

We support the location proposed for the following reasons:

1. Transporting critical patients from either of the alternate locations could delay the arrival of the patient due to traffic congestion. If either alternate location is used during football games, the route may, in fact, be impossible.

2. The University Hospital is isolated from Children's Hospital during football and basketball games.

3. A severe impact on travel time must be considered during rush hours.

4. The athletic field complex is situated just south of businesses and a well-traveled road. We would expect an impact on the Seattle Police Department if this location is selected because of on-lookers, sightseers, and people slowing or stopping their vehicles to see what is happening.

For the reasons stated above, the Seattle Police Department favors location of the Helistop at Children's Hospital.

Very truly yours,

PATRICK S. FITZSIMONS
Chief of Police

By N. Fedan

Major M. D. Brasfield
Inspectional Services Division

MDB:PMM:gt

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CIVILIAN MAST

MILITARY ASSISTANCE IN SAFETY & TRAFFIC COMMITTEE OF STATE OF WASHINGTON, INC.

801 Broadway Suite 927 Seattle, Wash 98122 (206) 682-6333

RECEIVED
OCT 20 1986
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

October 15, 1986

Ms. Julia Gibb
Seattle Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Re: Comments on DEIS Children's Hospital Heli-Stop

Dear Ms. Gibb:

I have reviewed all MAST Flights for the past ten years as a part of my regular duties with the MAST Coordinating Committee.

On only one occasion, in the winter of 1986, was it necessary to deliver an infant directly to the hospital's door, rather than landing at Graves' Field.

My data shows no other bad patient outcome resulting from landing at the Grave Field site.

Last winter I asked the Seattle Fire Department, Chief Jerry Burt and Shepard Ambulance, Mr. Ken Ruef, if they knew of any bad outcomes occuring during the transport of pediatric patients from a MAST helicopter at Graves' Field to Children's Hospital.

Neither activity knew of any of any bad result at that time.

Warm regards,

Jay M. Kranz, MD., Chairman
MAST Coordinating Committee

cc: Capt. Dan Madden

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4217 51 Ave. N.E.
Seattle, WA 98105-4930
October 16, 1986

RECEIVED
OCT 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Holly Miller
Director, Dept. of Construction and Land Use
Municipal Building
Seattle, WA 98104

Dear Ms. Miller:

I am writing about the proposed helipad at Children's Hospital. I am a pediatrician and on the staff of Children's Hospital, so I am not unsympathetic to the need for efficient and effective transportation of sick children. However, I believe that the current plan proposed by the hospital is insufficient and does not contain adequate safeguards for either the patients or the community.

Regarding the patients, while it may seem intuitively obvious that faster transport will enhance survival, this is not necessarily the case and should be documented with good scientific studies. Judging by Dr. Nicola's recent excellent review of the literature on this issue, there are none. A possibly analagous example of the misuse of technology is the situation with monitoring of near-term fetuses, where the use of electronic monitors increases the rate of Cesarean sections but does not necessarily enhance rates of survival of infants. Ground transportation has advantages over air transportation. The only way to resolve situations in which such uncertainty exists is to perform proper comparisons of the available methods on appropriate subjects. Until such a study is performed, one might be able to draw some tenuous conclusions from a review of data from transports performed during last year's snow. During that time, what was the survival rate of patients in comparison to similar patients transported during better weather? I think that Children's Hospital should be required to provide such data to justify the use of an expensive technology, for which the neighbors, the patients, and society at large must pay. It should be analyzed by a third party.

Regarding the community, are they being protected from the strictly entrepreneurial interests of Airlift Northwest and Children's Hospital? What mechanism is there to prevent the abusive use of helicopter transport for all sorts of medically unnecessary purposes? I have heard stories of Airlift Northwest transporting corpses of children. Why should the community suffer this? Will the city allow the proverbial fox to guard the henhouse? What disinterested party is going to monitor the use of a heliport once it is constructed? Who has verified the hospital's data on noise and other environmental concerns? Rather than belabor the issue with a long litany of possible abuses of the community by entrepreneurs, I will simply urge that this issue be considered in light of the recent history of Children's Hospitals relations with its neighbors.

Sincerely,

Thomas A. Bell, M.D., M.P.H.

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cc to Holly Miller

16

ravenna-bryant community association

6559 ravenna n.e., seattle, wa 98115 527-0718

October 8, 1986

RECEIVED
OCT 10 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb, Land Use Specialist
Department of Construction and Land Use
600 4th Avenue
Seattle, Washington 98104

Subject: Helipad at Children's Orthopedic Hospital

At the October meeting of the Ravenna Bryant Community Association (10/7/86) concern was expressed for the proposed helicopter landing site at Children's Orthopedic Hospital. Our board has examined the current status of the proposals placed before your agency and we hope to see the strictest review of the proposal by all concerned city, state or federal agencies before approval is considered for the proposal.

A motion was placed before the board and was adopted unanimously. Please enter the motion in your file of testimony and hearings.

RBCA Motion A/10-7-86/Unanimous

Moved: That RBCA support the position of the Laurelhurst Community Club concerning the helicopter landing site proposal of Children's Orthopedic Hospital, in that the Laurelhurst Community Club poll of local residents demonstrates near unanimous concern for the proposed site, in that it is the conviction of RBCA that a statement of need and demonstration of need for air transportation must be provided and approved before our community association would consider approval of the site proposal, and in that RBCA sees the need for a statement of justification and demonstration of why the existing joint use of the University of Washington landing site (shared by the UW and COH for emergency cases) is not a superior and safer alternative for a site location for helicopters.

Please place our association on your mailing list for subsequent matters concerning the COH proposal.

Sincerely yours,

David W. Rigby
President

1986

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MONTLAKE COMMUNITY CLUB

"Cooperating to maintain a fine Montlake Residential District"

2511 West Montlake Place East
Seattle, Washington 98112

October 14, 1986

RECEIVED
OCT 16 1986
DEPT. OF CONST. & LAND USE

Holly Miller, Director
Department of Construction and Land Use
408 Municipal Building
Seattle, Washington 98104

Comments on the Children's Hospital and Medical Center Helistop
Draft Environmental Impact Statement

Dear Ms Miller,

Our preliminary comments were made at the Public Hearing on September 23, 1986 and concerned the failure to involve any of the community groups which will be impacted by the numerous helicopter flights and the failure to consider the cumulative impact of such flights to/from both Children's and University Hospitals. A copy of the testimony is appended for your convenience.

Environmental Impacts
Why is no attempt made to assess noise and vibration impacts along the entire flight path? Montlake residents are well aware of helicopters over our community. We hear them overhead when we are inside well-built homes and feel the vibration they cause. This is hardly the reaction to a truck going by. You predict 15-20 flights a month which must be doubled due to the medical team pick-up. This means an additional 360 to 480 flights per year to Children's which has only 17% of the flights. How many helicopter flights will have as their destination University Hospital? How will the constant barrage of helicopter noise affect the emotional well-being of Montlake residents and the livibility of our community?

Role of Helicopters
Table 2 lists 21 patients who were transported by helicopter with a mortality rate of 48% and brain damage in other cases. What is the mortality rate for all patients transported by helicopter since May, 1985? Charges have been made that helicopter transport is more traumatic and can cause cerebral hemorrhage in neonatals. Could damage to the patient be caused by helicopter flight?

Table 3 is a purely hypothetical case. Use a real case and take into consideration the time involved when the community doctor calls the medical director for advice, the medical director calls Boeing Field, the helicopter pilot takes off and lands at Children's, the medical team is loaded and the helicopter departs and lands at the community hospital. This time interval was completely absent from Table 3.

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Is the increase in use of medical helicopters forcing community-based physicians to send patients who cannot be helped to tertiary care facilities because of the fear of malpractice charges?

Why has Children's Hospital failed to file an updated form 7480 with the FAA?

Is it more than a little premature to plan a relatively massive assault on densely populated areas with medical emergency helicopters before the proposed guidelines and standards are formulated by Puget Sound Health Systems Agency, the Subcommittee on Air Ambulance Medical Standards of the Washington State Medical Association and American Society of Hospital Based Emergency Air Medical Services and National Emergency Medical Services Pilots Association? It appears that a Supplemental Draft Environmental Impact Statement should be completed and offered for additional comments by the public after the reports by the associations are finished and a part of the document.

Will the expanded service of Airlift Northwest and other helicopter services force the curtailment of MAST operations in western Washington? MAST is not allowed to compete with private enterprise.

Helicopter Safety
According to aeromedical experts, hospital-based helicopters crash far more frequently than other helicopters or civil fixed wing aircraft. Therefore it is necessary to examine closely the predicted increase in emergency flights by helicopters which have such abysmal accident records. How many helicopter pilots does Airlift Northwest employ? How many helicopter pilots are on duty at one time? How many hours per day is each helicopter pilot on duty? How many days per week does each helicopter pilot work? Is a helicopter pilot ever required to work extra hours per day, per week, per month?

Part of the arguement for building a secured, lighted pad is the safety factor. Is there any concern for safety when the helicopter lands at a community hospital with no landing pad or at an accident scene on a freeway or in a field?

What kind of insurance does Airlift Northwest carry in case the helicopter crashes in a densely populated area?

Is enough information available to make a convincing case for allowing 80-90 emergency helicopter flights per month in Seattle? In the American Medical News of September 5, 1986, preliminary evidence suggests that helicopter transport may be detrimental to patients' outcomes.

Sincerely,

Doris Baxter Burns

Doris Baxter Burns
President

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MONTLAKE COMMUNITY CLUB

"Cooperating to maintain a fine Montlake Residential District"

TESTIMONY AT PUBLIC HEARING, SEPTEMBER 23, 1986, ON CHILDREN'S HOSPITAL HELISTOP

I am Doris Baxter Burns, 2511 West Montlake Place East, Seattle 98112, President of the Montlake Community Club. We will present some of our comments at this time with more detailed concerns in writing before the October 2nd deadline.

First of all, we must protest your mailing list which contains not a single community council. Allied Arts may well be concerned about the helipad, but why are University District, University Park, Laurelhurst, Green Lake, Montlake, Wallingford, Ravenna-Bryant, Eastlake, Portage Bay-Roanoke, Capitol Hill and other communities well within the flight paths ignored? Some of these community groups may not be aware of the publication of this Draft Environmental Impact Statement and thus miss the deadline for reply about their just concerns. An honest attempt should be made to rectify this error. It certainly is a grave one that should be remedied by notification of the concerned groups and extension of the reply time.

Secondly, cumulative impact must be discussed more adequately. No man is an island, and no institution exists in splendid isolation. Airlift Northwest is a consortium of four hospitals. Providence and Harborview share a helipad which is located on a parking lot at Harborview. University and Children's want individual landing pads: one atop the hospital and the other outside the emergency room. University Hospital manages Harborview and has intimate ties to Children's. The close proximity of University and Children's Hospitals demands that the cumulative impact of landings at both helipads must be considered in this DEIS. Children's Hospital claims only 17% of the helicopter flights. How many will land at University Hospital? You state that other helicopters will be allowed to land at the hospital. It is necessary to provide at least some indication of the numbers of such flights to both hospitals. Additionally, how many MAST flights will continue to both hospitals and where are they expected to land? How do you expect to enforce your flight patterns on emergency medical helicopters other than Airlift Northwest? One recently flew over my home which is some distance from I-5. Indeed, Airlift Northwest flights will operate at pilot's discretion also.

Other aircraft that must be considered are the traffic advisory planes and helicopters which patrol I-5, SR 520 and the Montlake Cut. Private planes of the fixed wing variety abound in this area. Float planes fly over Capitol Hill, swoop down over SR 520 and land on Portage Bay. Lake Union is also a favorite destination. During football games at Husky Stadium, planes trailing advertizing slogans circle the area. All these flying vehicles appear to be completely unregulated. Add to this a proliferation of emergency medical helicopters whose safety record as a class leaves much to be desired. The cumulative impact of all planes, fixed wing or rotor propelled, must be considered in your

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analysis of cumulative impact on the densely populated area over which the helicopters will fly.

In conclusion, we find this a most inadequate document that raises more questions than it answers. Hopefully the FEIS will be more satisfactory.

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To: Katy
Julia

October 1, 1986

Holly Miller, Director
Department of Construction
400 Municipal Building
Seattle, Washington 98104

RECEIVED
OCT 1 - 1986
Dept. of Construction & Land Use

Re: Helistop, CHMC
4800 Sand Point Way N.E.

Dear Ms. Miller:

The DEIS on CHMC Helistop raises many questions which are not answered sufficiently and ignores many more which have been raised during the hue and cry over this extremely sensitive issue. Time permits me to raise only a few items which bother me.

P.x indicates that only 3 of the 46 Elements of the Environment were reviewed by DCLU. These elements are set forth in the Seattle Municipal Code. Unexplained is who/what the determinant of non-review is/was. Yet, some of these are discussed in the text, but hardly reviewed, since they are "deemed nonsignificant."

The most specious nonsignificant is d.iii. Schools are dismissed as "no significant increase in school population is anticipated from development of this project." Of course not! The obvious significance of schools has been raised in every hearing, newspaper/tv discussion: parents do worry about their children's safety. This safety has threats in any community with accidents, whether by car, bus, bike, playground, now compounded by an omnipresent fear of threat to either Laurelhurst School or the Villa Academy in the immediate vicinity of Children's proposed helistop. If DCLU had reviewed schools, it would have found that parents in neighboring communities worry about the possibility of harm to their schools near the proposed flight patterns depicted in the DEIS. This worry and fear must not be dismissed as irrational nor should DCLU believe that accident rates given in the DEIS immediately calm these worries and fears. Pp. 66 and 67 offer cold comfort with "flew into the ground" statistics predominantly in daytime hours.

DCLU's Distribution List, pp. xiv and xv, shows strange omissions. None of the neighboring community organizations, whether club or council in Montlake, University District, Windemere, Belvedere Terrace, Ravenna-Bryant, Hawthorne Hills, View Ridge, not even Laurelhurst! were included. Also omitted were Seattle School District, Villa Academy, management boards of Burke-Gilman Place, Laurelon Terrace and other living groups, as well as neighborhood businesses and the University Herald. No wonder there are loud outcries.

I question the omission of any statistics for the first alternative, the UW Intramural Field, equivalent to those provided in Table 2, pp. 14-16, for direct landings at CHMC (albeit they are contrary to City regulations).

Other omissions: MAST landings at the UW area have been a long-time emergency provider for the CHMC, yet MAST is summarily treated and dismissed. Nothing is stated, except in an appendix letter about comparative costs of ground travel teams and Airlift Northwest. Presumably, meaning I don't know, costs are billed to parents, hospital involved, medical insurance? Nothing is stated, nor is mention made that MAST traditionally does not charge for its services. Will MAST

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coexist with Airlift Northwest?

Also omitted is any correlation of jurisdiction over helistop siting and emergency airborne patient services with CHMC's assertion that it will continue to land on its property despite regulations. It cites its authority as WAC 248.18.285 and RCW 7.70.040 yet neither one is presented, pp.41,57. They should be.

It is unclear what medical support is provided to a patient who has been removed from monitoring/sustaining equipment in a helicopter to a gurney for the 120 feet journey to the CHMC Emergency Room.

If the UW Hospital is"unlikely to allow CHMC" use of its proposed building-top helistop, then it ceases to be a feasible alternative and should not be listed as such, p. 53. Conversely, and not addressed, will CHMC allow the UW to use its helistop?

In view of so many omissions (and even commissions) raised above, as those which will be raised by other DEIS readers, I believe a Supplemental EIS is necessary and so request.

Sincerely,

Dorothy McCormick

Dorothy McCormick
6639 58th Avenue N.E.
Seattle, Washington 98115

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Seattle Women's Clinic
Obstetrics and Gynecology

BOYD C. QUINT, M.D.
JACK R. LAMEY, M.D.
LAWRENCE R. DONOHUE, M.D.
ROBERT E. LIEPPMAN, M.D.

DIPLOMATES OF THE AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

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OCT 15 1986
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SEATTLE, WASHINGTON 98122
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BOOKKEEPING 292-7249

1626 - 112th N.E.
BELLEVUE, WASHINGTON 98004
454-7132

14 October 1986

Holly Miller, Director
Department of Construction & Land Use
400 Municipal Building
Seattle, WA., 98104

Re: COH Helicopter Landings

Dear Ms. Miller:

I wish to be on record as opposing the COH application to have helicopter landings at the hospital rather than at the soccer field or the intramural field at U.W.

I am unconvinced of the medical necessity of such a program and fear that it is predominantly a marketing ploy for COH that would put the transported patient, and the surrounding community at an unacceptably high risk for accident.

I urge denial of permits for the on site helicopter pad as unnecessary and dangerous.

Sincerely,

Lawrence R Donohue

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October 15, 1986

Holly Miller, Director
Dept. of Construction and Land Use
400 Municipal Building
Seattle, Wash. 98104

OCT 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Miller:

I would like to submit my testimony at the public hearing on September 23, 1986 to serve as my comments on the draft environmental impact statement by Children's Hospital.

"I am here to speak as the president and the representative of the Board of the Laurelhurst Community Club.

In my remarks, I intend to highlight two specific issues (1) the certificate of need (CON) process and the absence or lack of reliable information about the medical need for the proposed helipad and (2) the safety risks of 60 to 80 flights per month into and out of the facility; basically, the probability of a crash with an emergency medical helicopter which makes their use within a single-family neighborhood unacceptable.

Initially, I'd like to talk about the CON process. Children's Hospital has consistently tried to avoid the preparation of a CON application to such an extent that their attorneys filed a lawsuit against the state to prevent it. The Laurelhurst Community Club Board has requested the CON because it is our opinion that it would provide important information to the decision-making process in connection with this conditional use permit request.

In large part, the CON process would provide data or information about need that is not in the draft EIS or the Nicola report. There are 15 specific questions that the CON process would answer and which should be in the final EIS.

1. Identify and analyze the UNMET health services needs which the project would serve.

2. Identify the relationship of the project to the appropriate availability and accessibility sections of the State Health Plan, Health Systems Agency Plan, or the Annual Implementation Plan.

3. Define the population that is expected to be served for the next 10 years and its geographic location, broken down into age and sex categories.

4. Include a patient origin analysis for at least the most recent 3 month period with origins indicated by zipcode.

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5. Provide information on the availability and accessibility of similar existing services to the defined population expected to be served. Identify all existing providers or services similar to those proposed and include sufficient information to prov that such existing services are not currently available or accessible. Time and distance factors are to be analyzed in detail in this section.

5. Provide utilization forecasts for at least five years following project completion, describe the methodology used to prepare the forecasts, identify and justify all assumptions related to changes in use rate, market share, and intensity of service.

7. Justify why the project does not constitute an unnecessary duplication of services, if existing services are available and accessible to the defined population.

8. Document the manner in which access of low income, racial and ethnic minorities and other underserved groups would be served in relation to their need for them.

9. Break out proposed capital expenditures in detail and explain fully the methods used to calculate them. Document the expected project impacts on capital costs, operating costs, and charges for health services.

10. Indicate the expected sources of financing and the expected sources of revenue associated with the operation of the service. Will cross-subsidies be required? (i.e., will one group of patients be asked to subsidize another group?)

11. Describe the relationship of the project to the appropriate cost sections of the State Health Plan, the HSA Health Plan or Annual Implementation Plan.

12. Show that there will be sufficient numbers of qualified health manpower and management personnel to operate a high quality service.

13. Show that the service will be provided in a manner that ensures safe and adequate care and in accordance with applicable Federal and State laws, rules and regulations.

14. Explore alternatives to the project, including postponing action, shared service arrangements, merger, and contract services. Alternatives should be compared with each other using specific criteria and the manner in which the preferred alternative has been selected should be indicated.

15. Show the specific ways that the project will promote staff or system efficiency or improve productivity.

The LCC Board specifically requests that the city (DCLU), require Children's Hospital to prepare Certificate of Need data within this process and include it in the final EIS

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Safety concerns:

1. Should the data be true that between 1980 and 1985, one of every 10 emergency medical helicoptors in operation crashed, that accident rate is unacceptable. The accident rate suggests that the helipad should not be used in a narrow confined area between houses, apartments, and hospital, but in an area where the flight path is clearand unobstructed.

2. In effect, this proposal to save lives puts more lives at risk.

3. The proposed site is much too close to the houses in this area and to two elementary schools.

Thank you for your attention to these matters.

Sincerely,
Bdo Klug amt
Robert Klug
President, Laurelhurst Community Club

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14 October 1986

Holly Miller, Director
Department of Construction and Land Use
408 Municipal Building
Seattle, Washington 98104

OCT 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Miller

The following are comments on the Draft Environmental Impact Statement prepared by Children's Hospital as part of its application for a permit to build and operate a helistop on its campus:

1. The DEIS contains information only on those Airlift NW helicopter flights that landed on the CHMC campus. During the past 15 months, the great majority of patients transported to CHMC via helicopter were landed at Harborview's helipad. The FEIS should include a full description of the total travel times (from the time the call for service was received until the patient entered CHMC), the flight times, the origins, the diagnosis and other pertinent characteristics of the patients and the reasons why the patient was not taken to Mary Bridge Children's Hospital for those cases where it was closer than CHMC (for all cases transported by helicopter to CHMC) since the service was initiated by Airlift Northwest. This data should be reviewed by a group of persons not directly connected with any of the actors and institutions involved in providing the transport service to ascertain the appropriateness and effects on the patient of the method of transport in each case. Particular attention should be give to revieving the experience gained with transferring patients at the Harborview helipad as it is expecially relevant to the analysis of the East Campus helipad alternative.

The results of this review should be included in the FEIS as should the basic elements of the data used by the review group. This review would provide a much better basis for making judgments about the need for the proposed helipad and its likely level of use in the future than is currently available.

2. A full discussion of the interrelationships between the medical and research activities at the UW Hospital and CHMC in treating pediatric patients is needed in order to assess the prospects for a helipad that could be used by both hospitals. Such a helipad could be located somewhere in the East Campus area of the UW. Since the UW Hospital is currently preparing a DEIS for a permit to operate a helipad on the roof of its new East Wing building, it is apparent that DCLU should require that both permits be considered jointly rather than sequentially. This is not a new idea. You will find several letters in the file that have suggested that DCLU require that these two permit requests be considered together. The DEIS has not given serious

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consideration to the alternative that calls for a joint use helipad located somewhere in the East Campus area of the UW. The FEIS should contain a much more detailed investigation of this alternative.

3. The DEIS contains no discussion of the standards and procedures for dispatching the Airlift NW helicopter. Dispatching is a vital part of the operation of any EMS service and can strongly influence the frequency with which the helicopter is used, decisions regarding the use of MAST instead of ALNW helicopters, decisions regarding the use of MEDIC I or private ambulance vehicles instead of the helicopter and the selection of landing sites when a choice exists. Ideally, the dispatching of all EMS services in the Central Puget Sound Region should be centralized and integrated. This is particularly important with regard to helicopters which can range up to 150 miles (i.e. south to Portland and north to the Canadian border). When emergency transport is required, a well-trained dispatcher should be able to quickly determine which EMS service can provide the appropriate assistance at the scene most rapidly so that the patient can be properly stabilized for transport. The DEIS provides no evidence that this most difficult problem has been solved in a way that will assure that the needs of the patient are given top priority. The FEIS should provide such evidence because of the close relationship between dispatching standards and procedures and the prospective use of the proposed helipad.

4. The DEIS does not mention the capabilities of Mary Bridge Children's Hospital to handle emergency pediatric cases. Yet, even the scant data on the actual use of the helicopter shows that many of the patients flown via helicopter to CHMC could have reached the facilities at Mary Bridge Children's Hospital much sooner, even if they had been transported by ground ambulance. A comparison of the capabilities of both hospitals to treat emergency pediatric cases should be included in the FEIS. Without this information, sound judgements about the proper role of each hospital in the care of the emergency pediatric patients that arise in the region cannot be made.

5. Throughout the DEIS, no distinction is drawn between the needs of different kinds of patients. There are at least three types that ought to be recognized: neonates, infants and pediatric patients. Neonates have special problems that most infants and pediatric patients do not have. Yet the discussion of alternatives in the DEIS seems to assume that all patients are alike and have the same problems that neonates have. All patients do not arrive in an isolette and do not have the same intubation problems as premature neonates. Data are needed on the number of emergency cases expected by patient type before one can properly assess many of the questions raised regarding the transfer of the patient from the helicopter to a nearby ground ambulance. This

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transfer requirement is a key issue in evaluating the East Campus helipad alternative. Neonates are already a very small proportion of the patient population that is expected to transported via helicopter. As the perinatal programs at UW Hospital, Swedish and other regional hospitals grow and develop, one can reasonably expect even fewer premature necnates to arrive by helicopter in the future.

6. An extensive assessment of the noise study included in the DEIS has been prepared by JGL Associates, Inc. located in Redmond, Washington. A copy of this study is enclosed with this letter. Its overall conclusion is that the noise study contained in the DEIS is quite inadequate and should be redone. As noted in the DEIS, there have been 21 landings on the COH campus during the past several months. If acoustical monitors has been installed inside and outside of several of the nearby residences during this period, some substantial amount of data would be available to assess the noise impacts associated with the operation of the Augusta 109. The noise testing accomplished to date by the applicant is clearly insufficient to provide the City Council with the information it needs to make its decision on this issue. This is especially true with regard to the Blackhawk helicopter that MAST expects to be using in the near future.

7. It is the purpose of an EIS to identify and describe the attributes of alternative solutions to the "problem" at some point in the future and then to compare them using a set of evaluation criteria. The results of this comparison provide a basis for the selection of the "preferred alternative" which is then normally discussed in some greater detail. The DEIS contains no such comparison, as the selection of the preferred alternative is identified early on in the document. This choice has not resulted from a careful and through comparison of alternatives. This deficiency should be corrected in the FEIS so that the City Council will have a clear presentation of the reasons why the Preferred Alternative is superior to the other possible solutions to the "problem".

8. The DEIS contains no discussion of the liability of the parties involved in the operation of the helicopter in the event of a crash in a residential or other populated area. It is known that Hospital Air Transport is required to carry liability insurance of $20 million dollars. Does this mean that Hospital Air Transport (headquartered in Beaverton, Oregon) is solely liable? Or, since Hospital Air Transport is a subcontractor to Seattle Jet, does Seattle Jet share in this liability? Are Harborview, Airlift Northwest, the other participating hospitals or the State of Washington liable in the event of a crash? It would be especially helpful to know how the insurer calculated the risk factors used to determine the premiums for this policy and who the insurer is. These questions are relevant to the safety issue and answers should be provided (in depth) in the FEIS.

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9. Airlift Nortwest has been bringing patients to COH via helicopter for about 15 months. There have been approximately 100 patients transported during this time. A review of the appropriateness of these transports conducted by an independent review panel should be included in the FEIS. This review should include at a minimum the following items: reason for transport, mechanism of injury or illness, interventions performed or maintained, outcome of patients transported and timeliness of transport. An analysis of these data by a well-qualified and credible panel would provide a much more reasonable basis for making judgments about the medical need and selection of destination hospital questions that are such key elements in matter. A case in point is data on the total travel time involved in these helicopter transports. How can one assess the disutility of the time required for a transfer at the UW East Campus area without being able to compare it with the total travel time involved? Does the transfer add 2%, 5% or some other figure to the total travel time? The DEIS does not contain this vital information. Please ask that it be included in the FEIS.

10. The forecasts of the probable use of the helipad contained in the DEIS are supported by no visible methodology. It is not reasonable to use data for the first 15 months of a start-up operation to extrapolate 10 years into the future. The only reasonable approach to this important problem is to forecast by analogy. This means that other Children's Hospitals that are similarly situated in a metropolitan area of comparable size that have some similarities in terms of topography should be located and their experience with pediatric transports over several years examined. Ideally, a population-based methodology should be developed that could be used to estimate the numbers of emergency cases that can be expected to be generated by a population as it evolves through time in response to the variety of factors that together define its demographic and socioeconomic characteristics. Examples of metropolitan areas that have characteristics similar to Seattle are San Diego, the San Francisco Bay Area, Portland and a few Eastern coastal cities.

11. The DEIS contains no references to the publication entitled Air Ambulance Guidelines published in May 1986 by the U.S. Department of Transportation and the American Medical Association. The FEIS should discuss in detail how the proposed air ambulance service would satisfy these guidelines. A copy of the table of contents of this publication is enclosed with this letter for your interest.

12. The DEIS includes a description of the time required for transport of a patient from Enumclaw to Children's (Table 3, page 18). This illustration should be modified to include the dispatch time for the helicopter which can be considerable. It should also include estimates for transport to Mary Bridge

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Children's Hospital in Tacoma. If minutes do make a difference, then it may be that this patient would be better off being transported to the closer hospital. Beyond these obvious deficiences of this part of the DEIS lies the larger and more important question of how one defines the appropriate service area for helicopter transport. Dr. Nicola uses a figure of 75 miles as defining the distance from Children's within which ground transport is probably going to be superior. How many times has Airlift Northwest been used to transport patients originating within 75 miles of Children's since June of 1985? The FEIS should contain such data as well as several analyses of the comparative advantages of ground versus helicopter transport from several representative locations in Western Washington. It is obvious that if minutes matter, all but very exceptional patients from Bremerton and other Kitsap County locations should be taken to Mary Bridge Children's hospital via ground ambulance. Yet, the information in the DEIS suggests that just the opposite is happening - they are being taken to Children's via helicopter. Such comparative advantage studies are needed to establish service area boundaries for those few pediatric services available only at Children's and Mary Bridge. Once such service area boundaries are established, population-based forecasting of patient volumes becomes much more feasible and rational planning becomes more possible.

13. A serious deficiency in the DEIS is its total unconcern with where the helicopter is supposed to land when it is sent to some hospital in Western Washington. Since about 90% of the helicopter flights are supposed to be interhospital transfers, one must assume that every hospital in Western Washington will need a helipad. A survey should be conducted that will show how many of these hospitals now have or contemplate having a helipad. For those that do not now have a helipad and have no plans to construct one, some other suitable landing place that has the approval of the FAA and other local and state officials should be identified in the FEIS.

There is much information that is still needed before the City Council can be expected to make an informed decision on this issue and I hope that you will require that the DEIS be largely redone in the near future.

Yours sincerely,

Jerry Schneider

Jerry Schneider
5003 45th Avenue NE
Seattle, Washington 98105

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JGL Acoustics, Inc.
14750 N.E. 95th • Redmond, WA 98052 • (206) 881-5522

September 17, 1986

Laurelhurst Community Club Executive Board
5003 45th Ave. N.E.
Seattle, Washington 98105

Attention: Mr. Jerry Schneider
Subject: Children's Hospital and Medical Center Helistop
Review of Noise & Vibration Studies

Gentlemen:

At your request I have reviewed the following documents relative to the previous noise studies prepared for the subject project:

> Helipad Noise Evaluation for Children's Orthopedic Hospital
> prepared by: Seton, Johnson & Odell, Inc.
> dated: October 8, 1985.
>
> Children's Hospital and Medical Center Helistop
> Draft Environmental Impact Statement, Chapter IV, pp. 74-89
> prepared by: Towne, Richards, & Chaudiere, Inc.
> dated: September 1986.

Based upon this review, I have the following comments:

1. Determination of the existing ambient noise characteristics of the residential properties affected by the project is inadequate to accurately determine the acoustical impact. There are several reasons for this:

   a. The instrumentation used in the measurements is not suitable for determining the acoustical parameters of interest (i.e. Leq and Lmax). The B&K 2209 sound level meter can only display the instantaneous sound pressure level (slow or fast response) it is up to the operator to view the indicating needle and estimate "by eye" the average and maximum noise levels during the measurement period.

   b. The measurement period at each location is inadequate to determine the necessary acoustical parameters with the required degree of accuracy. For this type of project the absolute minimum monitoring period should be 24 continuous hours at each location. The recommended monitoring period is 3 days at each location. The 10 to 15 minute measurement period used by Seton, Johnson & Odell cannot even begin to determine

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a. The DEIS fails to compensate for the character of the helicopter noise. It is a well known fact that some types of sound create higher levels of annoyance than others even if the A-weighted sound pressure level of the two sounds is the same. Sounds containing single frequency components (tones) and impulsive sounds generally fall into this category. Helicopter noise is known to possess both of these characteristics. The City of Seattle Noise Ordinance accounts for this fact by applying a 5 dBA penalty in determining compliance. Even though emergency helicopters are exempt from meeting the requirements of the noise ordinance, it would be necessary to apply a similar penalty if the intent of the study is to determine true impact by the use of Lmax and Ldn noise descriptors.

b. The DEIS fails to provide a projected helicopter noise contour map and a discussion regarding the geographical area of impact. Reading these reports one gets the impression that the helicopter noise will impact only the front row of houses directly adjacent to the helistop. This is probably not the case, and in fact, if a significant or moderate impact is expected at Site 1, I would expect the impacted area to include most of the homes bounded by N.E. 50th St. on the north, 46th Ave. N.E. on the east, and N.E. 45th St. on the south.

In summary, my opinion is that these noise studies rely too much on general data and not enough on information which is specific and relevant to the project in question. This is sometimes the case for an environmental checklist report, but it is not at all appropriate for an environmental impact statement.

If you have any questions regarding these comments, or if I can be of any further assistance, please give me a call.

Very truly yours,
JGL Acoustics, Inc.

Jerry G. Lilly

Jerry G. Lilly, P.E.
President

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3. Estimates of the average exterior Ldn from helicopter traffic using the proposed helistop are based upon FAA noise test data which provides Lmax and SEL statistics for various maneuvers with the Agusta A109 Mark II. All noise level predictions are apparently based upon 100% use of this aircraft. If other aircraft are expected to use the facility, the noise levels and percentage of use for each of these aircraft should be factored into the analysis if an accurate assessment of the impact is to be made possible.

4. Estimates of the maximum exterior noise levels from helicopter traffic are based upon the field test conducted in May 1985 as well as the FAA data on the Agusta A109 Mark II. Unfortunately, the maximum noise levels presented in this report are not clearly reported. There are three different maximum noise level statistics in common use:

   i) Lmax (slow response). This is the maximum sound pressure level detected during a measurement period with the sound level meter time weighting factor set to "slow response". The "slow response" setting causes the meter needle to respond slowly to rapid changes in the noise level (missing the true maxima) and it is normally used to determine compliance with environmental noise ordinances. It should not be used to estimate actual maximum noise levels when sleep interference is an issue. It is commonly used with non-integrating sound level meters (such as the Bruel & Kjaer 2209 which was used by Seton, Johnson & Odell) because the indicating needle movement is too rapid to follow with the eye using other settings.

   ii) Lmax (fast response). This reading is similar except the meter time weighting is set to "fast response". Lmax values determined with the "fast response" setting are almost always higher than those taken with the "slow response" setting, and the difference between the two depends upon the nature of the noise.

   iii) Lmax (peak detector). This reading bypasses the rms detector circuit in the sound level meter and captures the true "peak" sound pressure level. This setting is normally used to measure impulsive noise, but it is of interest here because some researchers have conducted laboratory sleep interference studies using the peak A-weighted sound pressure level as the primary control variable.

   There is a significant difference between each of these noise descriptors (as much as 15 dBA between Lmax (slow) and Lmax (peak) for any one single event), and unless the existing and predicted future Lmax levels are based upon the same time weighting factor, it is not possible to assess the impact.

5. The methodology used to evaluate impact in the DEIS is generally appropriate, but there are two major omissions:

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the necessary statistics about the existing Lmax levels in the area. The existing and predicted Lmax levels in the adjacent residential community is one of the most important parameters necessary to evaluate impact (particularly sleep interference). The DEIS suggests that existing Lmax levels are in the 75 to 85 dBA range. This should be verified by direct measurement. The short measurement period (along with the improper instrumentation) also lends considerable doubt to the accuracy of the Leq values reported. It is certainly presumptuous (and misleading) to publish an estimated monthly Ldn based upon less than 2 hours of data.

c. The ambient noise measurement locations are not adequately specified in either of the reviewed reports. The precise location of the microphone should be specified at each measurement location. From the verbal description presented in the Seton, Johnson & Odell report it appears that some of the measurement locations were inappropriate. For example, site 1 is said to be "in the parking strip on the east side of 44th Ave. N.E. between N.E. 47th St. and N.E. 50th St." Ambient noise measurements should never be made this close to a street because of the effect of street traffic. It is a well known fact that the Leq and Lmax levels close to the street are not representative of the levels which occur at typical house setbacks. I suspect that this same problem occurs with all of the five sites reported in the DEIS.

2. Presumably, the helicopter noise tests conducted in May of 1985 were run to determine the pertinent helicopter noise descriptors as they pertain to the impact on the adjacent residential property. Unfortunately, the measurements were taken at only one point with only one landing/take-off, and the data was not analyzed for frequency content. The frequency content of the noise is critical if projections of interior noise levels are to be made. The interior/exterior noise reduction estimates presented in the DEIS and the Seton, Johnson & Odell report are taken from the EPA Noise Guidelines Document which is based on a national average for all types of noise. It is a well known fact that typical exterior construction provides more noise reduction at high frequencies (above 500 Hz) than low frequencies. The fact that helicopter noise has more low frequency energy than typical traffic noise would suggest that the interior/exterior A-weighted noise reduction values for helicopter noise would be below that of the national average for all types of noise. The only way to legitimately estimate the interior noise levels (without direct measurement, which is the preferred technique) is to measure the frequency content of the helicopter noise at carefully selected receiving locations as the helicopter goes through its typical operating maneuvers. From these data it is possible to calculate the interior noise levels as a function of frequency assuming typical exterior building construction for the residential area in question. A minimum of three landing/take-offs should have been measured (and tape recorded) in order to get an estimate of the frequency content and range of noise levels created by the helicopter due to slight changes in flight path, approach rate, and altitude.

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Revised May 1986

NTS-42

U.S. Dept. of Transportation
National Highway Traffic Safety Administration
and the
American Medical Association
Commission on Emergency Medical Services

Air Ambulance Guidelines

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Jackie
Desire
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RECEIVED
OCT 15 1986
DEPT. OF CONST. & LAND USE

Oct. 13, 1986

Holly Miller - Director
Dept of Const. + Land Use
Seattle

Dear Ms Miller:

It seems apparent that the Helipad concern by Laurelhurst residents, including myself, is great high. In addition it seems questionable as to the benefit it would provide.

I am opposed to this effort: the safety aspect, heightened congestion and noise and questionable benefits, vs all costs, are the reason.

Sincerely -

Douglas B. Nichols
5126 NE 42 st
Seattle WA 98105

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DAVID S. BELVIN
4757 - 45th Northeast
Seattle, Washington 98105
10/16/86

To: Holly Miller. Director DCLU
Municipal Bldg. Seattle 98104

Subject: COH Helipad "Deis"

So much has been said against the COH helipad, I would be repeating what has been said. The exception would be the "DEIS" COH has released. It is nicely prepared with words of motherhood, but loaded with misleading statements and facts. These range from misapplying safety statistics to expanding the time line difference to transport from the playfield aread to COH vs direct flight. An Ambulance should not take any longer time than required to walk the distance. Please count this statement as strongly in opposition to the COH proposal.

Sincerely yours,

David Belvin

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LAND USE DIVISION

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October 19, 1986

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OCT 21 1986
DEPT. OF CONST. & LAND USE

Holly Miller, Director
Dept. of Construction and Land Use
408 Municipal Building
Seattle WA 98104

Dear Holly Miller,

As you will note by my address below, I live across the street on the south edge of Children's Hospital. I am very much in favor of a helipad at the hospital to help children suffering traumatic health problems. The following are a few of my thoughts:

- Helicopters paths and safety are controlable human factors. If the path is up 45th street at a reasonably high level and a quick decent to the pad, the noise is very briefly heard and safety to residences could not be a concern.
- Helicopter noise from those landing in the past has been no louder at my location than many of the street vehicles that go up and down 45th Street.
- Helicopters are fun to watch even though it would only be a brief time at my location. And it is inspiring to know they are helping Children.
- Please consider the south side of Children's Hospital for the helipad — in the area of the current play yard for children.

I am sorry to be so late with my comments and I was unable to attend the September 23rd hearing. When is the next hearing scheduled? I would like to support the helipad development.

Sincerely,

Ruth Dam
4415 43rd Ave. N.E.
Seattle WA 98105
524-5590

work: 771-0570
Edmonds School District

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Laurelhurst Community Club
4326 NE 42nd Street
Seattle, WA 98105

October 14, 1986

Dr. Robert H. Muilenburg
Executive Director
University of Washington Hospitals
C414 Warren G. Magnuson Health Sciences Center SC-61
University of Washington
Seattle, WA 98195

RECEIVED
OCT 21 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Subject: A JOINT USE HELIPAD IN THE EAST CAMPUS AREA

As you may know, the Board of the Laurelhurst Community Club is actively involved in trying to find a solution to the controversy generated by the proposed helipad at Childrens Orthopedic Hospital. One idea that the Board would like to see explored in detail would involve the construction of a permanent helipad somewhere in the East Campus area that could be shared by University and Childrens Hospital. The facility would be used by MAST, Airlift Northwest, and other helicopters transporting patients to the two hospitals. It is clear that this location offers the safest possible landing area in the immediate vicinity of the two hospitals as well as producing the fewest adverse effects upon the local environment.

We ask that you initiate discussions with the administration of Childrens Hospital on this topic, that you identify and study one or more possible sites in this area, and that you work out a joint operating agreement. We have suggested this idea to the administration, medical staff and Board of Childrens on numerous occasions but they have so far ignored the idea. We would like to see the University take the lead in these discussions so that this safest of all possible solutions receives a full review.

Sincerely,

Robert H. Klug

Robert H. Klug
President

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cc: Dr. Tallman Trask III
Vice President for Finance and Administration
306 Administration Building AH-05
University of Washington
Seattle, WA 98195

H. Sedge Thomson
Director
Campus Planning
University Facilities Building FJ-05
University of Washington
Seattle, WA 98195

Helen M. Shawcroft
Director
Hospital Planning
University Hospital Administration
BB-367 University Hospital RC-34
University of Washington
Seattle, WA 98195

Holly Miller
Director
Department of Construction and Land Use
City of Seattle
400 Municipal Building
600 4th Avenue
Seattle, WA 98104

Julia Gibb
Land Use Specialist
Department of Construction and Land Use
City of Seattle
408 Municipal Building
600 4th Avenue
Seattle, WA 98104

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October, 1, 1986
Mawson Brotherton
4542 49 N.E.
Seattle, Wash.
98105

TO: Holly Miller, Director
Dept. of Construction and Land Use
408 Municipal Bldg.
Seattle, Washington 98104

RECEIVED
OCT 9 - 1986
DEPT. OF CONST. & LAND USE

Dear Ms Miller,

I am writing concerning the helipad issue in regards to Children's Medical Center (C.O.M.) located in Laurelhurst community. I am a great supporter of the hospital and all it seeks to achieve however, I do have some concerns regarding the necessity of a helipad at the hospital. Will there be a weather observer at the hospital to keep pilots informed of prevailing weather conditions? The flight patterns shown in the EIS show a secondary approach which when used in bad weather conditions appears much more dangerous to the pilot and his/her passengers. The existing field at the University of Washington which is used for hospital landings seems a more logical and safer place for all concerned. There are telephone poles, electrical wires,

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homes, schools and many occupants. It is in these dwellings that the pilot must be aware of. In an emergency (ie. unforseen weather problems, engine problems ...) the obstacles one must deal with & potential disasters are fewer if the soccer field approach and landing place were to remain as is. In my dealings with the hospital, (I currently give tours for the hospital + was president of a guild which supports uncompensated care at the Children's Medical Center) I fail to see the critical need for a helipad sight located so far from the entrance to ER as opposed to a safer landing site and short driving distance to the doors of Children's. Do not trauma victims go generally to Harborview for emergency treatment? In conclusion - I must add the statistics printed in the American Medical News journal dated 9-5-86 alarms and frightens me and my neighbors. 21 crashes this past year of medical helicopters is astounding. The secondary flight approach as proposed by the hospital puts the lives of my 4 children and 13 nieces + nephews along with their friends in school at Villa Academy in potential jeapordy. I urge you to consider the existing landing field at U.W. as a safer and better for all concerned place to land Airlift N.W..

Sincerely
Maureen Brotherton

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OCT 21 1986

DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Oct. 15, 1986

Department of Construction & Land Use
City of Seattle
Rm 408 Municipal Bldg
Seattle, Wa 98104

Dear Director:

I am writing to register my comment on the Draft EIS for the Children's Hospital Helipad.

The inadequacies of the DEIS has been pointed out by many residents who testified at the hearing. I simply want to say that the way the document was prepared tends to focus on the helipad rather than on the helicoptors which will use the pad and which are the cause of concern. In other words, the DEIS does not dwell firmly enough on the question of the risk of helicoptor accidents and why the risks are worth-taking.

Also, the DEIS goes through the routing of "addressing" various impacts but totally misses the point.

Examples:

Page xiii, d.i. Fire. "...service not significantly affected."

-- Granted that fire services may not be affected by the HELIPAD. Would the HELICOPTOR not cause additional fire concern?

Schools. "... no significant increase in school population...." Funny! No one has ever raised a school population question here. But we have asked a lot of questions about what happens to the school and students in case of a helicoptor accident. Why not dwell on the impact from the HELICOPTORS instead of HELIPAD?

Similar ironies abound in the DEIS.

In sum, do you really think it is good land-use to introduce emergency helicoptors with their high rate of accidents to a residential neighborhood of mostly wooden-frame houses?

Please address these questions and demonstrate why the Hospital needs such a facility when there is already a good alternative site at the University of Washington grounds ~~five~~ 3 1/2 minutes away.

Sincerely,

S. Kenneth Pai

4331 NE 45 Street
Seattle, WA 98105

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Julia

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

November 10, 1986

Marcia Graber
2294 Old Day Creek Road
Sedro Wooley, Washington 98284

Dear Ms. Graber:

Thank you for sending me your thoughts about the proposed helipad at Children's Hospital.

The Department of Construction and Land Use (DCLU) is the City agency responsible for evaluating individual applications with the ultimate decision being made by the City Council. They have asked COH to prepare an Environmental Impact Statement addressing factors including noise, safety and cumulative impacts which could result from the helipad.

If you have further questions about the decision process on the helipad, please call Julia Gibb at 625-4509; she will be glad to help you.

I am confident the City's decision on the helipad will acknowledge both the medical needs of children and the concerns of residents in the neighborhood surrounding Children's Hospital.

Sincerely,

Charles Royer

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DCLV MAYOR'S RESPONSE DUE 10/28 LOG P5078
DCD
MC>F41

RECEIVED
OCT 13 1986
MAYOR'S OFFICE

10-7-86

Mayor Royer:

I'm writing you to urge you to support having the Heliport built at Children's Orthopedic Hospital. The good they do for the children in that hospital is unbelievable and the heliport would get some children there faster when time is so important to an ill or injured child.

Thank you for reading this letter. I've never written to you before but this seemed such an important issue.

Marcia Graber

Harley & Marcia Graber
2294 Old Day Creek Rd.
Sedro Woolley, WA 98284

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DCLV MAYOR'S RESPONSE DUE 10,31 LOG P5108

RECEIVED
OCT 10 1986
MAYOR'S OFFICE

10-7-86

To whom it may concern:

I believe the greatness the helipot at Children Orthopedic Hospital would far outway the noise it would cause to residents around the facility.

There are so many cases of ill or injured children that would benefit from the helicopters transportation because of speed or location.

Thank you for reading my thoughts on this.

Marcia Graber

Harley & Marcia Graber
2294 Old Day Creek Rd.
Sedro Woolley, WA 98284

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Raymond, Wash.
October 15, 1986

To The Seattle City Council

Gentlemen:

Our Pacific County Orthopedic Auxilliary met in Aberdeen, Wash. on Oct 8th for a Round Table discussion with several of the Orthopedic Auxilliaries in the area. Three women, who work for the Hospital spoke to us about the many programs there. We were amazed to hear that some of the residents around the Hospital object to the helicopters landing on the hospital helipad, they say there's too much noise. We understand about twenty-eight trips a year are made to the Hospital on the helipad.

Our views are that the noise is a small thing to have to listen to, when the child that comes to the hospital in a helicopter is either injured or seriously ill, the quicker the medical treatment starts so much better for that child.

We thought you would like to know our views on the matter from the Raymond and South Bend area.

We are also interested in the outcome of this project.

Yours truly
Astrid Shelton
Secretary
Pacific County Orthopedic
Auxilliary
Rt. 3 Box 1066
Raymond, Wash. 98577

RECEIVED
NOV 7 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION
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NOV 07 1986

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PAUL KRAABEL
SEATTLE CITY COUNCIL

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September 28,1986

Ms. Holly Miller
Department of Construction and Land Use
408 Municipal Building
Seattle, Washington 98104

RECEIVED
OCT 6 - 1986
DEPT. OF CONST. & LAND USE

Dear Ms. Miller:

I would like to submit some comments and criticisms on the Draft EIS, submitted for a proposed helistop, by Children's Hospital and Medical Center. Most of my criticisms and suggestions center on the issue of safety; I have also touched upon the issues of alternative sites. Lastly, I comment on the presence of bias in this document. Because of the number of problems in all these areas, I would like to see the next follow-up document be a second, rather than final, draft. In this way, comments could again be taken from the community with the hopes that a better, more credible and complete EIS would be produced.

Thank you for your time and consideration of this matter.

Sincerely,
Ruth Engelberg
Ruth Engelberg
4717 45th N.E.
Seattle, Washington 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

1. A set of standards has been proposed for the EMS industry. These standards should be responded to in the DEIS (Bill Roy, AirNet, May, 1986).A stated, they represent" MINIMUM objective factors which should be present for safe EMS operations:

1. Four pilots serving 12 hour duty periods-- with a mandatory ratio of one day off duty for every half-day worked.

2. Night weather minima outside of metropolitan areas of 1000 ft ceiling and 3 miles visibility.

3. A system of stability augmentation for all night flights that is certified for single-pilot IFR.

4. Lacking stability augmentation, night flights must be flown by two pilots.

5. Four thousand hours total helicopter flying time. More than aircraft handling proficiency is demanded in EMS flying; a well-developed judgement in operational decision-making, based upon long and varied experience, is necessary as well.

6. The EMS pilot must be licensed and recurrently trained in instrument flight proceudres." (Air Net, Hospital Aviation, May, 1986)

It should be noted that these quidelines were to be formally reviewed and released to the industry this past week. While we presently do not have a copy of the regulations passed by NEMPSA, they should be secured and responded to in the EIS.

2. A pamphlet LZ put out by NEMPSA has been described by Helicopter News (12:11), p.65, 1986, as" making a major contribution to safety in EMS missions". Yet, COH's proposal for a helistop is 40x 40 sided; LZ recommends 60x60 sided, with 100x100 sided for night. The Draft should discuss the implications of their reduced size of pad and why they did not feel they needed to comply with LZ standards.There are so few authorities in this field, as noted in DEIS-- shouldn't they have complied with one which has surfaced?

3. Another concern with standards- Gene Hill, an ALNW pilot, states that their (ALNW) standards are stringent (p.69), yet these standards are not included, except for flying conditions (p.45). . In the EIS, therefore, the pilot standards (staffing, training, required hours flying) should be included.

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Hill also states that "pilot discretion" is used in marginal weather (p.67). How will pilot decisions in marginal weather be made and assessed? This is particularly important, as a major source of accidents has been found to be pilot error in marginal weather (p.66). Further, NEMPSA contends that EMS safety would be improved if pilot discretion and vulnerability to flying pressures were reduced. This policy does not seem to help the pilot with reducing vulnerability. Could the EIS respond to these concerns? Further, COH itself points out, with references, that "the rash of accidents suggests that one reason for the accidents is the piots' willingness to fly in adverse weather when other commercial helicopter pilots would not fly." As stated by Paul Procter, a business flying editor for Aviation Week and Space Technology, "Those guys asolutely hate the thought of losing a patient because they can't fly"(p.62).

Other pressures noted by NEMPSA- institutional pressures, nursing pressures, financial pressures. The EIS should discuss the chain of command and the safequards which will ensure that safety is a first, not last, consideration. On p.42, the referral chain is indicated. Nowhere in the outline of steps is the pilot's decision concerning whether it is safe or unsafe to fly-- he is told to fly after all medical decisions are made. The next Draft needs to specify when, how, and who makes the safety decisions. In addition, when do these safety decisions come into play in the referral chain?

4. Alternative considerations- this section is very inadequate, particularly regarding the safety advantages of alternate sites. COH needs to answer these concerns.

For example, Bill Roy (AirNet, May 1986) states:"It is commonplace among our pilots that the situation they fear most to be placed in is that of powerless flight at altitudes over a severely restricted landing or takeoff area". Yet the ALNW pilots (and this is the only source) state that there is no advantage to an improved East Campus site(p.73). Are there other sources (objective) who would agree with this appraisal of the equivalent safety characteristics of the COH site vs. East Campus site? With the professional building to the East, the Hospital to the South and West, and residential homes to the North-- this site presents a restricted area. Further, a quote from Benedict in which he says the hospital site is as safe as the downtown sites does not qualify as an assessment of safety for the alternative East Campus site(p.72).Lastly, there are a number of East Campus sites that were not even discussed which might prove desirable alternatives; these sites should be considered, with

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attention to safety, noise, and cumulative impacts. For example, could the stadium provide a good spot for a shared helipad for COH and UW? It is lighted, big, provides a sound barrier, and is unobstructed. With the exception of football Saturdays (during which time helicopters could land at an alternative site), it represents an important alternative.

5. BIAS: Shouldn't the EIS attempt a little more objectivity? The considerations concerning safety are clouded by the use of biased, non-objective sources. None of these sources would be considered credible by researchers, because of their involvement in the program and a resulting conflict of interest. While there may be different sides to this issue, it is clear that the Draft has done little to illuminate the controversies, differences of opinion, and points of view that characterize the issue. For example, the statements (p.68) from the Agusta marketing representative on the safety of the Agusta is not particularly convincing. Are there other sources that could be used? Further, the statement on p.68 that "there is a general perception ...in the industry... that overall safety has improved" contrasts with other statements from Airnet (January, 1986):"The accident rate we are experiencing in EMS aviation is horrendous". It should be noted that the support for the Draft's statement of improving safety is from Hill, an ALNW pilot. The statements from Poulton and Collette indicate that the industry is committed to improving safety through the new standards from ASHBEAMS and NEMPSA. Is ALNW a member of these organizations? Will/do they comply with their standards--please include in EIS! Lastly, the table on p. 64 should be contrasted with a table from Airnet, January, 1986. The data are not different; they are interpreted differently. From Airnet, the information is more revealing about fatalities and injuries as due to pilot error vs. the interpretation by the Draft as due to mechanical error.

6. Enforcement, jurisdiction and regulation ensuring safety are considerations that have been overlooked in the DEIS. In the "Fly Neighborly" program,sponsored by Helicopter Association international, there are agencies that have been used to set up, monitor, and trouble-shoot helicopter programs, both before and after they are operational. Shouldn't these kinds of organizations be considered in the Draft, as part of the helistop plans? Ex: FAA Rotorcraft Task Force (Houston, 1981), Helicopter Safety Advisory Conference(HSACO), HAI Heliport Development (From Rotor News, May-June, 1981/2), Houston Aircraft Facility Review and Appeals Board.

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OCT 17 1986

Testimony for Hearing on Draft Environmental Impact Statement for

Children's Hospital of Seattle Proposed Helipad

September 23, 1986

I am Anita Francis, A Laurelhurst resident. As a graduate nurse and a medical sociologist I am aware that there are many relevant questions regarding "medical need" that have not been answered in this draft impact statement.

The impact statement refers repeatedly to Dr. Nicola's report as proof that there is a need for the helicopter to land at Children's door instead of the soccer field. But Dr. Nicola does not tell us how he came to his conclusions, what questions he asked, how many physicians were interviewed, or what control of bias was maintained. Also, we need to know, were physicians not affiliated with Children's interviewed, and how were conflicting views handled? Why was not even a retrospective study conducted? Dr. Nicola states that he looked at transport records for one month. This was a month when 6 helicopter flights came in to Children's! How can this be considered an adequate study? He possibly didn't realize the importance of his recommendation.

How valuable are helicopter transports for Children's Hospital patients?

Many of Children's patients are newborn--neonates. These are the ones that COH claims to have trouble with tubes if they land at the soccer field. Well, many neonatologists (physicians who care for newborns) question use of helicopters for these fragile newborn. Some say it is even detrimental.

Here is a statement published in May, 1986 in a professional journal, EMERGENCY MEDICINE, by Dr. Kenneth Mattox, director of emergency surgical services at Ben Taub General Hospital in Houston. He says, "According to some neonatology physicians, a helicopter flight for a premature infant almost guarantees an intracerebral hemorrhage." Other physicians we have talked with have voiced similar concerns.

This doesn't sound like there is universal support for using helicopters for the newborn. Maybe that is why most neonatology hospitals in the U.S. do not use helicopters but use a ground ambulance for transfer instead (from Guidelines for Perinatal Care, American Academy of Pediatrics and American College of Obstetricians and Gynecologists, 1983.)

After all, it is a widely accepted principle that "Stabilization (of the newborn) prior to departure from the referring hospital is the most critical aspect of interhospital transfer because it minimizes subsequent deterioration in an environment that may not permit detection or treatment of problems." (page 193, Guidelines for Perinatal Care, 1983.) So, the most important aspect of care of most neonates is to get the skilled team to the neonate, which then may take 1 to 2 hours to stabilize the patients. Speed in getting to the Children's

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Hospital is usually not the most important factor. In fact, one 3 year study of neonatal care in King County found NO deaths during transport using ground ambulance exclusively, during those 3 years.

It appears that the helicopter may be an example of another medical fad whose use should be examined more carefully. As Dr. Mattox says-- "it's an expensive and risky vehicle."

Unfortunately, the safety risk to us in the community will be weighed against the medical need for the helicopter and yet there will be no objective, careful assessment of that need. The information provided on medical need as reported in the DEIS is seriously deficient. For example, Mary Bridge Children's Hospital in Tacoma has neonatal intensive care beds and offers services similar to COH and yet there is no mention of it in the DEIS. At least, the city should solicit the views of people from other hospitals, as we have.

Also, the city should not accept the Nicola report without realizing its serious scientific limitations and the naivete of the recommendations. One recommendation called for was for a 6 month trial period without going through the City's conditional use process. That's not even <u>legal</u> and wasn't done. Similarly, Nicola's call to allow helicopter landings at COH's door 10 times per month is naive--as the hospital states clearly in this DEIS that they "are obligated by state requirements (WAS 248.18.285) to treat all patients brought to the hospital: the hospital construes this statute to mean that no helicopter transporting an emergency patient can be refused permission to land at the proposed helistop, if constructed, or elsewhere on the campus grounds." There is no realistic way, then, of limiting the landings once ANY are allowed.

The main argument for the need to land at the door was for neonates, but, as we have seen, a helicopter is probably not the ideal transport vehicle for them.

We have evidence that many transfers from a helicopter to an ambulance at the soccer field have been made for pediatric patients. There should be proof that transfers are bad, not just anecdotal information. The stakes are too high for that. Indeed, we have heard Dr. Copass state twice that there have been no deaths due to the transfer. Dr. Kranz, Medical Director of MAST(Military Assistance in Safety & Traffic), has also stated that he has not been informed of any particular problems in conducting this transfer at the soccer field.

We know that most consulting hospitals, like Children's, do not have helipads at their door. Dr. Kranz points out that "most Washington hospitals have some sort of tranfer from the helicopter to an ambulance to take patients to the E.R. doors, as Harborview does." <u>Landing at the soccer field, then, is the expected standard, and not the unusual case.</u> The soccer field alternative is sensible, is safer, and has widespread medical support.

Anita Francis

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CENTRAL SEATTLE COMMUNITY COUNCIL FEDERATION
509 10TH E.
SEATTLE, WA 98112
328-9481

October 15, 1986

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

OCT 17 1986
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Miller:

RE: Helipad Proposal for Children's Hospital of Seattle

The Federation members ask that the following topics be covered in the Final Environmental Impact Statement prepared by Children's Hospital.

-The cumulative impact of the University Hospital proposed helipad and the Children's Hospital helipad should be examined jointly and simultaneously. Combined, they will have a greater impact on the adjacent communities than either helipad does alone. They are only one mile from each other. Logic dictates that they should be examined together. The combined impact of their proposed actions will strongly influence actions by other hospitals in the city and region and will largely determine the type and amount of hospital helicopter service Seattle ends up with.

-A regional plan for integrating helicopter and other emergency medial services must be in place before any permits are granted. Once major actors in any plan have their service, it will be impossible to establish a coordinated and effective regional emergency medical services system.

-No permits of any kind should be granted until and unless demonstrably enforceable rules are in place for restricting flights to life-threatening emergencies, as called for in the city code. The history of Children's Hospital does not provide any reason for optimism that they will meet permit conditions. The great difficulty and 4-years of time spent by DCD to obtain compliance by Children's Hospital on the conditions attached to their 1981 permit to build a large parking garage, and the repeated helicopter landings on their campus without a permit are two recent examples which give us reason to be very concerned about compliance and enforcement issues.

Please keep us informed as to your schedule and actions on this matter.

Sincerely,

Beth Means

Beth Means
President

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Business/Asia
4339 NE 45 Street
Seattle. WA 98105
USA

October 5, 1986

RECEIVED
OCT 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Holly Miller, Director
Department of Construction and Land Use
408 Municipal Bldg.
Seattle, WA 98104

Dear Ms. Miller,

I have just returned to Seattle after nine months of teaching at Shanghai University in China. As on my previous trips to China, I was deeply impressed with the friendliness and perseverance of the Chinese people. But, much more than on my earlier trips, I was impressed with the absolute power of the Chinese government.

I mention the above only because of the resemblance of the methods used by the Chinese government and those methods used by the Children's Orthopedic Hospital in its recent project - the helistop. The methods I mean are secrecy and almost total disregard for the consensus of the citizens concerned.

1. Secrecy - Unlike past COH expansion projects for which somewhat advance notice was given to the community surrounding the hospital, the helistop was shrouded in mystery from the beginning. Only after the understandable indignation of the community was aroused two years ago did COH slowly acknowledge a vague outline of their plans to fly helicopters "a few times a month" into the densely populated area around the hospital. Recently we have been told that the hospital administration has admitted that flights may occur as frequently as 80 times a month.

COH has repeatedly refused to give information or else has given only partial or misleading information to persons asking about the legality and funding of and the adequate exploration of alternatives to the helistop.

2. Disregard for Citizens - After a demonstration flight for which little advance notice was given and in which a light, single-blade helicopter landed at COH, large double-blade helicopters have begun to land at the hospital before even the most preliminary requirements (i.e. the draft EIS) have been considered fully.

The statements above cannot begin to encompass the myriad powers COH has assumed in its campaign to install its helistop. Yet these statements are adequate evidence of the kind of battle being waged by COH with its undisclosed moneys to hire lawyers to try to justify its goal - and all under the guise of helping little children.

A neighbor of mine said recently, "Would it be possible to set up a small airport in downtown Seattle without meeting every require-

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Business/Asia
4339 NE 45 Street
Seattle. WA 98105
USA

ment for safety and for environmental concern?" The answer is obvious. Yet this is just what COH is determined to do. And the losers in the establishment of this thinly-veiled marketing device, should a helicopter accident very possibly occur, will be the neighbors along the flight path, the children at nearby elementary schools, and the little patients that COH has promised to protect.

We are not living in China. This is supposedly a free country where the voice of the people counts for a lot. Our city government must realize the truth about a helistop at COH, no matter how smoothly its supporters speak. A helistop at COH is unnnecessary, unjustifiably expensive, and clearly dangerous to the community, most of all to the children in COH itself.

Sincerely,

Joy Scott

Joy Scott

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4134 42nd N. E.
Seattle, WA 98105
October 10, 1986

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

RECEIVED
OCT 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Re: Draft Environmental Impact Statement
for Children's Hospital Helistop
4800 Sandpoint Way N. E.
Application #8405870

Dear Director Miller:

I attended the Hearing on September 23, 1986 at the Laurelhurst Elementary School where ample evidence was presented to establish the fact this is only a commercial endeavor by the three hospitals.

I live on 42nd N. E. about half a block directly south of the hospital. The helicopters are presently still making landings in violation of City ordinances. Their approaches are often made directly over our house as they swing around into the hospital grounds.

I have called Ms. Greenawalt at the Hospital and she first tries the tear-jerking need to save lives. When pinned down she will not confirm that an extra ten minutes for the maximum possible use of Graves Field would make any difference.

Then she swings into their usual arrogant explosion of not needing a permit because of their size, and that the citizens of Laurelhurst will just have to put up with the problem.

PLEASE, in the interest of safety for the school, the school children, and home-owners in this area, do NOT issue a permit for this heliport, but leave it at Graves where it has been for many years. Also, be sure that the approaches are restricted to Union Bay and the playfield.

Thank you for your consideration in this very important matter.

Sincerely,

A. WESLEY ROBERTS

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October 12, 1986

RECEIVED
OCT 15 1986
DEPT. OF CONST. & LAND USE

Ms. Holly Miller, Director
Department of Construction & Land Use
Room 400, Municipal Building
Seattle, Washington 98104

Dear Ms. Miller and Ms. Julie Gibbs,

I am writing to you in regards to the proposed helipad at Childrens Orthopedic Hospital. I am particularly concerned about the safety issue. My son attends Villa Academy which is located in the Laurelhurst neighborhood, near Childrens Hospital. My fear is that a helicopter crash could seriously jeopardize the life of my son and other children. The proposed landing site is in a high density, residential neighborhood.

I strongly oppose helicopter landings at COH. I also oppose landings at the University Hospital. I do not believe that helipads have been proven safe or cost effective. We have excellent ambulance transport in Seattle. Let's stay safe and sane.

Thank you.

Sincerely,
Carol Wilkinson

CAROL WILKINSON
1837 E. Shelby
Seattle, WA 98112

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RECEIVED May 15, 1986

MAY 19 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr Gibb,

I am writing in support of Children's Orthopedic Hospitals request for a conditional land use permit to build a helistop outside their emergency room. I am a grandparent and also care for all children and feel it is important that children who need emergency care in a hurry can land directly at the hospital. A little noise is not important when the life of a child is to be considered.

Sincerely,

Gertrude Schroeder

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APPLICATION 8405870

RECEIVED
SEP 29 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

X I wish to receive notice of the decision.

X I wish to receive notice of the availability of the Final EIS.

Name CAROLYN MARGON Address 3650 42nd Ave NE

SEATTLE, WA ZIP 98105

JAG

APPLICATION 8405870

RECEIVED
OCT 10 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

✓ I wish to receive notice of the decision.

✓ I wish to receive notice of the availability of the Final EIS.

Name BRUCE MARGON Address 3650 42nd Ave. NE

SEATTLE WA ZIP 98105

JAG

APPLICATION 8405870

RECEIVED
SEP 03 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

✓ I wish to receive notice of the decision.

✓ I wish to receive notice of the availability of the Final EIS.

Name HELEN NEWMAN Address 4252 - NE 50th SEATTLE WN

Helen Newman ZIP 98105

JAG

APPLICATION 8405870

RECEIVED
SEP 03 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

X I wish to receive notice of the decision.

I wish to receive notice of the availability of the Final EIS.

Name Lucille Rawley Address 5040 - 44th NE

Seattle Wa ZIP 98105

JAG

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APPLICATION 8405870

X I wish to receive notice of the decision.

X I wish to receive notice of the availability of the Final EIS.

Name Mrs. Betty Brewster Address 146 N.W. 74th

Seattle, Wa. ZIP 98117

RECEIVED
SEP 02 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

SEP 11 1986

APPLICATION 8405870

I wish to receive notice of the decision.

I wish to receive notice of the availability of the Final EIS.

Name Lissa M. Jensen Address 10853-37th Ave. S.W.

Seattle, WA. ZIP 98146

APPLICATION 8405870

X I wish to receive notice of the decision.

X I wish to receive notice of the availability of the Final EIS.

Name K. Peterson Address 5007 - 44th N.E.-Lwr. Apt.

Seattle, WA ZIP 98105

RECEIVED
SEP 11 1986

APPLICATION 8405870

I wish to receive notice of the decision.

I wish to receive notice of the availability of the Final EIS.

Name Nancy Lawrence Address 10660 LaKeside Ave. N.E.

Seattle, WA. ZIP 98125

RECEIVED
SEP 19 1986

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APPLICATION 8405870

RECEIVED

SEP 05 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

---- I wish to receive notice of the decision.

---- I wish to receive notice of the availability of the Final EIS.

Name M.V. Rinaldanger Address 12812 SE 231st Way

Kent, WA ZIP 98031

Emergency Ordinator Dow Corning JAG

APPLICATION 8405870

JAG

RECEIVED

SEP 04 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

-X- I wish to receive notice of the decision.

-X- I wish to receive notice of the availability of the Final EIS.

Name Dr/Mrs. J. Stimson Address 4715 45th Ave NE

Seattle WA ZIP 98105

APPLICATION 8405870

RECEIVED

SEP 03 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

---- I wish to receive notice of the decision.

-X- I wish to receive notice of the availability of the Final EIS.

Name Marietta Stratford Address 22307-52nd Pl

Mountlake Terrace Wa ZIP 98043

JAG

APPLICATION 8405870

JAG

RECEIVED

SEP 04 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

---- I wish to receive notice of the decision.

-X- I wish to receive notice of the availability of the Final EIS.

Name ALBERT A. FELDMANN Address 4873 TERRACE DR NE

SEATTLE WA ZIP 98105

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APPLICATION 8405870

JAG

X I wish to receive notice of the decision.

___ I wish to receive notice of the availability of the Final EIS.

RECEIVED Name Kath. Bonifas Address 19615 18 2nd Ave NE

SEP 12 1986 Woodinville, Wash ZIP 98072

APPLICATION 8405870 RECEIVED JAG

X I wish to receive notice of the decision.

X I wish to receive notice of the availability of the Final EIS. SEP 15 1986

Name Bea Sharpe Address 5013 Sand Pt. Pl. NE

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Seattle, Wa ZIP 98105

APPLICATION 8405870 JAG

X I wish to receive notice of the decision. RECEIVED

X I wish to receive notice of the availability of the Final EIS. SEP 08 1986

Name HELEN M. SHADCROFT Address UNIVERSITY HOSPITAL, RC-34

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

1959 NE PACIFIC ST, SEATTLE, WA ZIP 98195

APPLICATION 8405870 JAG

X I wish to receive notice of the decision.

X I wish to receive notice of the availability of the Final EIS. RECEIVED

Name Wm. Bergquist Address 3662 42nd Ave. NE SEP 05 1986

Seattle, WA ZIP 98105

DEPT OF CONSTRUCTION & LAND USE

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Comments should be addressed to: Director, Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.
If you wish to receive notice of the decision(s) on this project or to receive notice of the availability of the Final EIS (which responds to comments made at the public hearing or on the Draft EIS), please return the completed form below to: Seattle Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.

JAG

RECEIVED
SEP 05 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

****

APPLICATION 8405870

____ I wish to receive notice of the decision.

X I wish to receive notice of the availability of the Final EIS.

Name Cynthia Sullivan Address 402 King Co Courthouse
Seattle, Wa ZIP 98104

****

APPLICATION 8405870

JAG

X I wish to receive notice of the decision.

X I wish to receive notice of the availability of the Final EIS.

RECEIVED
SEP 08 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Name DeMARCI CATANZARO Address 4801 JEROACE NE
SEATTLE WA ZIP 98105

****

APPLICATION 8405870

JAG

✓ I wish to receive notice of the decision.

✓ I wish to receive notice of the availability of the Final EIS.

RECEIVED
OCT 20 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Name E. BRANCH Address 5011-45th NE
SEATTLE WA ZIP 98105

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Additional information and a limited number of copies of the draft EIS are available through the Master Use Information and Notification Center, Room 408, Seattle Municipal Building (625-5200).

Opportunity For Public Involvement

A public hearing to gather comments on the environmental impacts of the proposal will be held on
SEPTEMBER 23, 1986 at LAURELHURST ELEM SCHOOL 06:00PM.
4530 46th Ave. N.E.
In addition, written comments may be submitted through OCTOBER 02, 1986

Comments should be addressed to: Director, Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.
If you wish to receive notice of the decision(s) on this project or to receive notice of the availability of the Final EIS (which responds to comments made at the public hearing or on the Draft EIS), please return the completed form below to: Seattle Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.

RECEIVED
SEP 25 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

****

APPLICATION 8405870

_V_ I wish to receive notice of the decision.

_V_ I wish to receive notice of the availability of the Final EIS.

Name HANEY & SCOTT Address 4339 NE 45

Seattle ZIP 98105

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Additional information and a limited number of copies of the draft EIS are available through the Master Use Information and Notification Center, Room 408, Seattle Municipal Building (625-5200).

Opportunity For Public Involvement

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4530 46th Ave. N.E.
In addition, written comments may be submitted through OCTOBER 02, 1986

Comments should be addressed to: Director, Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.
If you wish to receive notice of the decision(s) on this project or to receive notice of the availability of the Final EIS (which responds to comments made at the public hearing or on the Draft EIS), please return the completed form below to: Seattle Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.

****

APPLICATION 8405870

_V_ I wish to receive notice of the decision.

_V_ I wish to receive notice of the availability of the Final EIS.

Name Sarah Scott Address 4339 NE 45

Seattle ZIP 98105

RECEIVED
SEP 25 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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Hospital copter pad plan ripped

By Don [illegible]
P-I Reporter

The [illegible]

OCT. 2, 1986

RECEIVED
OCT 2 1986
DEPT. OF PLANNING AND LAND USE
LAND USE DIVISION

Julia

DEAR DIRECTOR

I AM WRITING TO ~~PROTEST~~ THE HELISTOP PROPOSAL FOR CH MC. THERE IS NO MEDICAL NECESSITY FOR IT: IT IS A PUBLICITY MANEUVER BY THE CH ADMINISTRATION. THEY WANT TO ADVERTISE IT TO HELP FILL BEDS. THE PHYSICIANS KNOW THERE IS NO NEED FOR LANDING ON THE GROUNDS, & SAID SO IN A P.I. INTERVIEW LAST YEAR.

I WORK IN THE NEONATAL ICU AT UNIVERSITY HOSPITAL. WE RECEIVE THE SAME TYPE OF TRANSPORTS, BUT THEY LAND AT HARBORVIEW, OR IN EXTREME EMERGENCIES, AT UW SOCCERFIELDS. THE TRANSPORT BY AMBULANCE IS FAR BETTER FOR THE PATIENT: HELICOPTERS ARE TOO NOISY FOR THE DOCTOR TO HEAR THE HEART & LUNG SOUNDS, WHICH ARE CRUCIAL TOOLS FOR THE CORRECT TREATMENT OF THE BABY.

BUT BEYOND THE FACT OF THE LACK OF NEED FOR THE HELISTOP, IS THE LOCATION. IT IS A SMALL AREA WITH A LOT OF PEDESTRIAN & VEHICULAR TRAFFIC, & IN A HEAVILY POPULATED

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II

AREA. TO INSIST ON LANDING HELICOPTERS THERE IS TO CREATE POTENTIAL DISASTER. A WITNESS TOLD ME OF ONE INCIDENT WHERE A MAST HELICOPTER WAS UNABLE TO SET DOWN ON THE FIRST TRY, & WENT UP THE HILL TO HOVER OVER THE GRADE SCHOOL & TURN AROUND. CONSIDERING THE HIGH NUMBER OF HELICOPTERS THAT CRASH, I THINK THAT IS NEEDLESSLY ENDANGERING THE SCHOOL CHILDREN — THEY COULD HAVE LANDED ELSEWHERE WITHOUT ENDANGERMENT.

SEVERAL MONTHS AGO I WAS WAKENED @ 3 AM BY ONE FLYING OVER MY HOUSE — I WAS TERRIFIED, AS IT WAS VERY LOW & THERE ARE MANY TALL TREES AROUND HERE. THEN I WAS SO ANGRY I NEVER DID GET BACK TO SLEEP, THEY WEREN'T FOLLOWING THE "APPROVED" ROUTE, WHICH IS OVER THE MONTLAKE FILL & ALONG THE CITY STREETS. THAT WAY, ONLY A HAPLESS MOTORIST OR TWO & A STRAY PEDESTRIAN WILL BE WIPED OUT IN EVENT OF A CRASH. FAR LESS THAN IF THEY CRASH ON A HOUSE OR ONE OF

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III

THE ADJACENT APARTMENTS & CONDOS. THERE THE EXPLOSION & SUBSEQUENT FIRE CAN TAKE A GREAT MANY LIVES. I JUST DON'T THINK SUCH A DANGEROUS SET-UP SHOULD BE PERMITTED.

THE UH HELIPAD IS NOT IN SUCH A STUPID LOCATION AS THE CH MC, BUT THAT ROOF ISN'T ALL THAT BIG, & I FOR ONE WOULD HATE TO BE BROUGHT IN THAT WAY. LAST YEAR 62 PATIENTS WERE TAKEN TO UH BY AIRLIFT NORTHWEST: ALL LANDED AT HARBORVIEW OR THE IMA FIELD, & SURVIVED INTACT. I DON'T THINK ANY ADDITIONAL HELIPORTS ARE NEEDED.

THANKS FOR YOUR ATTENTION.

MARY L. VANECEK
3524 W. LAURELHURST DR. N.E.
SEATTLE, WA.
98105

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Sept. 29, 1986

Holly Miller, Dir.
Dept. of Construction & Land Use
400 Municipal Bldg.
Seattle, Wa.

RECEIVED
OCT 2 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Miss Miller,

I die is to inform you of our objection to the proposal by Childrens Orthopedic Hospital to construct & use a helipad at their site. We, as long time residents of this once quiet residential neighborhood, are so very concerned. The objections at the hearing on the D & L were the same as ours:

Safety factor - dangerous flight over school, condominiums & private homes.
Weather factor - Pilot error
Expense to patient - $2000.00 per hour
Need for frequent landings - one to pick up pediatric team, depart, one to land & discharge patient & one to depart.
Threat of turbulence to a newborn baby.
Horrendous noise over neighborhood.

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No certificate of need
Graves field is most adequate for
both University Hospital & C O H.
It only takes 2½ min. to drive to
C O H from Graves and if it were
my grandchild that method is
safer.
Any hospital, anywhere, can
stabilize a child and I'm speaking
as a registered nurse.

Thankyou,

Sincerely

(Mrs. Ben J.) Barbara H. Smith
5169 N.E. Laurelcrest Lane
Seattle,
Wash 98105
Tel. 523 9997

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE,
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3650 42nd Ave. N.E.
Seattle, Wa. 98105
October 13, 1986

RECEIVED
OCT 15 1986
DEPT. OF CONST. & LAND USE

Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

To whom it may concern:

I am concerned about the possibility of small, private helicopters landing in a residential neighborhood within two blocks of an elementary school and several apartment complexes. It is my understanding that the MAST helicopter service which COH has utilized for the past ten years has been more than adequate to cover all emergencies. I question the motivation of people involved in this new project, and I hope you will vote against granting a conditional use permit to Airlift Northwest or any other private company to land on the grounds of COH. I am in favor of continuing the current helicopter service exactly the way it is now operated or constructing a new helipad in a less residential location.

Sincerely yours,

Carolyn Margon

Carolyn Margon

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Julia

Seattle
Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

December 16, 1986

Jane L. Johnson
4323 Northeast 45th Street
Seattle, Washington 98105

Dear Ms. Johnson:

Thank you for your letters commenting on the Draft Environmental Impact Statement (DEIS) for the Children's Hospital helistop.

The Department received many comments and with the private consultant for the EIS are reviewing them carefully. Our substantive responses to comment letters will be published in the final EIS.

We expect to issue the final EIS in early January, and will add your name to the notice list.

Sincerely,

Holly Miller
HOLLY MILLER
Director

HM:jgg

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cc to Glenn Bachman 12-23-86

Oct. 10, 1986

Holly Miller
Director, DCLU
408 Municipal Bldg.
Seattle, Wa. 98104

RE: DEIS for Proposed Helipad at Children's Hospital:
Failure to address all issues specified in Feb. 1986 scoping list

The DEIS for the proposed helipad at Children's Hospital fails to address adequately the issues specified in the February 13, 1986, scoping letter from Julia Gibb of DCLU to Nancy Greenawalt of COH. I quote from the scoping letter section regarding mitigating measures:

"MITIGATION MEASURES

Possible mitigation measures discussed in the EIS shall include the following:

- flight paths
- number of flights
- usage and location of U.S. Army (M.A.S.T.) or other agency helicopter landings
- off-campus pick-up of medical teams
- liability insurance
- criteria for use of helicopters
- plan for monitoring use"

Within the DEIS itself, mitigation measures referred to on pages 73 and 88 only address safety and noise impacts, and then only perfunctorily. These short sections in Chapter IV of the DEIS mention specifically only flight paths and number of flights, the first two of the seven topics in the passage quoted above.

Passing references were made in the DEIS to MAST helicopters and possible off-campus pick-up of medical teams, the third and fourth items. References were made obliquely to criteria for use of helicopters and plan for monitoring use (the sixth and seventh topics), but with no specific information given on how mitigation could be accomplished.

Lastly, the fifth item, liability insurance, was not addressed at all in the DEIS. If is most unfortunate that DCLU did not catch this major omission from the DEIS. Please make sure that the final EIS addresses this important topic, and that it also addresses completely and separately the six other mitigating measures included in the February 13, 1986, scoping letter.

Sincerely,

Jane L. Johnson

Jane L. Johnson
4323 N.E. 45th St.
Seattle, Wa. 98105

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Holly Miller, Director
Dept. of Construction and Land Use
408 Municipal Building
Seattle, Wa. 98104

Sept. 30, 1986

RE: DEIS for Proposed Helipad at Children's Hospital
Comments due by October 17, 1986

The "Cumulative Impacts" section of the DEIS is deficient, inconsistent, inaccurate, and vague for the following reasons:

- It is deficient in failing to specify how Airlift Northwest and the proposed helipad would be integrated into the proposed Puget Sound Health Systems Agency (PSHSA) regional transport plan. Although the DEIS states on page 31 that the status of the PSHSA proposal is unclear, the DEIS goes on to say on page 91 that Children's would be included in a regional helicopter transport plan. What is the exact relationship between these two statements?

- It is inconsistent in asserting that the City's land use criteria so limit the use of helistops that they will discourage the improper use and proliferation of helicopter service (page 90), when it has previously cited WAC 248-18-285 to mean that a hospital cannot prohibit a helicopter from landing, even if by doing so it would violate land use laws (pages 41, 57). If this were indeed a correct interpretation of the WAC, what is to prevent other hospitals from also construing the WAC as permission to land helicopters and overriding City land use regulations?

- It is inaccurate in stating that University Hospital already has received its Certificate of Need for a helistop (page 90); in fact, UH has not yet prepared its Certificate of Need.

- It is vague in stating throughout that flights would be limited to "critically ill" cases, but that guidelines to restrict landings to critical cases haven't been established. It admits that guidelines are only now being discussed with MAST (page 42), Airlift Northwest (pabe 49) and the Washington State Medical Association (pages 31, 91). The DEIS says that as doctors hear of Airlift Northwest services, they will become more likely to use Airlift for interhospital transfers (page 41), but does not distinguish adequately between cases brought in from "the field" and those brought as interhospital transfers (page 42), and what guidelines would apply to any of these cases.

The Puget Sound Health Systems Agency has expressed concern about the proliferation of helicopter services in the region, and cautioned that there is no agreement on when medical conditions warrant helicopter use, and that triage guidelines have not yet been developed. In a February 1985 report to Major Royer (attached), from which the DEIS quotes on pages 17-19, PSHSA recommended transport to only the most specialized trauma centers in Seattle, namely University Hospital and Harborview, and that consideration of other sites should evaluate community costs and benefits in meeting patient needs. The PSHSA report stated that "...limiting the number of helipads may be an

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important component in ensuring limits on the growth of helicopter services..." and goes on to say that "...inappropriate use and proliferation of helicopter transport services [should] be discouraged," but that "...unfortunately, we are in the midst of 'air wars'...as hospitals vie with one another to establish helicopter programs."

Bud Nicola, author of the Seattle-King County Department of Public Health assessment of the proposed helipad, also encourages PSHSA to develop a statewide and regional helicopter transport plan. He wrote to PSHSA in April 1986, encouraging that agency to work with the Washington State Medical Association to develop triage guidelines for helicopter transport.

Unfortunately PSHSA's effort to conduct an assessment of helicopter transport and develop a regional plan has been delayed and scaled back. In May 1986 PSHSA proposed to develop a state plan that would integrate helicopter service with the statewide Emergency Medical Services (EMS) system; by September 1986 this proposal had been reduced to a mere data collection effort for King County only.

In order to correct the deficiencies and other problems in the "Cumulative Impacts" section of the DEIS Children's Hospital must:

1. Ascertain the status of the PSHSA proposed state and regional plan, and triage guidelines that will intregrate helicopter services with the existing statewide EMS system.

2. Await the completion of the regional and state plan before finalizing its EIS for its proposed helipad. If the plan and triage guidelines are not to be developed after all, then Children's should under no circumstances be allowed to build a helipad or land helicopters on its campus.

3. Explore jointly with University Hospital the possibility of landing patients at a joint pad in Graves Field, instead of simply assuming that UH would not allow Children's-destined patients to land (p. 53).

4. Demonstrate definitively that WAC 248-18-285 could not be used by other institutions as it has been used by Children's to violate City land use regulations.

5. Include copies of all material cited in the DEIS Bibliography and Personal Communications sections, since discrepancies exist. For example, a 1986 Thompson reference is cited on page 91, whereas the sole Thompson reference in the references sections is 1985. Is this a typographical error or a different reference?

Sincerely,

Jane L. Johnson
4323 NE 45th St.
Seattle, Wa. 98105

Attachments: Report from PSHSA to Mayor Royer
Letter from Nicola to PSHSA

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Report to Mayor from PSHSA

February 21, 1985

Charles Royer, Mayor
City of Seattle
1200 Municipal Building
Seattle, Washington 98104

Dear Mayor Royer:

The Puget Sound Health Systems Agency (PSHSA) has prepared the following in response to your questions about the appropriate use of helicopter transport in emergency medical situations.

1. In what circumstances is it appropriate to use a helicopter in emergency medical transport to Seattle health care facilities?

Helicopter transport is appropriate when it operates within a regional emergency medical service (EMS) system. It is most valuable in linking rural and other isolated populations and medical facilities to tertiary trauma centers in Seattle.

Medical conditions which require helicopter transport are those in which more rapid transport and the availability of highly specialized care enroute can affect outcomes when compared to alternative methods of transportation. Helicopter transport is not inherently better than ground transport in ensuring survival and recovery.

this much is quoted in DEIS — — p.1719

Emergency services have developed as part of a regional system in Washington, and helicopter transport is integral to the provision of these services. The EMS system features substantial ground transport services throughout the northwest region, each of which is capable of responding rapidly to calls in the area it serves. Military Assistance to Safety and Traffic (MAST) helicopters transfer patients from accident sites within a 100-mile radius of Fort Lewis to Harborview in Seattle and to St. Joseph in Tacoma. Interhospital transfers and service to areas outside the range of MAST are provided by the fixed-wing transport of Airlift Northwest. Private helicopter service operating out of Bellingham further supports counties in the northwest section of our region.

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The existing EMS system is founded on comprehensive ground transport services and has developed into a well coordinated regional network. As a result, the use of helicopter services can be managed within the present system to better ensure that their use is limited to cases not adequately served by ambulance or plane transport.

2. How frequently is this means of emergency transport required?

Agreement on when medical conditions warrant the use of helicopters has not been reached. The introduction of helicopter transport is so recent that triage guidelines have not yet been developed which might help establish the frequency with which helicopter transport would appropriately be expected.

In the last year MAST completed approximately 220 field trips, most of which were to provide transport of patients from south King, Pierce, and Kitsap counties. Some of these patients were taken to St. Joseph Hospital. Approximately 120 were taken to Seattle hospitals, most of these to Harborview.

The extent to which this level of service approximates the expected need for helicopter transport is not presently known. Efforts are underway to formulate a method to determine the need for helicopter transport and to establish the resources necessary to meet that need. These efforts in Washington and in other parts of the country should be evaluated by clinicians, planners, and administrators in order to prepare guidelines tailored to the special requirements of our region.

3. How many facilities in Seattle and King County should be equipped with helipads to meet the medical need?

Which Seattle hospitals are best suited to meet the medical need?

Helicopter transport is only appropriate for the most critical cases. An evaluation of helicopter transport often cited to support its efficacy in improving outcomes suggests that major improvement occurs only in the more severe classifications representing a fraction of all trauma patients. This study by William G. Baxt and Peggy Moody indicates that helicopter transport is required for only a small subset of trauma patients especially when high quality ground transport systems are available.

MAST helicopters are presently transporting patients within King County directly to Harborview or to University Hospital (and occasionally other hospitals) by way of ambulance from the University of Washington soccer field.

While we cannot confirm that this arrangement is adequate, PSHSA recommends transport to only the most specialized trauma centers in Seattle, of which University and Harborview hospitals are excellent examples. Consideration of additional sites should evaluate not only unmet patient

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care needs, but also the trade-offs which will result in meeting those needs. Limiting the number of helipads may be an important component in ensuring limits on the growth of helicopter services and in fostering effective and cooperative use of the EMS system as a whole.

It is critical that the inappropriate use and proliferation of helicopter transport services be discouraged. Unfortunately, we are in the midst of "air wars" throughout the country as hospitals vie with one another to establish helicopter programs. The number of programs in the country doubled between 1980 and 1983, and the National Medevac Conference in 1983 opened with spokesmen suggesting that the number of programs would (and should) double again in five years. It is not at all evident, especially in areas served by MAST, that additional programs are needed and the impact of further growth may be adverse for the community as a whole. Particular patient care requirements of an institution may not be sufficient to outweigh the additional direct and indirect costs which may result from expanded helicopter services.

PSHSA is especially concerned that individual institutions will establish helipads and eventually separate helicopter programs in an effort to meet particular patient care objectives which might be met satisfactorily under the current arrangement of emergency services.

A conservative approach to the development of helicopter transport programs is advised for several reasons:

a) The present system is extremely cost-effective. MAST operations are provided at no additional cost to residents above the support of federal tax subsidies.

b) In our region, the need for additional helicopter services which would be sufficient to support such an expensive service at an individual institution is unlikely. To justify the program, transportation services would tend to be over-utilized with transport provided in cases which would more appropriately be handled at other levels in the EMS system.

c) Facility costs would tend to increase since helicopter services are generally "loss leaders," powerful marketing tools which may increase hospital utilization but which would not necessarily guarantee the additional revenues required to cover the additional costs incurred.

d) If unnecessary and used inappropriately, helicopter transport services established outside the current system have the potential to adversely affect the EMS programs now serving the region. The development of private programs could result in the elimination of MAST (as specified in federal guidelines). Second, the ambulance

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and plane support systems in place might begin to experience volume reductions which could jeopardize both the quality and financial viability of the services they provide.

In summary, should additional need for helicopter services be found in the area, a consortium approach rather than an institutional approach to the provision of these services is recommended. This approach will avoid duplication, support the development and implementation of appropriate triage guidelines, and encourage continued reliance on a regional EMS system. It will prevent the introduction of such services as marketing tools for individual institutions which needlessly drive the cost of hospital care up while reducing reliance on the existing EMS system.

5. What alternatives are available for transporting patients and what are the medical implications?

Helicopter transport has a vital place in the emergency medical service system. The alternative of not providing such service does not exist. The real alternative is to allow proliferation of helicopter transport services which will unnecessarily increase the cost of hospital care without significantly benefiting the community.

BG:rs:P2
2/21/85

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City of Seattle
Charles Royer, Mayor

King County
Tim Hill, *Executive*

Seattle-King County Department of Public Health

Bud Nicola, M.D., M.H.S.A., *Director*

April 25, 1986

Larry Thompson, Executive Director
Puget Sound Health Systems Agency
601 Valley Street
Seattle, Washington 98109

Dear Larry:

I am writing to give you my comments on the Puget Sound Health Systems Agency's proposed plan for air ambulance (helicopter) services. First, let me apologize for the delay in responding. In the last month, my staff and I have had an opportunity to review the proposal and the issue generally with County Executive Tim Hill, representatives of the Mayor's Office and key County Council members. I would summarize our general comments as follows:

1) There is a consensus on the need to develop such a plan. We are on the threshold of a major change in pre-hospital emergency medical services and in the relationship between providers and the hospital community. In addition, inter-hospital relationships are being affected by the introduction of air ambulance services. The relationship of local community hospitals throughout the Puget Sound basin to the tertiary care centers in the Seattle-Tacoma metropolitan area may be the major factor influencing the development of air ambulance services. what is that relationship, & how is it changing?

2) There is a need to coordinate the development of such a plan with others who are already working on this issue. The Washington State Medical Association Emergency Medical Services Standards Committee has appointed a special Task Force to deal with helicopter medical standards. Their charge is to develop medical indications or "user guidelines" for the use of helicopters in patient transportation. I have attached for your information a memorandum from Lothar Pinkers, M.D., dated February 21, 1986, that outlines the Task Force's agenda.

   The WSMA Task Force will be addressing many of the items identified in your proposal. I believe they will be establishing a framework for further planning. They are hoping to have a final report by June, 1986.

   There is also talk of incorporating air ambulance service planning into a statewide EMS planning effort.

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3) It seems essential that any planning effort be broader in scope than just Seattle and King County. I realize this is a change from what we discussed previously, but upon further reflection, it just does not seem realistic to focus on Seattle and King County when the operation of air ambulance services will undoubtably be multi-county in scope. If the planning process is too narrow, it will lack credibility with other potential users on our borders and beyond.

In summary, it is my recommendation that the Puget Sound Health Systems Agency look to broadening the geographical scope of a plan for air ambulance services. It is imperative that those entities outside of Seattle and King County with an interest in such a plan be included in the process from the beginning. Secondly, the Health Systems Agency's planning effort should compliment the Washington State Medical Association's activities. In fact, it should probably follow and expand upon their work.

Finally, I understand your agency is involved in reviewing a Certificate of Need for helicopter services in Bellingham. How does that fit into this evolving situation?

I would ask that you contact Steve Call, Manager of the Emergency Medical Services Division, at 344-4293, to schedule a meeting to discuss where we go from here.

Thanks for your efforts to date. I look forward to working with you.

Sincerely,

Bud

Bud Nicola, M.D.
Director of Public Health

BN:SC:rh
Enclosure

cc: Steven Call, Manager, Emergency Medical Services Division
Katie Chaney, Director, Land Use Division, Department of Construction and Land Use
Jim Kruger, King County Council Staff

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3812 48TH AVENUE, N.E.
SEATTLE, WASHINGTON 98105

RECEIVED
SEP 29 1986
DEPT. OF CONSTR. & LAND USE

Holly Miller, Director
Seattle Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Miller,

I attended the public hearing last Tuesday evening on the Draft Environmental Impact Statement for the proposed helipad at Children's Orthopedic Hospital.

As a result of that hearing I ask you, I beg you, to order a new draft that is less full of inaccuracies, specious judgments, undocumented conclusions, and prejudicial statements. I find it impossible to understand why DCL accepts an EIS prepared by a firm employed by one of the conflicting parties. An impartial draft is impossible under such a system.

Since the city bears responsibility for the document, won't you order a new draft in the interest of justice to both sides and urge that it be as accurate and impartial as is possible to obtain under the present system?

Very sincerely yours,

Helen R. Pinkney

Helen R. Pinkney

September 26, 1986

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For Katy

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OCT 31 1986
DEPT. OF ECOLOGY & LAND USE

Laurelhurst Community Club
4326 NE 42nd Street
Seattle, WA 98105

October 14, 1986

Dr. Robert H. Muilenburg
Executive Director
University of Washington Hospitals
C414 Warren G. Magnuson Health Sciences Center SC-61
University of Washington
Seattle, WA 98195

Subject: A JOINT USE HELIPAD IN THE EAST CAMPUS AREA

As you may know, the Board of the Laurelhurst Community Club is actively involved in trying to find a solution to the controversy generated by the proposed helipad at Childrens Orthopedic Hospital. One idea that the Board would like to see explored in detail would involve the construction of a permanent helipad somewhere in the East Campus area that could be shared by University and Childrens Hospital. The facility would be used by MAST, Airlift Northwest, and other helicopters transporting patients to the two hospitals. It is clear that this location offers the safest possible landing area in the immediate vicinity of the two hospitals as well as producing the fewest adverse effects upon the local environment.

We ask that you initiate discussions with the administration of Childrens Hospital on this topic, that you identify and study one or more possible sites in this area, and that you work out a joint operating agreement. We have suggested this idea to the administration, medical staff and Board of Childrens on numerous occasions but they have so far ignored the idea. We would like to see the University take the lead in these discussions so that this safest of all possible solutions receives a full review.

Sincerely,

Robert H. Klug

Robert H. Klug
President

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cc: Dr. Tallman Trask III
Vice President for Finance and Administration
306 Administration Building AH-05
University of Washington
Seattle, WA 98195

H. Sedge Thomson
Director
Campus Planning
University Facilities Building FJ-05
University of Washington
Seattle, WA 98195

Helen M. Shawcroft
Director
Hospital Planning
University Hospital Administration
BB-367 University Hospital RC-34
University of Washington
Seattle, WA 98195

Holly Miller
Director
Department of Construction and Land Use
City of Seattle
400 Municipal Building
600 4th Avenue
Seattle, WA 98104

Julia Gibb
Land Use Specialist
Department of Construction and Land Use
City of Seattle
408 Municipal Building
600 4th Avenue
Seattle, WA 98104

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Seattle Women's Clinic
Obstetrics and Gynecology

BOYD C. QUINT, M.D.
JACK R. LAMEY, M.D.
LAWRENCE R. DONOHUE, M.D.
ROBERT E. LIEPPMAN, M.D.

DIPLOMATES OF THE AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

801 BROADWAY, SUITE 511
SEATTLE, WASHINGTON 98122
292-2200
BOOKKEEPING 292-7974

1200 116TH AVENUE NE, SUITE F
BELLEVUE, WASHINGTON 98004
462-1132

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OCT 22 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

October 14, 1986

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Re: Proposed Helicopter Landing Pad at Children's Orthopedic Hospital

Dear Ms. Miller:

This letter is being sent in opposition to the proposed helicopter landing pad at Children's Orthopedic Hospital. As best I can interpret this situation, it seems that a reasonable alternative of a landing site at University of Washington playfield is a better decision. Not only would the safety of the surrounding neighborhood not be compromised by them landing in a densely populated area, but also the safety of the crew members of the helicopters would be better.

I think it would be appropriate to continue utilizing the University of Washington playfield as has been done and has been shown to have good success in caring for ill children and infants.

Sincerely,

Jack R. Lamey, M.D.

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MRS. WILLIAM L. TRUDGIAN
9600 MANDUS OLSON ROAD N.E.
BAINBRIDGE ISLAND, WASHINGTON 98110

RECEIVED
October 27 1986
OCT 28 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

October 27 1986

Seattle City Council
Mr. San Smith, President
600 Fourth Avenue, Seattle 98104

Dear Mr. Smith and City Council Members:

Please allow me to add my voice to many others you must be hearing, in favor of allowing a permanent heliport at Childrens Hospital & Medical Center.

We all already owe you tremendous thanks for permitting helicopters to land at the Hospital during the past year. The privilege was not used more often than absolutely negessary to save a life; and the infrequent landings were neither heard nor noticed by the neighborhood above the usual high-decibel background of daytime city sounds.

Our darling grand-daughter became crucially ill last summer, and was rushed by ferry (which waited!) and by car out to the Hospital in time for her life to be saved. If this emergency had occurred very late when the ferries are several hours apart, we would surely have hired a helicopter, and have been forever grateful that it could take her right out to the Hospital.

We are lucky: our little one is now fine. But we do think about other frantic parents (and grand-parents).

PLEASE DO ALLOW THE PERMANENT HELIPORT.

Very sincerely yours,

Prudence L. Trudgian

Mrs. W.L. Trudgian

RECEIVED
OCT 28 1986
PAUL KRAABEL
SEATTLE CITY COUNCIL

Copies to: Ms. Julia Gibbs
Mr. Paul Kraabel
Mrs. Gilbert Anderson

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MRS. WILLIAM L. TRUDGIAN
9600 MANDUS OLSON ROAD N.E.
BAINBRIDGE ISLAND, WASHINGTON 98110

October 27, 1986

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Mr. Sam Smith, President
600 Fourth Avenue, Seattle 98104

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THE WALL STREET JOURNAL.

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SMALL BUSINESS

Farm Woes, Technology Spur Rise in Agricultural Start-Ups

By Steven P. Galante
Staff Reporter of The Wall Street Journal

THE FARM BELT is proving to be fertile ground for a new breed of small business. Companies are carving out niches by adapting new technologies to age-old agricultural problems. Some are using computers and computer modeling to help farmers make better decisions about how to cultivate crops efficiently. Others are tapping biotechnology to develop products that will take much of the guesswork out of farming. "We're trying to turn an art into a science," says Bert G. Giguire, president of Professional Agricultural Management Inc. in Firebaugh, Calif.

The farming industry's financial woes, far from hurting the start-ups' chances, actually are enhancing the prospects of many of them. The industry's ills are forcing a consolidation of ownership. Large farms are snapping up small, financially strapped ones. The owners of these larger farms are usually institutions, such as banks, insurance companies and railroads, which hire professional managers rather than longtime farmers to run the operations. "Modern managers are making a lot of the decisions on farms these days, and modern managers look on technology more favorably than the traditional family farmer," says Richard J. Defieux, general partner in Princeton/Montrose Partners, a Princeton, N.J., venture capital company that has invested heavily in agriculture-related start-ups.



Financial pressures are forcing even traditional farmers to accept new technology. "Any chance they have to improve efficiencies, they have to look at seriously," Mr. Defieux says.

THIS COMBINATION of technological innovation and economic necessity is spurring the creation of new companies. Among them is Earth Resource Data Corp. of Overland Park, Kan., just outside Kansas City. By marrying several technologies—aviation, remote energy sensing and computer analysis—Earth Resource Data has produced an agricultural survey service to help farmers cultivate crops more efficiently.

The company's airplanes, fitted with special sensors, fly over farms to collect data on crop conditions, such as water content and insect infestation. A computer turns this data into color-coded maps, which a farm manager can use to pinpoint where he needs to adjust agricultural inputs, such as increasing irrigation or spraying insecticide. The company says the service can cut costs by allowing a farmer to treat specific areas, instead of an entire field.

Another young company, Mr. Giguire's Professional Agricultural Management, offers a slightly different service. Instead of airplanes, ProAg uses "fieldmen" who visit farms to measure and quantify growing conditions. A computer compares that data with statistical models in ProAg's data base and generates a report the farmer and fieldman use to choose cultivation techniques.

"The whole issue is that agriculture has to be competitive on an international scope," says Mr. Giguire. "To do that, it has to

Financial Officers

Average 1986 salaries and increases from 1985 of corporate financial officers:

	1986 SALARY	% INCREASE
Top financial executive	$140,600	7.5%
Treasurer	88,700	6.2
Senior attorney	57,600	4.9
Accounts payable manager	31,300	5.4
Tax accountant	27,200	4.4

Source: A.S. Hansen Inc.

Medical Airlifts: Rise in Crashes Draws Scrutiny

By Laurie McGinley
Staff Reporter of The Wall Street Journal

Pilot Barry Day and two nurses were on their way to pick up a patient at a hospital in Galax, Va., last month when their helicopter smashed into a foggy peak in the Blue Ridge Mountains of southwest Virginia. All three were killed.

In July, a Duke University medical helicopter carrying a cardiac patient lost engine power and went down in a remote area near Durham, N.C. The five occupants escaped injury. The month before, a medical helicopter crashed into the Black Warrior River in Alabama after delivering a patient to a Birmingham hospital. Two nurses and a pilot were killed.

Serious accidents involving medical helicopters, once rare, have increased sharply in the last two years, raising new questions about the growing use of these air ambulances. Although helicopter safety problems aren't limited to medical aircraft, these programs are attracting special attention because of their rapid growth and the humanitarian nature of the flights.

Hospital-based medical helicopters have carried 300,000 patients since 1972, when the first program started in the U.S. According to industry estimates, roughly 20% would have died without the quick medical attention made possible by the air service. The number of programs is expected to nearly double over the next few years from 150 currently, providing service to tens of thousands of Americans.

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By La
Staff Reporter of T

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"The whole issue is that agriculture has to be competitive on an international scope," says Mr. Giguire. "To do that, it has to come out of its traditional style and move into high tech and get the cost of units produced down."

THE FOCUS ON COST-CUTTING is a significant shift in how new companies are marketing agricultural goods and services. "For many years, our answer in American agriculture to being more efficient was to produce more per acre," says Jim Herbert, president of Neogen Corp. in Lansing, Mich. "But obviously that's not the answer," he says, pointing to the commodity glut that has depressed farm prices. "The question is, how do we

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Safety Board Plans Study

The accidents represent a black cloud in an otherwise promising future. Though government statistics are sketchy, John Lauber, a member of the National Transportation Safety Board, calls the industry's accident rate "pretty high" and adds: "Somebody better do something to correct this." The board plans a special study of the problem soon.

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By Lau
Staff Reporter of Th

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Neogen's answer has been two technology-based products. One is a miniature weather station that uses a microprocessor to analyze climatic conditions and forecast fungus and insect infestations. The second product uses monoclonal antibody technology to detect dangerous toxins in grains.

Biotechnology is the basis for many of the new agricultural companies. Most of them are experimenting with genetic engineering to produce plants with certain desirable properties. For example, Calgene Inc. of Davis, Calif., is developing tomatoes with a higher percentage of usable solids for Campbell Soup Co.

Calgene and other agricultural biotech companies also are using gene-splicing to develop seeds that will produce plants resistent to insects, fungi and herbicides. Such seeds would end much of the guesswork in farming by eliminating the need to apply precisely correct amounts of agrichemicals.

NOT ALL AGRICULTURAL START-UPS are prospering, of course. Energy Management Corp. of Los Alamitos, Calif., can't find buyers for its computer-controlled irrigation system. "Business isn't very good at this point because farmers don't have the money," says James R. Dunn, president.

Even companies that can find customers are having to make adjustments. Earth Resource Data of Kansas, for example, expects to move its headquarters to California soon. "Recognizing, frankly, the tough economic conditions of the Midwest, we think our initial growth is on the West Coast, where growers are not as affected," says Gus Olson, president.

Yet, despite such obstacles, entrepreneurs see recent technology breakthroughs as creating the best opportunities in decades for agricultural start-ups. "Since the '30s, when combines and tractors were introduced on a large scale in the 'horsepower revolution,' farming hasn't really progressed a lot," says ProAg's Mr. Giguire. "It's the last industry to adopt high tech."

Warning: These Are Professionals: Do Not Try to Do This at Home

By KATHLEEN A. HUGHES
Staff Reporter of THE WALL STREET JOURNAL

LAKE PERRIS, Calif.—Four divers, in black wet suits and carrying knives, disappear beneath the cold murky water.

Their assignment: force a pumpkin to the bottom of the lake and carve a face in 45 minutes.

So begins the second annual Underwater Pumpkin Carving Contest, pitting team No. 1, lifeguards Ron Schafer and Douglas Harding, against team No. 2, mechanic Jim Crawford and travel agent Dick Evangelista. It took place on Saturday—with victory going to the best face.

'Don't Move'

For team No. 2, the competition starts well. They force their small pumpkin to the bottom in one minute. Mr. Crawford climbs on top of the pumpkin and Mr. Evangelista carves a hole, causing a rush of air to bubble to the surface.

Then comes trouble. Mr. Crawford, whose job is to hold the pumpkin steady, bobs up and down, causing his partner to carve two jagged eyebrows and two irregular eyes. And just as Mr. Evangelista starts the nose, Mr. Crawford and the pumpkin rise—and the knife knocks out a big section below the nose.

Meanwhile, team No. 1 rests easily on the lake floor, 25 feet below the surface, with a much larger pumpkin. Their secret: rocks stuffed in their wet suits. But they have another problem: Their pen and pencil float away. Mr. Harding, who planned to draw, and then carve, has to wing it.

After 26 minutes, team No. 2 surfaces carrying a pumpkin with a wild expression. Their opponents emerge 17 minutes later bearing a pumpkin with a neat symmetrical face. Two tiny clam shells are balanced in the triangular eyes. The triangular nose is centered, and the broad smile has seven teeth.

"It's a classic," says Abby Failor, one of two judges, of team No. 1's effort. Turning to team No. 2's pumpkin, she frowns and says, "You can't see the mouth."

Something for the Mantle

A ranger for the Lake Perris State Recreation Area, which hosts the event to draw attention to the lake as a potential diving area, presents Messrs. Schafer and Harding with first-place trophies and kits containing diving accessories. Messrs. Crawford and Evangelista go home with underwater flashlights.

"Naturally, I'm disappointed," says Mr. Crawford. "I would have been happier if the face was higher on the pumpkin." He vows to return next year—this time with his wife as partner. "Next time," he says, "we'll practice the weekend before."

portation Safety Board, calls the industry's accident rate "pretty high" and adds: "Somebody better do something to correct this." The board plans a special study of the problem soon.

Pilots, hospital officials and helicopter operators are now embroiled in a painful, at times fractious, self-critique of patient and flight-crew safety. They want to come up with new industry standards to prevent needless loss of life and, not coincidentally, to forestall stringent federal regulations.

"What's been happening is terribly unfortunate and we can't allow it to continue," says James Smith, president-elect of the American Society of Hospital-Based Emergency Air Medical Services, a San Diego-based industry group. If it does, he warns, "it will hurt every program in the country." Safety, he says, will be the top priority at the group's convention this week in Alexandria, Va.

There is little doubt that air medical programs are an important medical tool. Their quick response means many critically ill or injured patients can receive treatment in what is known as the "golden hour"—the first 60 minutes after an accident or attack—in which proper treatment can substantially increase chances of recovery.

At the same time, the helicopters provide a glamorous marketing tool for hospitals faced with increasing competition. Besides giving a hospital a wider reach, the aircraft pay bonuses in public relations. "There's nothing quite as glitzy as having a helicopter land on the roof," says Nina Merrill, executive director of the San Diego air medical services society.

But behind the glitz lurk allegations that medical pilots are overworked and that they sometimes take unwise risks.

Fatigue and Stress

Don Wright and Tom Einhorn, two pilots who in 1984 founded the National Emergency Medical Services Pilots Association, based in Pearland, Texas, say fatigue and stress, caused partly by understaffing, are two big problems facing pilots. They contend a four-pilot team should be required for each helicopter to ensure adequate rest, especially since pilots can be on call for 24 consecutive hours; many programs operate with three, or even two, pilots for each aircraft. Helicopter operators reply that four pilots are already used on the busiest assignments, and that others don't need that many.

Some safety experts speculate that another factor in the crashes may be dangerous conditions. "These pilots are going out in the middle of the night in bad weather," one safety-board investigator says. "They may land on the highway median strip, and God knows how many ground hazards are in their approach path." Others say pilots accept risky missions because they fear the patient will die if they refuse.

The consequence is a growing concern "that people are going out and trying to complete a mission when they shouldn't," says Mr. Smith of the American Society of Hospital-Based Emergency Air Medical Services. At its convention, the group will propose that members adopt new safety guidelines, including limitations on flying in bad weather.

Says Mr. Smith, "On certain nights, in certain kinds of weather, nobody should fly."

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LAURELHURST COMMUNITY CLUB

Serving over 1600 homes.

August 13, 1986

Tallman Trask III
Vice President for Finance
and Administration
University of Washington
Seattle, Washington 98195

RECEIVED

AUG 22 1986

DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. Trask:

The Laurelhurst Community Club Board of Trustees has reviewed your letter of July 2, 1986 to Treuman Katz, Chief Executive Officer of Children's Hospital, regarding the possibility of locating a helipad in the Graves Field area to serve Children's Hospital needs. In your letter, we see no evidence that the University has closely examined some possible locations for a helipad that would meet Children's needs. Children's needs a paved, lighted and secure helipad that can be reached over a paved road. Further, the helipad should not be clearly visible from any heavily travelled road, should not be on a playing field, should not be closer than about 1000 feet to any residential buildings and should be easy to land on and take-off from in all types of weather.

We have identified five locations that appear to satisfy these criteria on enclosure I. The black circle represents approximately the area needed for a helipad (i.e., a circle with a radius of 30-40 feet). We would greatly appreciate it if the University could take a close look at these five locations to see which of them would be the best location for a helipad for Children's Hospital. If the University would allow Children's to construct a helipad on one of these locations, at its expense, it would greatly assist the solution of this issue which has generated a lot of conflict between the Laurelhurst community and Children's. Further, we think that Children's should pay the University a landing fee each time it uses the helipad to help defray the cost to the University of providing University police services as required for the safe operation of the helipad. Children's should also be responsible for maintenance or pay the University to do this for them.

Our review of the University of Washington General Physical Development Plan indicates that the outdoor storage yard in Sector E8 is to be phased out and turned into open space (see enclosure II and page 102). This proposed action would appear to make the location of a permanent helipad in this area even more feasible in the future. Flight paths could be designed over the playing fields so that the noise and vibration impact in the wildlife areas would be minimized.

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We expect that Children's will continue to land helicopters on its campus, when absolutely necessary, as they do now. For cases where time is not so critical, we would like them to land at Graves Field and transfer the patient to an ambulance for a 3 minute ride to the hospital. As you may know, all patients who arrive at Harborview by helicopter now are transferred to an ambulance for a short trip to the Harborview emergency room or to other nearby hospitals. During the past 12 months, there have been 85 helicopter flights made by Airlift Northwest with patients bound for Children's Hospital. About 70 of these landed at Harborview and the patient was then brought to Children's by ground ambulance (a 20-30 minute trip). Current projections are that the number of helicopter flights to Children's could rise to 35-40 per month by 1990. Some would still land at Harborview, others at Graves Field and a few, really critical cases, would be landed at the Children's campus as they do now.

Another reason to have a helipad constructed in the Graves Field area is to provide a safe and adequate landing facility for MAST helicopters. MAST and other military helicopters have been landing infrequently on this area for the past 11 years and should be allowed to continue to do so. MAST hopes to obtain new Blackhawk helicopters in the near future. These machines are much larger than the "Hueys" currently in use. It is probably inappropriate, because of weight and size, for MAST to land on the University Hospital's rooftop helipad. It is clearly inappropriate for them to land at Children's proposed helipad on their campus. MAST landings in the Graves Field area have sometimes been hindered by muddy conditions. They, too, have an obvious need for a paved, lighted, and secure helipad.

We believe that allowing Children's to build and use a helipad at Graves Field would be consistent with the long history of cooperation between Children's and University Hospitals, the desire of the University to be a good neighbor, and the clear need for a helipad that can be used by MAST helicopters bringing critically ill patients to both Children's and University Hospitals.

We invite you to respond to this letter by presenting your findings to our Board at its next meeting on September 8, 1986. Please let me know if you will be able to do so as soon as possible. I can be reached at 447-4054 (office) or 527-4892 (home).

Sincerely,

Robert N. Klug

Robert Klug
President
4326 N.E. 42nd

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ENCLOSURE I. FIVE POSSIBLE HELIPAD SITES IN THE GRAVES FIELD AREA



KEY TO MAP SYMBOLS

	Building		Campus entrance
	Path/Sidewalk		Bridge/overpass
GRANT LANE	Road		Fence
32	Campus parking area		Campus area
P	Public parking area		Pavement, brick, gravel
	Bus route	★	Branch library
	Bus stop		Road Gate
	Automatic parking gate		Gatehouse (with emergency phone)

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ENCLOSURE II. PLAN FOR SECTION E8, UNIVERSITY OF WASHINGTON GENERAL PHYSICAL DEVELOPMENT PLAN, VOL. I, MAY, 1984

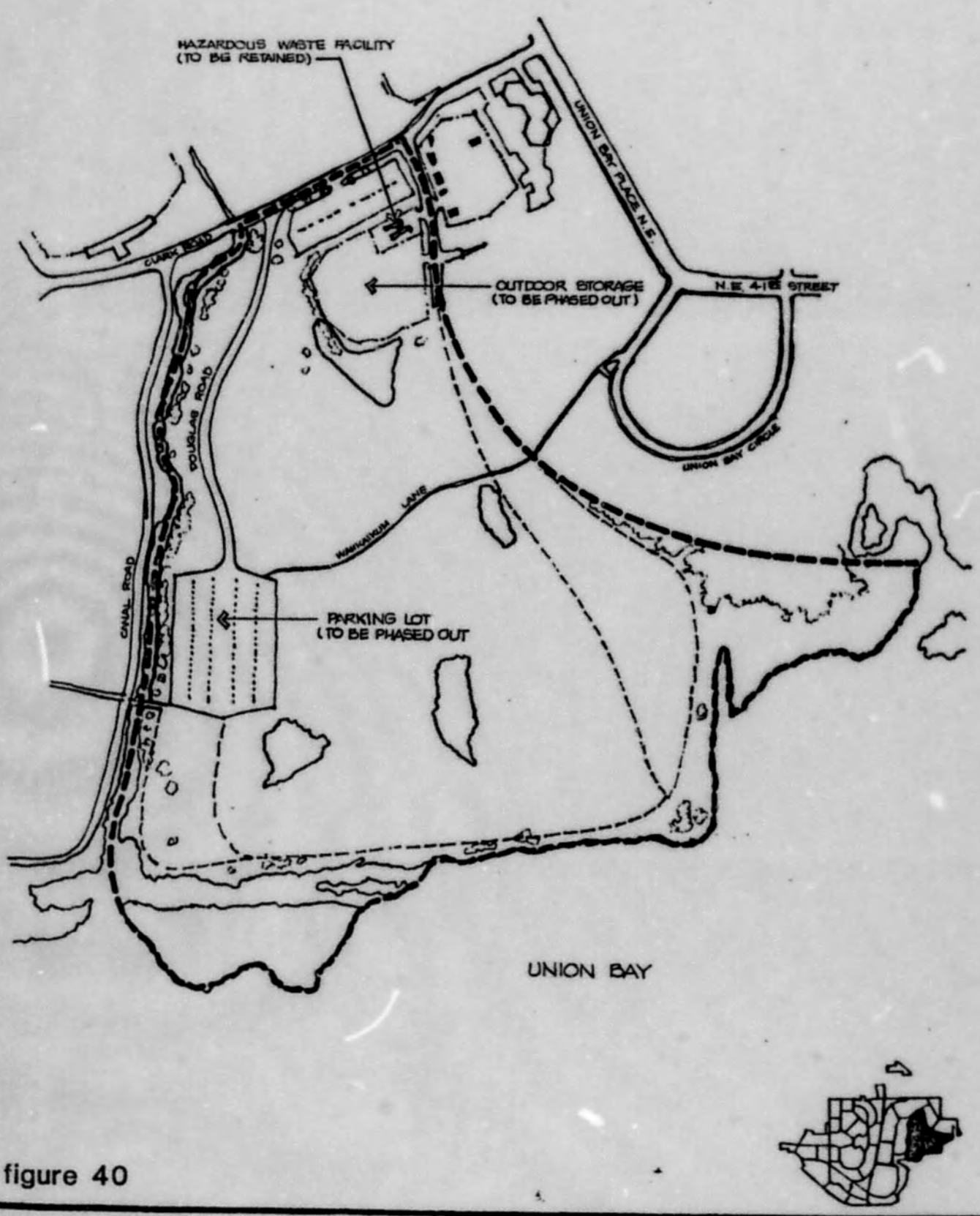

figure 40

103

SECTOR E 8

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Additional information and a limited number of copies of the draft EIS are available through the Master Use Information and Notification Center, Room 408, Seattle Municipal Building (625-5200).

Opportunity For Public Involvement

A public hearing to gather comments on the environmental impacts of the proposal will be held on
SEPTEMBER 23, 1986 at LAURELHURST ELEM SCHOOL 06:00PM.
4530 46th Ave. N.E.
In addition, written comments may be submitted through OCTOBER 02, 1986

RECEIVED
SEP 24 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Comments should be addressed to: Director, Department of Construction and Land Use, 400 Municipal Building, Seattle, We 98104.
If you wish to receive notice of the decision(s) on this project or to receive notice of the availability of the Final EIS (which responds to comments made at the public hearing or on the Draft EIS), please return the completed form below to: Seattle Department of Construction and Land Use, 400 Municipal Building, Seattle, We 98104.

****

APPLICATION 8405870

✓ I wish to receive notice of the decision.

✓ I wish to receive notice of the availability of the Final EIS.

Name Jay Scott Address 4339 NE 45
Seattle ZIP 98105

****

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

APPLICATION 8405870

✓ I wish to receive notice of the decision.

✓ I wish to receive notice of the availability of the Final EIS.

Name William Scott Address 4339 NE 45
Seattle ZIP 98105

****

LAND USE DIVISION

APPLICATION 8405870

✓ I wish to receive notice of the decision.

✓ I wish to receive notice of the availability of the Final EIS.

Name Huda Giddens Address 4338 NE 44
Seattle ZIP 98105

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American Medical
NEWS
SEPTEMBER 1986

Air rescue threatened by chopper crash rate

Hospital-based helicopters crash far more frequently than other helicopters or civil fixed wing aircraft, according to aeromedical experts at a meeting of emergency medical personnel in San Diego.

The efficacy of hospital-based helicopters also was questioned at the conference, with some expressing doubt that the popular aeromedical

New group for EMS MDs.—page 33

rescue teams are any more effective at saving lives than ground ambulance crews.

"We have a long way to go in justifying the need for these programs in terms of patient outcome, cost, and, most importantly, safety," said Ronald D. Stewart, MD, the president of the conference's sponsor, the National Assn. of EMS Physicians. Dr. Stewart is also a professor at the U. of Pittsburgh, and president and director of the Center for Emergency Medicine of Western Pennsylvania.

The use of hospital helicopters has grown quickly in the past 10 years. There are now 150 hospital aeromedical programs, and some predict that there will be 500 by 1996.

A stinging indictment of hospital helicopter safety came from Tom Einhorn, vice president of a recently formed association of hospital helicopter pilots, the National EMS Pilots Assn. "Hospital-based aeromedical helicopters have the worst accident rate in modern aviation history," Einhorn said.

According to the private, Columbus, Ohio-based Aviation Safety Institute, through 1985, the fatal accident rate for aeromedical flights was 6.5 lives lost per 100,000 flying hours. That is nearly triple that of commercial helicopters in general, which suffered 2.2 lost lives per 100,000 flying hours.

There have been 21 hospital helicopter accidents so far this year, including one in June near Birmingham, Ala., that killed a pilot and two flight nurses (*AMN*, June 13, 1986). "It's a miracle that more of the accidents this year didn't result in fatalities," said John B. Galipault, president of the aviation institute. Last year, 10 people were killed in hospital helicopter accidents.

Einhorn said that "the one threat to the survivability of aeromedical EMS in this country is the issue of safety." He cited several factors that have contributed to the string of accidents. They are:

- **Stress and fatigue.** Don Wright, president of the helicopter pilots' association, said that too many hospitals are trying to run their aeromedical program with only two pilots. This means that each pilot must work at least 12 hours a day, seven days a week, to provide around-the-clock coverage. Wright said that pilots had confessed to him that they had fallen asleep at the controls due to fatigue.

Einhorn noted that flying a helicopter requires far more pilot concentration than does flying a regular airplane. Hospital helicopter pilots also must be on the lookout for wires and obstructions, navigate with street maps, and at the same time, communicate with air traffic controllers and emergency service dispatchers, he said.

- **Training.** Most EMS pilots have military and commercial backgrounds that do not prepare them for the challenges of aeromedical flying, where they must frequently land by expressways, in the middle of subdivisions, or in populated areas that aren't prepared for helicopter landings. Problems are compounded when the pilot flies at night or in bad weather. A large number of crashes resulted after the helicopter struck an unseen electric or telephone wire. Presently, there are no national training standards for aeromedical pilots, and as a result, the quality of training given to pilots varies widely from program to program.
- **Equipment.** In order to economize, many aeromedical EMS programs operate with helicopters that have only one engine, as opposed to the preferable two, and that don't have all the instruments and equipment needed for some flights.
- **Operating standards.** There are no nationally accepted operating standards for aeromedical programs that would govern when conditions are suitable and unsuitable for flight. Presently, Einhorn says that all too often, a heroic "save the patient" attitude exists, causing flights to be made in conditions that are unsafe.

In addition to questions of safety, questions regarding the very need for hospital helicopters were raised. Wright said that too often a hospital starts a program for financial, and not medical reasons. "The administrators may have seen the studies that show that patients brought in by helicopter are overall better insured and tend to stay in the hospital three times longer than average patients."

In addition, Wright said that administrators may be swayed by the 150-mile radius of coverage a helicopter will give a hospital, and the vast amount of free publicity it provides. "TV news shows love shots of helicopters whisking injured patients away from accident scenes," he said, adding, "Too often a hospital in a city will start an aeromedical program, and that in turn will spark other hospitals in the area to start their own. This happens in cities that can't even support the first one."

Dr. Stewart said that data is "sparse" to support air over ground transport of patients to hospitals. "We are not certain that air transport improves patients' outcomes; preliminary data suggests that it may be detrimental."

Dr. Stewart cited a study that showed that cardiovascular patients, who make up a high percentage of those transported by helicopters, had a greater incidence of problems when transported by air instead of by ambulance. Kenneth W. Kizer, MD, the director of the California Dept. of Health Services concurred with the studies saying, "It's not surprising that a heart patient who finds himself loaded aboard a cramped machine with whirling rotors would have problems."

> In Los Angeles, before the 31 hospital helicopters began coordinating which would respond to a patient, 'They stopped just short of air-to-air missiles in competing for patients.'
>
> —Kenneth W. Kizer, MD, director of the California Dept. of Health Services

Those who spoke at the conference stressed the need for studies of the need for aeromedical programs, and the results of those operating so far. They also stressed the need for coordination in communities that already have competing programs. Dr. Kizer explained the situation he had found in the Los Angeles area. "Any or all of 31 helicopters could respond to a patient. Before they started trying to cooperate, they stopped just short of air-to-air missiles in competing for patients."

Wright and Einhorn said the pilot's association was calling immediately for a minimum standard of four pilots per aeromedical helicopter to alleviate the problems of fatigue. They also are working to develop operating procedures and standards, and minimum weather requirements for flight. —Ryan Ver Berkmoes

Pilot group calls for safety standards

Hospital chopper crash rate aviation's worst

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PUBLIC HEARING

COH'S Proposed Helipad



Children's Hospital has released its Draft Environmental Impact Statement on their proposed helipad.

Come to a public hearing to learn about or comment on the helipad proposal:

Laurelhurst Elementary School Auditorium
Tuesday, September 23, at 6:00 P.M.

- It is important to show the city and the hospital that we are concerned.
- Issues to be discussed include: helicopter safety, proposed flight paths, noise and vibration, alternative locations for the helipad, and more. Each person may speak for 3 minutes at this meeting.

IN ADDITION to attending the hearing, your written comments on the Draft Environmental Impact Statement or on what you learn at the hearing are very important. Responses to your comments will be included in the Final Environmental Impact Statement.

Send written comments before October 2 to:



Holly Miller, Director
Department of Construction and Land Use
408 Municipal Building
Seattle, Washington 98104

You can obtain a copy of the Draft Environmental Impact Statement at the public hearing or from the Department of Construction and Land Use (same address as above or phone 625-4509). Copies are also available at the Seattle Public Library, Downtown, Northeast and University Branches or the University of Washington Library.

Copies can also be obtained from Anita Francis (524-9340) or Liz Anderson (522-2944) while the supply lasts.

This is the first of two very important public hearings. This is your opportunity to speak out and comment in writing on this issue.

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To: Kathy
Julie

RECEIVED
SEP 30 1986
DEPT. OF CONST. & LAND USE

September 26, 1986

Ms. Holly Miller, Director
Department of Construction & Land Use
Room 400, Municipal Building
Seattle, Washington 98104

Re: Proposed helipad at Children's Orthopedic Hospital & Medical Center (COH)

Dear Ms. Miller and Ms. Julie Gibbs:

In addition to the recorded testimonies heard at the draft EIS hearing held 9-23-86 in the Laurelhurst Elementary School auditorium, and in addition to previous letters from me, please read and add this letter to your permanent files on the above-named issue.

By definition, the word environment means "one's surroundings or external circumstances collectively." Be it noted in the draft EIS on the proposed helipad at COH that the phrase "no significant impact" is repeatedly used per page. "No significant impact" is not the same as "no impact," which phrase is not used. Collectively, the repeated "no significant impacts" add up to great cumulative impact on the surrounding neighborhood--the environment of individuals, families, school children.

The draft EIS document is inadequate coverage of the serious impacts on the neighborhood. It is based on faulty research and statistics. Dr. Nicola is often quoted--and he quotes himself as reference. The document shows a strong bias (COH); it is not an objective, impartial review; it does not equally present the two sides. I hereby concur with specific citings and details and examples to support the claim of deficient data as presented in testimonies at the 9-23-86 public meeting. the the draft EIS

The most serious problem is that of safety (or lack of same). Frequency rate of helicopter crashes exceeds other aircraft as well-documented nationally by news media (magazines, newspapers, radio and TV). Factors causing crashes include pilot error, pilot fatigue, obstructions (such as power lines, buildings and trees), weather conditions.

The proposed landing site is located in a high-density, residential neighborhood, including: single-family homes; an elementary school (200 children plus faculty and staff); Laurelon Terrace Condominiums (136 units); Laurel Crest Condominiums (82 units); Laurelhurst West Condominiums (54 units). The Laurelon Terrace units are contiguous to COH property and helicopter site. The 60-80 landings--estimated at 15-20 patients per month with 4 flights-landings for each patient--would be a mini-airport in our midst. It would be like a helicopter landing on Laurelon Terrace rooftops or landing in Laurelon residents' yard. These could occur any time day or night.

A helicopter crash at COH site would kill: patient, pilot, medical personnel aboard; children and personnel in COH; neighborhood residents; school children. In addition to loss of life and property damage, fire could rage as a result of a crash on this site. An oxygen tank and a natural gas main are located near site on COH property.

Weather is another factor which could cause crash. Weather is unpredictable, uncontrollable, including wind, fog, mist, rain making for poor visibility.

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Noise of the helicopter is far greater than traffic--auto or ambulance (latter shuts off siren in neighborhood). Helicopter noise decibels are above health and acceptability levels for individual residents, school classes, hospital patients' welfare.

Another real concern is the lack of standards for decision-making processes involved in helicopter usage and flights. Lack of designated/named responsible persons to make decisions is a serious flaw in the proposed plan(s). I am also concerned about the lack of reference related to insurance. For example: Who carries policy/policies? Who pays the premiums? What is the amount of coverage? Who and what is covered?

The extreme expense related to initiation and maintenance of helicopters and their services is another concern. The millions spent on this marketing tool to be competitive with other hospitals could and should better be spent on patient care, programs, personnel, research. Duplication of these expenses across city and state as hospitals compete for business is wasteful and wrong.

The helipad proposed at COH is just one more example of institutional encroachment in a residential neighborhood. The helipad would be a veritable mini-airport wantonly endangering the lives of hundreds of residents each time a flight was made (often circling several times--losing precious time--over homes, condos, school before landing at a rate of approximately 1,500 feet per minute endangering the life of baby patient aboard).

In the face of mounting evidence of: (a) the unsafe record of factors involved in medical helicopter crashes; (b) the uncertain benefit derived from usage of helicopters for critical patients--documented by the medical profession; (c) the lack of standards for decision-making; (d) the excessive expense of helicopters; and (e) strong and widespread community objection, this proposal must be rethought and cancelled permanently.

I thus recommend:

1. <u>Absolutely NO helicopter landings at COH</u>.

2. COH and University Hospital-UW Medical School cooperatively construct and use a helipad on UW soccer field or adjaccent UW land <u>only</u> if a need can be proved for this unsafe and expensive service. (The jostling and rapid descent by helicopter is far more injurious to patient than ambulance transport -- Seattle ambulance service second to none in the nation.)

   The University Hospital and UW Medical School currently are doing and plan to expand research on COH campus. COH could share a helipad with University Hospital on UW property where the approach is wide open. It is ridiculous that there be two helipads within one mile of each other.

We all -- citizens, neighbors, COH--have a moral responsibility to <u>STOP TRAGEDY BEFORE IT HAPPENS</u>. A helipad at COH must not be further considered a viable option and never constructed. Helicopter landings in parking lot and/or any part of COH grounds must not be permitted, must be stopped.

Thank you.

Sincerely,
Maryann E. Spangler
Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

cc:

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SEP 08 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

5038 Sand Point Way N.E.
Seattle, WA 98105
September 1, 1986

Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98014

Dear Director:

I have a unique perspective on the issue of the helistop at CHMC. I, my wife and two children are neighbors of the hospital, living about two blocks from the site of the proposed helistop. In addition to this I am a physician employed at the hospital, who also works as a flight physician with Airlift Northwest.

Children's Hospital and Medical Center offers unique services to patients throughout Washington and the Northwest. Children who are critically ill often can not be treated appropriately anywhere else in Western Washington. These critically ill children should not be put at added risk by having them endure multiple transfers in and out of ambulances, let alone the added time needed to reach the hospital, necessitated by landing elsewhere.

I am glad that as a Laurelhurst resident my two girls are so very close to one of the nation's outstanding children's hospitals. In my experience as a flight physician I know that residents throughout Western Washington are also very grateful that it is possible to get their child to Children's Hospital rapidly and safely through the use of air transport. This helistop is for them and their children.

The risk of having a helistop in the Laurelhurst neighborhood and the inconvenience of the sound of a helicopter landing are trivial in comparison to the good it provides children throughout this state and beyond. It should be built well, to provide the maximum safety and minimal disturbance to the neighborhood, but it must be built and put into service as soon as possible.

Thank you for your consideration.

Sincerely,

Thomas P. Strandjord

Thomas P. Strandjord, M.D.

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Mark D. Plunkett
Janette K. Plunkett
4100 36th NE
Seattle, WA 98105

RECEIVED
SEP 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

City of Seattle
DCLU Office
408 Municipal Bldg.
600 4th Ave.
Seattle, WA 98104

Sept. 15, 1986

To Whom It May Concern:

Please incorporate the following comments into your EIS on the proposed Children's Hospital Helipad.

For starters, let it be known we are NOT opposed to the development of health care services generally at Children's Hospital. We applaud the expertise and care of this institution to children of the Northwest.

What we DO object to though is the unreasonable expansion of the hospital into the community under the guise of improved health care. It has NOT been clearly demonstrated yet that there exists substantial benefits to patients in helicopter transit directly to the hospital versus landing at Graves Field and being ushered into the care of an awaiting team of physicians, etc via an ambulance.

Secondly, are we to believe the hospital personnel that the helipad will be used for only extreme cases once the proposed service begins? Will the expense of this service be paid for by using the helipad route for non-emergent cases simply because its there and it's an "advanced " way to handle a case? Physicians in my neighborhood have serious doubts that either of the above two concerns are satisfactorily met with the proposed helipad. In our opinion it is high tech above reasonable judgement.

Next,we are angered with the arrogant attitude of COH displayed towards the community in resisting the proper channels of documenting their needs for the proposed helipad. Why have the administrators objected to complying with a standard documentation of need for this helipad? Are they concerned that we will become educated and protest this action en masse? Let's play by the rules of a free and open democracy and discuss the issue honestly and openly.

Lastly, we look to you to fairly portray our concerns and not be unduly affected by the deserved admiration of the entire community towards COH. Yes...they are a valuable part of the Northwest, but this stature must not obscure their responsibility to all our citizens to develop in a fair, honest way, accountable to all. We urge you to deny COH the helipad permit.

Sincerely,

Mark Plunkett Janette Plunkett

P.S. Please send a copy of the final EIS.

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RECEIVED
SEP 29 1986
DEPT. OF CONST. & LAND USE

September 27, 1986

Holly Miller, Director
Department of Construction and Land Use
408 Municipal Building
Seattle, WA 98104

Re: Children's Orthopedic Hospital
Helipad

To Director Holly Miller:

I am the owner of an apartment in the Laurelon Terrace Condominium complex, which is next door to the proposed Children's Orthopedic Hospital helipad.

I was present at the meeting of September 23, held at Laurelhurst Elementary School, at which this plan was discussed. According to COH there should be about ten emergency cases brought in by helicopter a month - a total of twenty trips. I believe there will be many more than that once the helipad is in place. Doctors will order helicopter service for their patients more often than they now anticipate as a defense against the possibility of any legal action against them by the child's parents in the event the child does not survive.

There is great concern by the residents of this condominium about having these helicopters coming down for a landing next door to us. Many have shown their concern by moving. I have lived in many neighborhoods in my life but never before have I seen so many "For Sale" signs appear in one neighborhood as there have been here since we all became aware of the proposed helipad two years ago. The Port of Seattle has been in the practice of buying up houses of people living in the flight pattern of SeaTac when they have been unable to sell them to anyone else. Now the City of Seattle is finding itself obligated to buy houses of people living near the Midway landfill. Will Seattle also come to the rescue and buy up the apartments of Laurelon Terrace residents when the frequency of helicopter flights overhead becomes unbearable and we are unable to find buyers? Had I known three-and-a-half years ago when I bought my apartment that there would be helicopters landing next door, I wouldn't have even made the trip over here to see the place.

Yours very truly,

Marjorie D. Kresge

Marjorie D. Kresge
4014 NE 46th Street
Seattle, WA 98105

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Sept 24, 1986

RECEIVED
SEP 26 1986

To whom it my concern:

We hope a careful study will be made of the excellent testimony given at the hearing Sept. 23, 1986 at Laurelhurst school regarding CO & Helipad, by several people who are experts in the use of helicopters - This has been a major concern to us - The weather and winds make it impossible to predict which way an aircraft approaches a landing site -

One point we did not hear addressed at the hearing was the close proximity of the large Oxygen storage tank to the Helipad site - This could be hazardous -

Our city and its residential areas are already impacted by too many private planes flying at uncontrolled altitudes - Should another be added when the need for the helicopter has not been proven.

Again we say who will pay for the service?

Sincerely

Mr and Mrs Fred M Wright
3925 48th Ave N E
Seattle, 98105

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Seattle Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

MASTER USE PERMIT

September 1, 1986

DRAFT ENVIRONMENTAL IMPACT STATEMENT - PUBLIC HEARING

Seattle's Department of Construction and Land Use has issued a Draft Environmental Impact Statement (EIS) for the proposed:

Project Description

4800 SAND POINT WY NE ZONE 1-4/1-2/SF 5 PROJ #8405870/KROLL 16W TO CONSTRUCT AN EMERGENCY HELISTOP FACILITY ACCESSORY TO AN EXISTING HOSPITAL/ MEDICAL CENTER (CHILDREN'S HOSPITAL & Medical Center).

The following Master Use Permit components are part of this application
SEPA ENVIRONMENTAL DETERMINATION
COUNCIL CONDITIONAL USE
TO ALLOW A HELISTOP WITHIN A MAJOR INSTITUTION ZONE.

Further Information Available:
A copy of the Draft EIS is available for public review at the downtown Seattle Public Library, 1000 Fourth Avenue the Governmental Research Assistance Library, Seattle Municipal Building, and the branch library in the neighborhood in which the project is located.

Additional information and a limited number of copies of the draft EIS are available through the Master Use Information and Notification Center, Room 408, Seattle Municipal Building (625-5200).

Opportunity For Public Involvement

A public hearing to gather comments on the environmental impacts of the proposal will be held on
SEPTEMBER 23, 1986 at LAURELHURST ELEM SCHOOL 06:00PM.
4530 46th Ave. N.E.
In addition, written comments may be submitted through OCTOBER 02, 1986

Comments should be addressed to: Director, Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.
If you wish to receive notice of the decision(s) on this project or to receive notice of the availability of the Final EIS (which responds to comments made at the public hearing or on the Draft EIS), please return the completed form below to: Seattle Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.

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SEP 2, 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

APPLICATION 8405870

X I wish to receive notice of the decision.

X I wish to receive notice of the availability of the Final EIS.

Name MR & MRS FRED M WRIGHT Address 3925 48th AVE NE
Seattle ZIP 98105

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Open Immediately
Land Use Information
Concerning Your Neighborhood

City of Seattle
Dept. of Construction & Land Use
400 Municipal Building
Seattle, WA 98104

Sept 24, 1986

To whom it may concern:
See attached

Mr. & Mrs. Fred Wright
3925 48th Ave. N.E.
Seattle, WA 98105

SHAPIRO & ASSOCIATES INC

The Smith Tower
Suite 1812
506 Second Avenue

Seattle
Washington 98104

206/624•9190

September 10, 1986

RECEIVED

SEP 12 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb
DCLU
402 Municipal Building
Seattle, WA 98104

Dear Julia:

Because of our client's aggressive schedule for the preparation of the Helistop FEIS, I would very much appreciate your sending us copies of comment letters on the DEIS as they are received at DCLU.

Can this possibly be arranged? If a moving van is in order to transport the letters, perhaps I can rethink this approach.

Sincerely,

SHAPIRO AND ASSOCIATES, INC.

Glenn

Glenn Bachman, Project Manager

GB:ble

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Seattle
Department of Construction and Land Use

Note

Date 10.9.86

To: File

From: dtz

RE: Telephone call 8405870
put on mailing list)

A.W. Roberts
4134 42d Ave NE
98105

- opposes helistop
- not need to build on campus vs Graves Field
- pilots will not adhere to flight path: are not doing so now.

OS 5.214

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To: Katy



RECEIVED
SEP 30 1986
DEPT. OF CONST. & LAND USE

2118 E. Shelby St.
Seattle WA 98112

27 September 1986

Ms. Holly Miller, Director
City of Seattle, Department of Construction and Land Use
Room 400 Municipal Building
Seattle WA 98104

Dear Ms. Miller:

This letter is a response to the Draft Environmental Impact Statement for the Children's Hospital and Medical Center Helistop (September 1986). My direct interest in the outcome of the licensing of the helistop is that I live along the Montlake Cut which lies along one of the major proposed helicopter approach and takeoff paths. More generally I am very concerned about the high levels of noise throughout the city which may yet force us to move from Seattle into the suburbs. I have only a few brief points and a suggestion or two to make.

I strongly support the concept of rapid access to hospitals for patients who require it. My goal here is to assure reasonable access consistent with the health of city residents. A reasonable heliport site and approach path will be proposed that will permit COH (and University Hospital) patients to have necessary timely medical care without placing an unfair burden on permanent residents along the helicopter flight paths. First I wish to draw your attention to serious deficiencies in the draft EIS regarding the impact of helicopter traffic on neighborhoods in the vicinity of COH, including mine.

I refer primarily here to the chapter entitled "Noise and Vibration" in the EIS. Here are the data upon which the EIS draws its conclusions regarding helicopter noise in the neighborhood:

- Monthly number of takeoffs and landings: 80 (p.83)
- Typical maximum outdoor sound levels: 75-85 dBA (p.85)
  (75 dBA is comparable to siren at 500 feet - 1 block;
  85 dBA is comparable to accelerating truck, lawn mower, p. 75)
- Outdoor-to-indoor noise reduction level: -25 dBA

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Based on these data and adopting standards of noise impact from of undiscussed acceptance, the EIS manages to conclude:

- Increases in neighborhood noise levels will be 0 to 3 dBA monthly (p.85)
- The impact of such noise increases ranges from "Barely Perceptible" to "Noticeable" at worst (p.74)
- The very worst case is an increased noise level of 5 dBA (p.83) which is considered "noticeable".
- In the worst case 40% of neighbors will be awakened if their windows are open and 20% if their windows are shut.

Anyone over the age of 3 years living anywhere in the University District or Montlake knows that the noise generated by a helicopter on approach to COH is very loud. "Barely perceptible" is not a description of helicopter noise that any sane person would ever dream of using. "Noticeable" seems much too modest. The conclusions regarding noise impact fly right in the face of experience. How can the experts be wrong?

This is easy to understand if the data are converted into measures that most of us understand, and if the procedure for processing the data are made clear. The second question first. Believe it or not, the EIS allows itself to convert the noise made by helicopters from a "peak" value -- the value heard by people nearby when the helicopter passes overhead -- to a monthly average value! (See bottom of p.74 and top of p. 76.) Since helicopters are overhead no more than 10 minutes per day, and since there are 43,200 minutes per month, the monthly average noise made by a helicopter trip is about 1% percent of its peak value. **In other words the writers of the EIS divide the noise of a helicopter by a factor of approx. 100 before they assess their noise impact!** How's that for taking the benefit of the doubt! I am dazzled. If this is standard "industry" practice then Lord help us.

My second point regards the assumtion that going indoors is a perfectly good way to escape from helicopter noise since noise levels inside a house are 25 dBA (about six times) less inside than outside. The 25 DBA result is based on high frequency noise (such as sirens), and it assumes that the windows are closed. The assumption seems very reasonable for sirens during the half of the year that windows are shut. I submit that these standards are completely irrelevant for low frequency noise all year long.

Consider expensive loudspeaker cabinets. The best ones are invariably the largest. Why? Because even the best loudspeakers have difficulty producing low frequencies (helicopters are great at it, however). The loudspeaker

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But that doesn't mean that they are right. Consider first the "generalized flight paths", or general approach routings, shown on p. 44. All approaches over the city follow either the I-5 or Fremont-Montlake canals. These are already among the noisiest parts of the city. Perhaps the helicopter pilots foes that these routes are safe (I wouldn't know) or that since these routes are already noisy, a little more noise won't hurt. I consider these routes to be highly inconsiderate of noise impacts for the many residents of these areas.

I urge you to require that large-scale approaches be overwater wherever possible. Flights from the west should come over Elliot Bay, along the Mercer Street corridor, over Lake Union across U.W. (see Figure "A" below), to the playfield. The approach from the east shown on p.44 is fine. Flights from the north and south should be required to fly over Lake Washington to a point a mile south of Webster Point and then approach the playfield as shown on p.51. None of these approaches will add more than 30 seconds to flights headed for COH.

Generalized Flight Paths

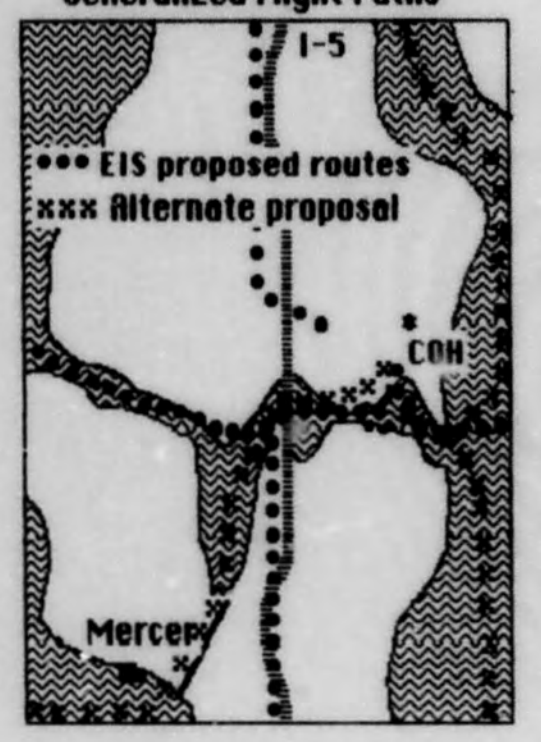

Figure "A"

Approach Paths to Playfied Helistop

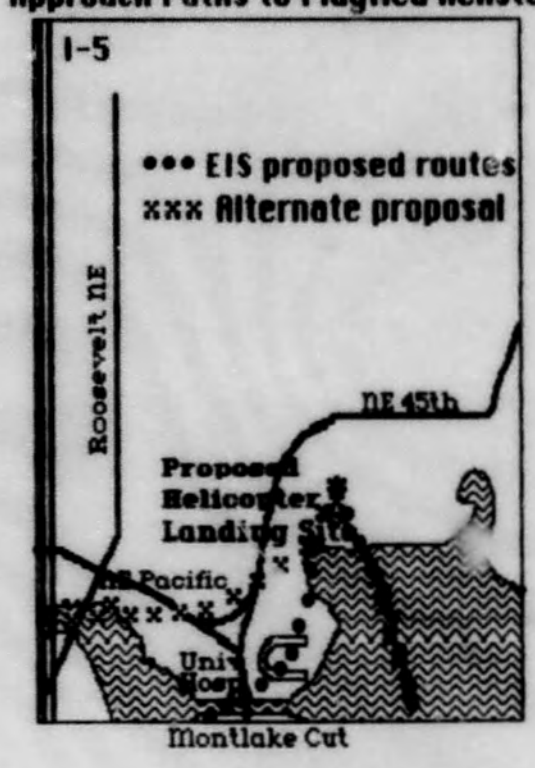

Figure "B"

Now examine the figure on p.51 which shows the proposed final approach paths to the playfield landing site. The approach from the southeast is fine as

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cabinet resonates and helps to strengthen the lower frequencies. The larger the cabinet the more effectively it boosts lower and lower frequencies.

A very expensive loudspeaker cabinet is your house. It resonates very effectively at the very low frequencies -- the sounds that helicopters produce abundantly. These frequencies are so low that the ear does not hear them. **Instead the house (and all of the people inside of it) vibrate.** As noted in the EIS (p.81) **"short-term sound pressure of these [helicopter-generated] levels can cause rattling and movement of dishes and other lightweight objects"**. How would you like to live in a house whose dishes vibrate eighty times per month, or almost one-thousand times per year?

I have described the worst case, according to the EIS. Maybe, but I doubt it. My house is more than a mile from the landing site. I have never counted the occurrence of dish-rattling helicopter overpasses, but I assure you that they are not just occasional. I can also assure you that the writers of the EIS don't live near me, or that they have decided to take more doubtful benefits! Finally it is well known that low frequency noise is far more objectionable than high frequency noise to humans. I cannot supply a reference for this conclusion, but it is cited frequently in FAA documents on the subject of jet noise.

In other words, I urge you to not let yourself get lost in the overabundant words and jargon in the EIS chapter on noise impact. The data, or the interpretation of the data, or both, completely conflict with reality. Challenge their conclusions, especially the rationale for interpreting the data in the way that they have.

In spite of my cynicism regarding the noise impact of helicopters, I believe that it should be possible to land helicopters near COH with only minor noise impact, and that the people at COH and their consultants have not tried very hard to find a prudent procedure for accomplishing this.

My proposed landing procedure is based on the first alternative listed in the EIS; namely, the U.W. playfield site. I accept the conclusions that landings at this site will not be highly objectionable. My concern is with the proposed flight paths to this site which were recommended by the helicopter pilots. Since helicopter pilots are inside the helicopter and cannot escape its vibration and noise, the pilots cannot be expected to be very concerned with the noise impacts of helicopters along the approach paths. Rather, they want to fly the most direct routes and over low-lying parts of the city. I can't blame them.

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shown. That from the southwest is abominable. The Montlake Cut region is already jammed with small planes and news helicopters, especially in the summer months. Emergency helicopters will create a safety hazard in this zone, and will add appreciably to the noise in the residential area to the south where I live. In addition, the route passes over University Hospital which it will vibrate. The University Hospital hopes to add a helipad on their roof, and the conflict of airspace will become even more hazardous if their rooftop landing site is approved.

In the interest of health and safety I urge you to require an approach path from the southwest as follows: cross the I-5 overpass over the canal and University Bridge. From there follow a line to the intersection of NE Boat Street and Brooklyn NE, and along the Burke-Gilliman Trail to the I.M. Buildings immediately north of the Hec Ed Pavillion, and then directly to the landing site. (See figure "B" above). This flight path is far from residences and avoids classroom buildings on campus. The noise will impact transients (motorists) rather than residents. Conflict with low flying planes and helicopters is avoided. It is also faster than the routes shown on p.51.

Sincerely yours,

Bruce Balick

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Law Offices
Peter J. Eglick
Suite 1130
1411 Fourth Avenue Building
Seattle, Washington 98101
(206) 464-1435

To: Katy
copy back
to me

RECEIVED
SEP 22 1986
DEPT. OF CONST. & LAND USE

September 19, 1986

Holly Miller
Director, Seattle Department of Construction and Land Use
408 Municipal Building
Seattle, WA 98104

Re: Comments on Draft Environmental Impact Statement
for Childrens Hospital Helistop

Dear Director Miller:

This letter is submitted on behalf of the Laurelhurst Community Club, a Washington non-profit corporation whose membership is comprised of Laurelhurst community residents, to comment upon the Draft Environmental Impact Statement (DEIS) in the above matter. These comments should be considered as supplemental to comments submitted by other members of the Community Club.

In general, the DEIS presents only a superficial view of the issues raised by the proposal. Specific inadequacies are noted below:

Land Use, Page 28: The DEIS assumes that consistency of the proposal with specific land use criteria is not a topic appropriate for discussion in the DEIS, at least to the extent of reviewing the criterion of medical need. This is incorrect. Such a criterion is part of the City's Land Use Code. The DEIS should consider consistency with the Land Use Code, including this criterion as part of the EIS process.

Further, the DEIS discussion of land use impact is wholly insufficient in its focus solely upon the policies applicable to the major institution zone. The City's conditional use criteria require review of impacts upon surrounding residential property. In reviewing such impacts, the DEIS should also examine policies applicable to the surrounding residential zones to determine whether the proposed use is consistent with those policies in its impacts, which clearly spill over beyond the campus where the helistop will be located.

Alternatives, Page 49: The discussion of alternatives appears to accept the judgment that the proponent's objectives are synonomous with "the purpose of the Helistop" as that term is used in Seattle Municipal Code, Section 23.48.05. Thus, the discussion of alternatives does not analyze their consistency with the conditional

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use criteria, but merely dismisses them as inconsistent with "the proponent's objectives." While it may be relevant to discuss whether or not the alternatives fit into the proponent's tailor-made objectives, the DEIS should <u>also</u> discuss whether or not the alternatives are consistent with the standard established by the City for the conditional use permit.

Weather, p. 67: Although weather is considered in the context of safety, the DEIS does not contain a similarly detailed discussion of weather as a factor in preventing airlift operations in the context of the proposal and its alternatives. Clearly, weather conditions may affect the viability of the proposal and its various alternatives and the extent to which they accomplish their announced purposes.

Noise Impacts, Page 80: The suggestion that "there is little valid scientific basis for claiming direct health impacts from aviation noise " is unsupported in the DEIS and is suspect. While it may be true that noise cannot be correlated with direct impacts (e.g. tumors), there is a substantial body of evidence that noise may be associated with, for example, pyschological and physiological changes relating to health. This should be addressed in the DEIS.

Page 90, Cumulative Impacts: The discussion of cumulative impacts is singularly one-sided and perfunctory. It ignores the very justifications used by the proponent for its application, dismissing the possibility that other institutions will use the same justifications, regardless of whether they are currently considered tertiary care referral centers. Further, although the possibility of further helistops is discounted in the discussion of cumulative impact, based on the alleged restraints by various governmental reviews necessary for their establishment, no mitigating measures are explored which would turn this speculative restraint into a reality or which would affect the COH permit in any substantial way (e.g. through automatic revocation) if other helistop approvals by other institutions were sought.

Because of the deficiencies in the EIS, a new DEIS should be prepared and recirculated for comment prior to issuance of a Final Environmental Impact Statement to ensure that the public has an opportunity to comment on missing information and analysis which must be included if the EIS is ultimately to be found adequate.

Thank you for this opportunity to comment on the DEIS.

Sincerely,

Peter J. Eglick

PJE:rr

cc: Liz Anderson, Laurelhurst Community Club

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AUG 16 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

August 16, 1986

Ms. Julia Gibb
Dept. of Construction & Land Use
400 Municipal Bldg.
Seattle, Wa.

Dear Ms. Gibb,

I am writing this letter to you to let you know that I fully support building the "Helistop" at the Emergency Entrance of Children's Orthopedic Hospital. It would really expedite the care for the emergency patients, which could mean saving lives in some instances.

I have been an Orthopedic Guild member for 32 years, and am aware of the miraculous things they do at the Hospital.

Very truly yours,
Mrs. Betty Brewster

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Aug. 26, 1986

Dear Ms. Gibb:

I am writing in support of Children's Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a parent of two small boys. I understand the concerns of those who are objecting, but I want to know that if my children need to come to CCHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Maureen R. Kinal

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AUG 29 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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needs notice

August 26, 1986

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AUG 29 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb
Dept. of Construction &
Land Use
400 Municipal Bldg.
Seattle, WA 98104

Dear Ms. Gibb:

It is time to resolve the question of making it possible for critically sick children to be lifted by helicopter to Children's Orthopedic Hospital and Medical Center. Any critically sick child residing in the vicinity of Puget Sound or areas depending on bridge access risk not reaching the Hospital in time to save a life, with the expertise offered there by its physicians, surgeons, and equipment.

It only requires the imagination of a parent or grandparent to find the answer which resides in the use of a tool like the helicopter to save a life.

Sincerely,

Emilie Schwabacher

Emilie Schwabacher

2209 38th Place East
Seattle, WA 98112

ES:db

cc: Mr. Paul Kraabel

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August 29, 1986

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SEP 0 2 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Dept. of Const. & Land Use
400 Municipal Building
Seattle, Wn. 98104

Re: CHMC Helipad

Even though I can understand the residents' feelings, fears and concerns about the noise and possible devaluation of their property in that exclusive area, I feel that perhaps they have over reacted, as my understanding is that the helicopter would be used only for emergency purposes, so it would not be a constant thing and should not affect them that much. CHMC should have the latest and best facilities for saving lives and I would, therefore, like to add my support for building the helipad outside the emergency room of CHMC.

Please convey my support to the City Council.

Very truly yours

Liesa M. Jensen, Pres.
F&N Retirees Guild

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ALBERT A. FELDMANN
P. O. BOX 85568 UNIVERSITY STATION
SEATTLE, WASHINGTON 98105

9-2-86

RECEIVED
SEP 08 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Director,
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Sir/Madam,

With reference to the application for construction of a Helistop Facility accessory to Chidrens' Hospital and Medical Center,I want to protest such a construction in the strongest terms ,both as individual resident within a few hundred feet of the hospital and as Vice-president of the Laurel Crest Condominiums Home Owners Association.

While pretending that the use of helicopters to ferry patients to the hospital is resorted to only in emergencies,the C.O.H. administration has demonstrated the untruthfulness of that claim by arranging for almost daily helicopter landings on its grounds during the month of August, including one at around midnight during a recent weekend. To the best of my knowledge ,C.O.H. has no permit for such landings and is constantly violating ordinances of the City of Seattle .Why do you and our elected officials remain silent in the face of such overt lawbreaking by a politically powerful organization ? The recent spate of crashes by helicopters used for ferrying patients and the disastrous effects of such a crash on the lives of people residing in a densely populated part of the city,should be enough reason to outlaw even a single landing of a helicopter on the grounds of C.O.H. .In addition to which the noise of the helicopter is deafening and certainly wakes up anyone trying to sleep at night.

The original reason for C.O.H. to locate in the Laurelhurst area was to get the benefit of a quiet neighborhood.If,some decades later, the goals of C.O.H. have changed and helicopter service for patients has become an indispensible marketing tool in the competition for patients ,then Childrens' Hospital must move to where such services will not interfere with the lives and the tranquillity of people living in a quiet neighborhood.The fact that Childrens'Hospital is out there aggressively campaigning for more patients is clear to all of us who watch its advertisements on Television and its fullpage advertisement in magazines such as Newsweek

Sincerely yours,
Albert A. Feldmann

Albert A. Feldmann
4873 Terrace Drive NE
Seattle,WA 98105

cc. Mayor Charles Royer

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Seattle Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

MASTER USE PERMIT RECEIVED

SEP 11 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

September 1, 1986

DRAFT ENVIRONMENTAL IMPACT STATEMENT - PUBLIC HEARING

Seattle's Department of Construction and Land Use has issued a Draft Environmental Impact Statement (EIS) for the proposed:

Project Description

4800 SAND POINT WY NE ZONE 1-4/1-2/SF 5 PROJ #8405870/KROLL 16W TO CONSTRUCT AN EMERGENCY HELISTOP FACILITY ACCESSORY TO AN EXISTING HOSPITAL/ MEDICAL CENTER (CHILDREN'S HOSPITAL & Medical Center).

The following Master Use Permit components are part of this application
SEPA ENVIRONMENTAL DETERMINATION
COUNCIL CONDITIONAL USE
TO ALLOW A HELISTOP WITHIN A MAJOR INSTITUTION ZONE.

Further Information Availeble:
A copy of the Draft EIS is available for public review at the downtown Seattle Public Library, 1000 Fourth Avenue the Governmental Research Assistance Library, Seattle Municipal Building, and the branch library in the neighborhood in which the project is located.

Additional information and a limited number of copies of the draft EIS are available through the Master Use Information and Notification Center, Room 408, Seattle Municipal Building (625-5200).

Opportunity For Public Involvement

A public hearing to gather comments on the environmental impacts of the proposal will be held on
SEPTEMBER 23, 1986 at LAURELHURST ELEM SCHOOL 06:00PM.
4530 46th Ave. N.E.
In addition, written comments may be submitted through OCTOBER 02, 1986

Comments should be addressed to: Director, Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.
If you wish to receive notice of the decision(s) on this project or to receive notice of the availability of the Final EIS (which responds to comments made at the public hearing or on the Draft EIS), please return the completed form below to: Seattle Department of Construction and Land Use, 400 Municipal Building, Seattle, Wa 98104.

****

APPLICATION 8405870

____ I wish to receive notice of the decision.

__X__ I wish to receive notice of the availability of the Final EIS.

Name D. S. BELVIN Address 4757-45 NE

SEATTLE WA ZIP 98105

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City of Seattle
Dept. of Construction & Land Use
400 Municipal Building
Seattle, WA 98104

Open Immediately

Land Use Information
Concerning Your Neighborhood

Helen & David Belvin
4757 45th Ave. N.E.
Seattle, WA 98105

Julia

METRO
Municipality of Metropolitan Seattle

Exchange Bldg. • 821 Second Ave., Seattle, Washington 98104

RECEIVED
SEP 09 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

September 8, 1986

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Draft Environmental Impact Statement
Children's Hospital Helistop

Dear Ms. Miller:

Metro staff has reviewed this proposal and anticipates no significant adverse impacts to its wastewater facilities.

Thank you for the opportunity to review and comment.

Very truly yours,

Gregory Bush

Gregory M. Bush, Manager
Environmental Planning Division

GMB:law

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Poulsbo, Wa
Sept. 11, 1986

Julia Gibb
Department of Construction & Land Use
400 Municipal Bldg.
Seattle, Wa. 98104

RECEIVED
SEP 15 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb.

This is to express my concern about the possible banning of helicopter landing at Childrens Hospital. My husband is a S.C.Atl. surveyor and, while this is not necessarily his opinion in this case, we have been made aware many times of the great need for this service at many facilities in times of emergency. I believe the positive factors far outweigh neighborhood objections. Please convey my thought on this matter to the city Council. Thank you.

Sincerely,
Jeanne C. Gosney

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September 5, 1986

RECEIVED

SEP 17 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Dept. of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I just became a parent last month to a healthy baby boy. If something where to happen, such as an emergency situation, I would really appreciate knowing that he could be rushed over to COHMC via helicopter to receive emergency treatment. This service is especially needed in places like Port Townsend, which is where we live, because we do not have the emergency facilities that COHMC has. And if we where to have to drive over to Seattle in an emergency situation it might just be too late.

I understand the concerns of those who are objecting, but I truly believe that having this helistop service could save many lives, maybe even the life of my own son!

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Lisa Talley

Mrs. Lisa Talley
101 Shotwell Rd
Hadlock, WA 98339
(206)385-6710

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2

Jan. 23, 1985

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JAN 25 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

William Justen, Director
Dept. of Construction and Land Use
600 4th Ave.
Seattle, Wa. 98104

Dear Mr. Justen:

RE: Proposed helipad at Children's Orthopedic Hospital

As a neighbor of COH, I am concerned about the proposed helipad, and believe that COH should be required to prepare an environmental impact study regarding this project.

Many of us in the nearby neighborhood have questioned the projected number of helicopter landings per month at COH, and wonder if only the truly "life saving" cases will be flown in, or rather if the helicopter landings will become frequent in order to make the service financially viable. Several medical authorities have wondered aloud if eventually broken legs and hang nails might be treated using the helicopter service.

This possibility raises the issue of environmental impact. What about the noise level on a regular on-going basis? What about the possibility of an accident or crash involving the helicopter? What about the air pollution from helicopter engine emissions?

I ask that DCLU require COH to conduct an enviromental impact study to address these and other issues.

Sincerely,

Jane Johnson

Jane Johnson
4323 NE 45th St.
Seattle, Wa. 98105

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COH file

Helicopter landing area at Children's Hospital and Medical Center undergoes alterations

By ANDRA MARJERISKA

Children's Hospital and Medical Center has cleared a group of trees and replaced four street lamps with lower ones near its temporary helicopter landing area.

The changes were made last month for safety reasons, according to Nancy Greenawalt, director of government affairs for the hospital.

"While the landing area was not unsafe without the alterations, the pilots with Airlift Northwest had made the request and our attorneys felt it was best to comply," Greenawalt said.

Air ambulances have been landing on a grassy area just outside the hospital's emergency room since August 1985.

Children's has been seeking approval from the city to build a helipad in that area since that time.

Greenawalt said besides safety, the "unanticipated length" of the permit process also factored into Children's decision to improve the temporary landing area. "We had expected to have been at this stage two years ago," said the hospital's governmental affairs director.

She stressed, however, that "in removing the three trees and replacing the street lamps with surface-level fixtures, we are not assuming the outcome of the land use process. We remain committed to following the process as outlined by the city."

Greenawalt said a letter regarding the improvements made to the temporary landing site was sent out to community residents. "I talked with some neighbors the night before the changes were made, and it didn't faze most of them," she said. "Of course, there were a couple of people that were upset, but they don't want to see any helicopters landing there at all."

Children's has been battling with the surrounding community on the helipad issue ever since it requested a conditional land use permit for the helipad.

The Laurelhurst Community Council, in particular, has voiced loud objections to the plan, noting that the medical need for a helipad has not yet been demonstrated. The state Legislature had considered a bill this session which would have required all hospitals to produce a certificate of need when seeking helipad permits. However, the bill, which was drafted in response to the controversy surrounding the Children's proposal, never even got a committee hearing.

Another sticking point with Laurelhurst residents is the issue of safety. The community council points to statistics in the American Medical News showing the high rate of aeromedical accidents.

Some of those concerns — expressed at a September public hearing — are in the process of being incorporated into a final Environmental Impact Statement (EIS).

The final EIS, which will also include recommendations from the city's Department of Construction and Land Use, is expected to be completed in the next two months.

The EIS will then go before the Hearing Examiner, who will review Children's application for the helipad. The Hearing Examiner will be specifically addressing whether the helipad is necessary to save lives; how it will impact the surrounding residential property; and if its use will be restricted to life-threatening emergencies.

The Hearing Examiner's recommendation will be forwarded to the Seattle City Council, which will decide on the helipad proposal. The council will have the option of holding a public hearing on the conditional-use permit application before voting.

Meanwhile, Dr. Bud Nicola, King County Health Director, has submitted his updated opinion concerning the necessity of Children's having a helipad. Nicola analyzed some 100 cases over the last year and one-half.

That report was submitted to DCLU's executive director two weeks ago. DCLU had requested the report.

In his two and one-half page report, Nicola stated that, in his opinion, a helipad for transporting critically ill patients directly to Children's campus was necessary.

In addition, he said no more than six patients a month would need to land at the hospital.

Currently, the majority of Children's patients who are transported by air ambulance land on Harborview Medical Center's helipad. They are then transported to Children's by ambulance.

While nearly 200 children have been airlifted to the hospital since its application for a helipad was made, 44 were actually flown right to Children's grounds — about two a month.

Some of Children's patients have also landed by helicopters at the University of Washington's Intramural Activities Field. The UW is currently seeking a permit to build a helipad on the field, which could be shared with Children's. It is also still in the process of getting permission to use a helipad already built on the top of the sixth floor of its new east wing.

Senior Activities

RAVENNA-BRYANT SENIOR CENTER
6559 Ravenna Ave. N.E.
527-0718

THURSDAY: 9 a.m tai chi; noon lunch by reservation; 12:30 p.m. speaker, home safety; 1-4 p.m. bowling at University Village Lanes.

FRIDAY: 9 a.m. tai chi; 10 a.m. bridge groups; 1 p.m. slide show on Carribean Cruise by Carol Blakely and 2 p.m. on Around the U.S.A. by Bob Boye; 2 p.m. bridge instruction, last day.

MONDAY: 8:30 a.m. tai chi; 10:00 a.m. writing your life story; 1 p.m. writing creatively; 1-4 p.m. bowling at University Village Lanes.

TUESDAY: 9:30 a.m. exercise; noon lunch by reservation; hands-on craft group; 1:30 p.m senior wellness clinic.

WEDNESDAY: 9 a.m. tai chi; 10 a.m. hula class; 2-4 p.m. Puget Consumers' Co-op cooking class.

Special Events:

The center's annual Mother's Day Brunch will be on May 8, by reservation only.

Members wanted: starting at 12:45 p.m., after lunch on May 14 the annual Board of Director Elections will be held at the center. Get acquainted with the nominees and with the center.

painting, set up for Rummage Sale.

FRIDAY: Hamilton House closed for Rummage Sale set-up.

SATURDAY: Rummage Sale, 9 a.m. to 3 p.m.

MONDAY: 9 a.m. dance exercise class; 9:30 a.m. watercolor, stitchery, coffee hour, Hamiltone Sirs; 10 a.m. dolls and toys, Just Friends;10:30 a.m. Hamiltones; 12:30 "Sights and Sounds of China, Part 2" by Hamilton House member, Maybeth Pressley.

TUESDAY: 9 a.m. bridge, women's pool;10 a.m. creative writing; 12:30 p.m. progressive bridge.

WEDNESDAY: 9:30 a.m. pinochle, weaving, coffee hour; 10 a.m. dancing with live music; 12:30 p.m. afternoon pinochle; 1 p.m. nurse practitioner (by appointment).

Election Results:

At the Tallmadge Hamilton House Board's Annual Meeting on April 20 the following officers were elected: Donald Spickard, President; Richard Garrity, First Vice President; Brewster Gere, Second Vice President; Betty Smith, Secretary; and Jacob Ehli, Treasurer.

Robert Birkner, Brian Dempsey, Jaacob Ehli, Particia Emory, Ludwig Lobe, Marty Richards and Donald Spickard have been elected to the Board of Diorectors for a three year term. James Mizell has been elected for a two year term.



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You're Invited to the
U-DISTRICT BUSINESS SAMPLER
Wednesday, April 29
5:30 - 7:30 p.m.
Meany Tower Hotel
4507 Brooklyn Ave. N.E.
Grand Ballroom
U-DISTRICT BUSINESS
• Door prizes include a $100 Gift Certificate from Nordstrom Place Two
• Samples • No-Host Bar

5043 Sand Point Place N. E.
Seattle, Washington 98105
October 1, 1986

RECEIVED
OCT 3 1986
DEPT. OF CONST. & LAND USE

Holly Miller, Director
Department of Construction and Land Use
408 Municipal Building
Seattle, Washington 98104

Dear Ms. Miller:

It is becoming quite apparent that the Childrens Orthopedic Hospital is making every effort to proceed with a Heliport on the C.O.H. grounds without due regard to the risk to the surrounding neighborhood.

First of all, the Laurelhurst Elementary School, containing approximately 250 children, is located less than two blocks from the proposed Heliport.

The physical risk to these children cannot be ignored. Also let us not overlook the noise and vibration factor that would surely disrupt school activities during landings and takeoffs. In addition to this, there is no approach route to this proposed landing site that would not jeopardize residences and business in the surrounding area.

The fact that many structural obstructions, as well as trees, in the area certainly do not enhance the safety of this proposed landing site.

One accident would certainly negate any value claimed by the use of this proposal.

For years the C.O.H. has been using the University of Washington East Campus Intramural Field for emergency helicopter landing sites. This area is totally unobstructed and approaches over water would certainly be safer with no risks to any ground personnel or structures. Transportation by ambulance from the Intramural Field to the hospital has been timed at two and a half minutes. This includes during rush hour traffic. Two and a half additional minutes to a forty-five minute or so helicopter trip is quite inconsequential particularly when we consider the overall risk. The jostling of the patient in the transfer is certainly no greater than the jostling suffered during the helicopter ride.

There can be no apparent advantage to transferring a patient from the Harborview Trauma Center to C.O.H. by helicopter--in these cases the time element is not a factor.

We must also consider a proposed heliport for the University of Washington Hospital. A centrally located heliport on the University of Washington Intramural Field would serve both institutions very well.

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If these proposals for individual heliports are not controlled, it is not inconceivable that many hospitals in this area (Seattle) will claim the necessity of such a convenience and the precedent will have been established.

Finally, it has come to our attention that the C.O.H. has filed Application #8602396 to build a four story medical office. Should not this application be included in the same Environmental Impact Statement as the one for the Heliport?

Let us please consider objectively the overall risk to the many as opposed to any claimed advantages to a few.

Thank you.

Sincerely,

Harold Kurt

Mildred Kurtz

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Julia

Seattle
Department of Construction and Land Use

Holly Miller, Director
Charles Royer, Mayor

October 9, 1986

Re: Your letter on Children's Hospital Helistop Application

Mr. and Mrs. Harold Kurtz
5043 Sand Point Place NE
Seattle, WA 98105

Dear Mr. and Mrs. Kurtz:

Thank you for your very thoughtful letter outlining your concerns about this proposed helistop. You pointed out a number of questions we have asked the hospital to research and present in the Environmental Impact Statement.

Safety is certainly a potentially significant impact to the area surrounding Children's Hospital. The Draft Eis (DEIS) reviews and analyzes potential safety impacts. During the present comment period on the DEIS we are receiving many comments and questions regarding safety. These comments will be responded to in the Final EIS.

Noise and vibration are also identified as environmental impacts and are discussed in detail in the DEIS. In addition to safety and noise impacts, we have asked for a thorough review of the siting of the helistop to insure that a proposed site has as little disruptive effect as possible to adjacent residents and land uses. In particular, the DEIS reviews alternative sites at the UW Intramural field and at the University Hospital.

The cumulative effects of siting helistops at hospitals, as you note, is also an area of concern which we are addressing in the EIS.

The medical office building proposed by Children's is subject to environmental review. A decision has not yet been reached regarding the environmental impacts of this project. Its planned construction is identified in the helistop EIS. The hospital does not feel that its location would change their preferred helistop site.

Finally, as you suggest, it is our responsibility to consider objectively the benefits of the proposed action and weigh them against the identified adverse impacts which cannot be

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reasonably mitigated, and to recommend to the City Council an action based upon that analysis. That is our job, and we do take it seriously.

Thank you for taking the time to write to me about this proposal. Please call Julia Gibb at 625-4509 if you have questions about the status of the application.

Sincerely,

Holly Miller

HOLLY MILLER
Director

JG:vg

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MRS. WILLIAM L. TRUDGIAN
9600 MANDUS OLSON ROAD N.E.
BAINBRIDGE ISLAND, WASHINGTON 98110

RECEIVED
OCT 28 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

October 27, 1986

Seattle City Council
Mr. Sam Smith, President
600 Fourth Avenue, Seattle 98104

Dear Mr. Smith and City Council Members:

Please allow me to add my voice to many others you must be hearing, in favor of allowing a permanent heliport at Childrens Hospital & Medical Center.

We all already owe you tremendous thanks for permitting helicopters to land at the Hospital during the past year. The privilege was not used more often than absolutely negessary to save a life; and the infrequent landings were neither heard nor noticed by the neighborhood above the usual high-decibel background of daytime city sounds.

Our darling grand-daughter became crucially ill last summer, and was rushed by ferry (which waited!) and by car out to the Hospital in time for her life to be saved. If this emergency had occurred very late when the ferries are several hours apart, we would surely have hired a helicopter, and have been forever grateful that it could take her right out to the Hospital.

We are lucky: our little one is now fine. But we do think about other frantic parents (and grand-parents).

PLEASE DO ALLOW THE PERMANENT HELIPORT.

Very sincerely yours,

Prudence L. Trudgian

Mrs. W.L. Trudgian

Copies to: Ms. Julia Gibbs
Mr. Paul Kraabel
Mrs. Gilbert Anderson

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H. JOEL WATKINS
RICHARD J. WATKINS
JOEL WATKINS, Jr.

LAW OFFICES
FRANKLIN & WATKINS
A PROFESSIONAL SERVICE CORPORATION
SUITE 2300
FOURTH & BLANCHARD BUILDING
2121 FOURTH AVENUE
SEATTLE, WASHINGTON 98121

TELEPHONE (206) 728-1511

RALPH E. FRANKLIN (1964)
MICHAEL KEYS COPASS (1967)

REPLY TO FRANKLIN & WATKINS

REFERENCE NO.
4775-001

October 2, 1986

RECEIVED
OCT 2 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Holly Miller
Director
Department of Construction & Land Use
408 Municipal Building
Seattle, WA 98104

Re: Children's Orthopedic Hospital and Medical Center
Helistop/Draft Environmental Impact Statement
File No. 8405870

Dear Ms. Miller:

We represent the Laurelhurst Condominium Association. That association is composed of the owners of 55 condominiums located at 4545 Sand Point Way N.E., approximately 1/4 mile from Children's Orthopedic Hospital. Substantively, the Association opposes absolutely the construction of the helistop. However, we realize that your department seeks input on the adequacy of the Statement. Gauging from the level of public interest shown at the recent hearing at the Laurelhurst Elementary School last month, your department will have received a great many comments. We wish to add, briefly, our input.

We direct your attention to page 92 of the draft Environmental Impact Statement. The section is entitled, "Significant Impacts that Cannot be Mitigated." The risk of helicopter accidents is stated to be "a potentially significant impact that cannot be entirely mitigated." A helicopter flying in and out of the hospital will be traveling a corridor up Sandpoint Way and 45th N.E. (This is the primary approach, p. 45 of the draft Environmental Impact Statement). We are less sanguine about that conclusion than the proponents of the statement. This area is densely occupied and heavily traveled during certain hours of the day. The draft Environmental Impact Statement contains little information regarding EMS helicopter flights. Certainly, the NTSB does not compile such statistics (p. 61, draft Environmental Impact Statement). The comparisons with St. Anthony's Hospital in Denver is demonstrateably unsound. ("... actual figures on

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the total number of air ambulance flight hours have not been kept.") Also, is "accident" defined by the Denver study (p. 61, draft Environmental Impact Statement), in the same fashion as the National Transportation Safety Board? (p. 65, draft Environmental Impact Statement). Are the physical conditions of arrival and departure comparable between the two hospitals? Under what conditions did the accident occur? What was the distance of the accident from the hospital? At p. 64, the draft Environmental Impact Statement recites 57 EMS helicopter accidents occurring in 1985. The hearsay statements of Nina Merrill of ASHBEAMS and Tim Einhorn of NEMPSA should be supported by a writing from those parties regarding the distance of those accident occurrences from the hospital. The observations in the helicopter safety section at p. 68 of the draft Environmental Impact Statement is replete with hearsay quotations from Gene Hill, Frank Benedict and Thomas Poulton. What questions were put to these individuals? Are the responses complete and in context? There would be a total of sixty to eighty overflights per month. These overflights will pass directly over our client's eight story condominium at a height of 1,000 feet. Our client is not satisfied that complete and accurate information is set forth in the draft Environmental Impact Statement. Frankly, the risk of accident does not appear to be "a potentially significant impact," but rather, a significant impact that cannot be mitigated." (p. 92, draft Environmental Impact Statement).

In the next paragraph, at p. 92, the proponent states that noise and vibration is not a significant impact based on regulatory criteria; however, it is recognized that helicopter noise could and probably would be disruptive of some adjacent residents' lives. SMC 23.48.05(A)(1)(b) sets forth the following criterion that "the helistop is located as to minimize impacts upon surrounding residential property." Helicopter noise is an "impact" that a number of the residents of the Laurelhurst Condominium have brought to our attention. The residents have not previously been concerned about noise from helicopter landings at the Graves Field. However, the Condominium Association informs us that a serious noise problem exists when helicopters fly to Children's. We note that the proponents of the draft Environmental Impact Statement are willing to quote conclusory hearsay statements from "experts" on helicopter safety. While there is a significant effort devoted to the noise issues, no resident of the area has had a chance to give his or her impressions on the subject of noise. "Regulatory criteria" aside. There is a dearth of evidence regarding the nature of the disruption of the adjacent residents' lives. As stated at page 28 of

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the draft Environmental Impact Statement, the purpose of Seattle's Major Institutions Policy, SMC 23.16.10, "is to balance the need for institutional growth and change with the need to protect the livability of neighborhoods adjacent to institutions." It does not appear that the proponent of the draft Environmental Impact Statement put all that much thought into the statement set forth at page 92 of that document. We suggest that additional information be obtained and included in this final chapter and that an additional effort me made to verify the reliability of the comparison with St. Anthony's Hospital in Denver and the self-serving quotations which are sprinkled through the draft Environmental Impact Statement.

Very truly yours,

FRANKLIN & WATKINS, INC., P.S.

By Joel Watkins
Joel Watkins, Jr.

JW:mbd
L05400

cc: Board of Directors
Ron McPhee

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Snohomish County Fire District No. 4

1525 Avenue "D", P.O. Box 820
Snohomish, WA 98290
(206) 568-1022

COMMISSIONERS:
Ray L. Brown
Eldon Harvey
Gerald Peacor

Secretary - Leona Snyder
Fire Chief - Robert Merritt

October 28, 1986

City of Seattle Hearing Examiner
c/o Children's Orthopedic Hospital
P.O. Box C-5371
Seattle, WA 98105

Dear Sir:

On behalf of the children and parents of our City and Fire District, we would like to express our utmost support of the proposed conditional use of Children's Orthopedic Hospital and Medical Center as a heliport site for emergency transport of the critically injured or ill children and infants.

Often it is easy to focus our views and needs on a more local latitude and somehow forget the vast, rural areas with their infants and children--which do desperately need the critical care provided by such facilities at COHMC. More often than not, our children have greater potential for, or illness, requiring the type of treatment available only by COHMC where time is THE MOST CRITICAL FACTOR. With the availability of air ambulance service to our area, we can actually bring specialists to the scene and turn around and transport them back to their facility in less than 40 minutes. This is truly a matter of life or death in some situations. Therefore, we are asking that you rule favorably to allow this use of COHMC facilities.

For many, many parent's sake in Western Washington, this is a cry for the children...

Sincerely,

Robert Merritt
Fire Chief

Simon Whitney,M.D.
Coordinating Physician

Anne Averill, Mayor
City of Snohomish

Ray Brown, Chairman
Snohomish County,
Fire District #4

RM/dl

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3804 48th NE
Seattle WA 98105

10/11/86

Holly Miller, Director
Seattle Dept of Construction &
Land Use.
400 Municipal Bldg
Seattle WA 98104

REC
OCT 14 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms Miller:

Just a note in opposition to the proposed helistop at Children's Hospital and Medical Center. As a physician I feel this helistop is not needed. It will not handle the larger helicopters most likely needed in real emergencies. The transfer time from the already used site at Graves Field is minimal and little more than at Harborview.

The proposed helistop offers more danger to the surrounding community than it does advantages for improved emergency care. The enthusiasm of the arguments proposed by Children's exceeds the real medical needs by far.

The helistop offers little if any advantage in critical care over the current program and real disadvantages and danger to the community. Sincerely yours

R O Bullfield M.D.

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MS. HOLLY MILLER

DIRECTOR

DEPT. of CONSTRUCTION AND LAND USE

MUNICIPAL BUILDING

SEATLE, WA. 98104.

Oct 14, 1986

RECEIVED

OCT 20 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

DEAR Ms. MILLER

RE. CHILDREN'S HOSPITAL, DEIS.

I WOULD LIKE to QUESTION CHILDREN'S OBJECTIVE AS STATED IN THE EIS INTRODUCTION (PAGE 1 PAR. 2) " TO CREATE A LANDING PAD FOR HELICOPTERS TRANSPORTING CRITICALLY ILL OR INJURED CHILDREN " OR " THE SPECIFIC OBJECTIVE OF THIS PROPOSED ACTION IS to MINIMIZE BOTH THE PATIENT TRANSFER TIME AND THE NUMBER OF POTENTIALLY DESTABILIZING PATIENT TRANSFERS---." CHILDREN'S POSITION IN THIS EIS IS THAT THEY ARE TRANSPORTING PATIENTS IN CRITICAL CONDITION (PAGE 13 BOTTOM). THE COUNTY EMS GUIDLINES DEFINES THE CONDITIONS FOR HELICOPTER USE PAGE 12 #1 THE PATIENT "MUST BE AN EXTREMELY ILL PATIENT SUCH THAT THE ARRIVAL AT A HOSPITAL CAPABLE OF PROVIDING SPECIALIZED CARE WILL IMMEDIATELY SAVE THEIR LIFE OR REVERSE THEIR MEDICAL DETERIORATION."

IN REFERANCE to TABLE II, PAGES 14, 15, & 16, TITLED

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"KEY CHARACTERISTICS OF CRITICALLY ILL PATIENT TRANSFERED BY ALNW DIRECTLY TO CHILDREN'S AUG 1,1985, TO JUNE 10,1986", I LOOKED FOR REFERENCES TO TABLE II IN THE TEXT AND WHERE THE PATIENTS WERE TRANSPORTED FROM. I FOUND THE FOLLOWING REFERENCES:

PAGE 17 PAR 1. "TABLE II PRESENTS DATA ON THE MEDICAL CONDITION OF PATIENTS WHO WHERE TRANSPORTED DIRECTLY TO COH BY HELICOPTER".

PAGE 24 PAR. 4. "TABLE II DESCRIBES ALNW HELICOPTER TRANSPORTS TO COH THROUGH MID JUNE 1986" FROM THIS TABLE DATA, COH STATES THAT ~63% OF THE TRANSPORTS TO COH WERE NEWBORNS. THE DATA AGREED, 13 OF THE 21 LISTED TRANSPORTS WERE NEWBORNS.

PAI. PAR. 1 "BASED ON DATA FROM EXISTING FLIGHTS (TABLE II) IT IS ESTIMATED THAT 20% OF THE FLIGHTS WOULD OCCURE AT NIGHT TIME HRS. (10PM-7AM)." THE DATA DOES NOT AGREE.

TABLE II IS USED TO EXTRACT DATA FOR USE IN OTHER SECTIONS OF THE EIS, THEREFORE THIS TABLE MUST BE ACCURATE.

NOW'S THE TIME TO ASK TWO QUESTIONS: IS THE TABLE ACCURATE? AND. WERE ALL THE PATIENTS TRANSFERED TO THE NEAREST CAPABLE HOSPITAL? I'VE SUBSQUENTLY FOUND THE ANSWER TO BOTH QUESTIONS TO BE NO.

THE ALNW PILOTS LOG SHOWS 64 NOT 21 FLIGHTS

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3/5

FROM AUG 1, 1985, TO MAY 30, 1986. COH ACKNOWLEDGES ONLY 21 IN TABLE TWO. CALENDARS MARKED BY LOCAL RESIDENCES PRODUCE A NUMBER OF FLIGHTS IN THE THIRTY'S. COH'S NUMBERS ARE INCORRECT, ILL USE NUMBERS FROM ALNW PILOTS LOG (64).

OUT OF THE 64 FLIGHTS 17 OR 25% EITHER OVERFLEW TACOMA GENERAL - MARY BRIDGE (A CAPABLE FACILITY) OR THE FLIGHT DISTANCE WAS CLOSER TO TACOMA THAN COH. THERE MAY HAVE BEEN MORE FLIGHTS AS IT IS DIFFICULT TO DETERMINE FROM THE FLIGHT LOGS FLIGHTS THAT ORIGINATED VIA FIXED-WING AND THE LOG DATA DOES NOT INCLUDE JUNE 1986.

THE EIS STATES THAT "ALNW ALSO WILL TRANSPORT PATIENTS TO NON-CONSORTIUM HOSPITALS" (PAGE 22 TOP) WHICH ACCORDING TO THIS DATA ISNOT BEING DONE. COH CLAIMS ITS OBJECTIVE IS TO SAVE LIFES BY SAVING TRANSPORT TIME. DR NEFF, COH'S MEDICAL DIRECTOR, SAID "FOR CRITICAL PATIENTS EVERY MOMENT LOST INCREASES MORTALITY" (PAGE 17 PAR 3). THE EIS CONTAINS SEVERAL STATEMENTS LIKE "THIS TIME SAVINGS CAN REDUCE SUFFERING, DECREASE HOSPITAL STAY TIME AND IN THE MOST SEVERE CASES CAN MEAN THE DIFFERENCE BETWEEN LIFE AND DEATH (PAGE 46 PS)

IF 25% OF THE PATIENTS TRANSPORTED BY CHOPPER

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TO COH COULD HAUE BEEN IN ANOTHER CAPABLE HOSPITAL SOONER, THIS IS NOT SAVING LIFES; THIS IS MARKETING, AND BY COH'S DEFINATIONS, IN THIS 25% THEY ARE INCREASING SUFFERING, INCREASING HOSPITAL STAY TIME etc.

ON JAN 22, 1986, DAUID HUNTER, SPEAKING FOR COH, GAVE A PRESENTATION TITLED "COH STRATEGIC DIRECTION STUDY". IN SECTION 5, STRATEGIC DIRECTIONS, PART A, NETWORKING. FIVE GOALS ARE SET, TWO OF WHICH ARE DECENTRALIZATION AND EMERGENCY TRANSPORTATION SYSTEM, GROUND, FIXED-WING AND ROTARY to COH AS WELL AS BACK TO THE COMMUNITY OF ORIGIN. I GAUE A COPY OF A COH OUTLINE OF MR. HUNTER'S PRESENTATION TO JULIA GIBBS.

MR HUNTERS TALK WAS A GENERALIZATION OF A REPORT TO A GOUERNMENTAL AGENCY WHICH HE SAID WAS CONFIDENTIAL. PLEASE OBTAIN THIS REPORT AND DISCLOSE YOUR OPIONION AS to THE EXTENT THAT MARKETING, NOT SAUING LIFES, IS COH'S INTENT FOR OBTAINING HELICOPTER SERUICE.

to REPEAT MYSELF, DATA SHOWS THAT THIS IS MARKETING, NOT SAUING LIFES, OR TO QUOTE DR. PINKER FROM HIS LETTER IN THE EIS APPENDIX "DIUIDING UP THE BABIES".

IN SUMMARY I ASK THAT COH CORRECT TABLE II

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5/5

AND CONCLUSIONS FROM THE DATA, INCLUDE ALNG PILOTS LOG IN THE APPENDIX, AND THAT ALL REFERENCES LISTED IN THE APPENDIX BE INCLUDED IN THE APPENDIX IN TOTAL.

John Mandenhall
5033-44th N.E.
SEATTLE, WA. 98105

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4217 51 Ave. N.E.
Seattle, WA 98105-4930
October 16, 1986

RECEIVED
OCT 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Holly Miller
Director, Dept. of Construction and Land Use
Municipal Building
Seattle, WA 98104

Dear Ms. Miller:

I am writing about the proposed helipad at Children's Hospital. I am a pediatrician and on the staff of Children's Hospital, so I am not unsympathetic to the need for efficient and effective transportation of sick children. However, I believe that the current plan proposed by the hospital is insufficient and does not contain adequate safeguards for either the patients or the community.

Regarding the patients, while it may seem intuitively obvious that faster transport will enhance survival, this is not necessarily the case and should be documented with good scientific studies. Judging by Dr. Nicola's recent excellent review of the literature on this issue, there are none. A possibly analagous example of the misuse of technology is the situation with monitoring of near-term fetuses, where the use of electronic monitors increases the rate of Cesarean sections but does not necessarily enhance rates of survival of infants. Ground transportation has advantages over air transportation. The only way to resolve situations in which such uncertainty exists is to perform proper comparisons of the available methods on appropriate subjects. Until such a study is performed, one might be able to draw some tenuous conclusions from a review of data from transports performed during last year's snow. During that time, what was the survival rate of patients in comparison to similar patients transported during better weather? I think that Children's Hospital should be required to provide such data to justify the use of an expensive technology, for which the neighbors, the patients, and society at large must pay. It should be analyzed by a third party.

Regarding the community, are they being protected from the strictly entrepreneurial interests of Airlift Northwest and Children's Hospital? What mechanism is there to prevent the abusive use of helicopter transport for all sorts of medically unnecessary purposes? I have heard stories of Airlift Northwest transporting corpses of children. Why should the community suffer this? Will the city allow the proverbial fox to guard the henhouse? What disinterested party is going to monitor the use of a heliport once it is constructed? Who has verified the hospital's data on noise and other environmental concerns? Rather than belabor the issue with a long litany of possible abuses of the community by entrepreneurs, I will simply urge that this issue be considered in light of the recent history of Children's Hospitals relations with its neighbors.

Sincerely,

Thomas A. Bell, M.D.

Thomas A. Bell, M.D., M.P.H.

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JOHN B. STIMSON, M.D.
4715 45TH AVENUE N.E.
SEATTLE, WA 98105

RECEIVED
OCT 15 [illegible]
DEPT. OF CONSTRUCTION AND LAND USE

October 13, 1986

Holly Miller
Director, Dept. of Construction and Land Use
408 Municipal Building
Seattle, WA 98104

Dear Ms. Miller:

I am concerned about the proposal to allow construction of a helipad in the Laurelhurst community on the Children's Hospital grounds. Making this decision involves balancing the resulting disruption and safety risk to the transported patients and to the neighborhood against the benefit that patients might receive from transport that would be more rapid than that by ground. The decision has greater than simply local implications, in that many other hospitals in the state are clearly interested in transporting patients to their institutions by helicopter as well. Others will look to this decision for guidance. It will become a precedent, whether justified of not.

My overriding concern about this situation is that the EIS is not the proper forum in which to consider this decision. Unfortunately, it appears that it is the only approval that Children's will be required to obtain. Assessment of the environmental impact cannot adequately address issues of medical need and medical decision-making, which are the real issues in this case. However, since medical justification of this undertaking is addressed in the text and in Dr. Nicola's appended letter, I wish to take issue with some of the conclusions reached, and request some revisions.

I have reviewed the literature cited in the EIS and Dr. Nicola's letter regarding medical justification, and disagree strongly with the conclusions reached. The EIS clearly states (p. 8) that Children's Hospital is not a trauma center, and that emergent trauma and burn cases in children go to Harborview. Therefore, the patients for whom Children's is requesting their helipad are critically ill children and neonates outside of the trauma or burn setting. The literature cited in the EIS and Nicola's letter, however, examines primarily helicopter transport of <u>trauma</u> victims. The only studies allowing conclusions to be drawn about whether helicopter transport of patients is better for them than ground transport deal soley with trauma cases. The only study cited outside of the trauma setting is mentioned in passing in Dr. Nicola's letter, but not commented upon. (p. 3: Resp Ther 15(2): 47-50, 1985). This is published in a journal that is not considered of

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JOHN B. STIMSON, M.D.
4715 45TH AVENUE N.E.
SEATTLE, WA 98105

sufficient quality to be carried by the Health Sciences Library at the UW (approximately 3300 journals carried), or the respiratory therapy departments of the University of Washington, Harborview Hospital, or the VA Medical Center. It is viewed as more of a magazine than a scholarly journal.

The justification offered for construction of the helipad, therefore, is no justification at all. I ask that the DCLU alter their sections of the EIS on pages 19 and 20 to state clearly that, although some trauma cases appear to benefit from helicopter transport, there is no published evidence that such transport of non-traumatized children or neonates improves, or in fact is not detrimental, to their health. In addition, it would be appropriate to ask Dr. Nicola to re-examine the literature and direct his conclusions to the type of patient that Children's proposes to transfer, rather than to helicopter transport in general.

The latter possibility, that helicopter transport could be detrimental to some patients, is quite real. (Am Med News, p. 33; Sept 5, 1986). This evidence has appeared since Dr. Nicola's letter, and I cannot fault its omission, but I think it should now be included and addressed.

Lastly, table 2 in the EIS (pp. 14-16) is extremely misleading, and should be corrected or clarified. Attatchment "A" suggests that about 20% of patients transported in 1985 (once return flights have been eliminated) were admitted to floors and not to an ICU. However, all of the cases in table 2 are listed as either expiring in the ER, or admitted an ICU. This suggests that the cases have been selected for severity of illness, and are not in fact representative of all patients transported directly to Children's Hospital. If this is the case, the table should read that the cases are selected, and state what characteristics they have been selected for, or be altered to show consecutive unselected cases transported. If I am in error, then the table should state that these are in fact unselected, consecutive cases.

I wish to emphasize that I have the utmost respect for our emergency medical service and its supervisors, and I recognize the contribution that Children's makes to the care of sick children in our state. However, in order to make a major change in the manner in which patients are cared for, it should be necessary to show that patients will benefit from the change, and that it can be done without undue risk to others. Children's has refused to do the former, and has not done a good job of doing the latter. If it is not within the scope of the DCLU to address these specific deficiencies, then it should be taken up by a more appropriate section of city or state government prior to approval. If helicopter transport of non-traumatized children and neonates turns out not to be in

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JOHN B. STIMSON, M.D.
4715 45TH AVENUE N.E.
SEATTLE, WA 98105

patients' best interest, it will be very difficult to alter hospital behavior and patient expectations after the fact. Please consider wisely.

Sincerely,

John B. Stimson, MD

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9 23 86 Bart Barker

3905 48th PL NE
Seattle, WA 98105
September 23, 1986

Julia Gibb
City of Seattle Department
of Construction and Land Use
Room 408
Municipal Building
Seattle, Wa

Dear Ms. Gibb:

For six years I was a Search and Rescue pilot for the U. S. Coast Cuard. I also served for three more years as the Senior Controller in the Coast Guard's Rescue Coordination Center located atop the Federal Office Building downtown. I was responsible for information processing, planning, and launching helicopters from Astoria, North Bend, and Port Angeles, and fixed-wing aircraft from Sacramento and Kodiak. I have worked extensively with MAST, the National Guard, Navy helicopters from Whidbey Island, and the Air Force in conjunction with the National SAR Plan. I am a graduate of the National Search and Rescue School in New York. I have personally been involved in hundreds of search and rescue operations and medical evacuations on both coasts, the Caribbean, Mexico, Alaska, and the South Pacific. I am currently a Captain for Alaska Airlines. I am the 737 Safety Representative for the Airline Pilots Association, and recently completed the Association's Accident Investigation School in San Diego, California.

It is my professional opinion that the Children's Hospital and Medical Center Helistop Proposal is neither necessary nor safe.

It takes 2½ minutes, in rush hour traffic, to drive from the University of Washington Intramural Field to the door of the Emergency Room at Children's Orthopedic Hospital. On Table 2 (p. 14) of the DEIS, from August, 1985 thru June, 1986, the average one-way flight time (from pick-up of the patient to arrival at COH) was one hour and four minutes (1+04). If two of the longer flights are excluded, the average flight time is 46 minutes. The total mission time, including flight time from Boeing Field to COH to pick up the Medical Team, flight time to arrive at the accident scene or the referring hospital, and return to COH, is at least twice the amount of time reported in the DEIS. This does not take into account the initial medical evaluation time, the decision making process, notification, flight planning, and the preflight checks of the aircraft. The time frame we are discussing is obviously not minutes and seconds. In nine years of hands-on operations, I never, ever saw the outcome of a single mission determined by 2½ minutes.

The DEIS would have you believe that the jostling sustained in the transfer from helicopter to ambulance might be dangerous to a critically ill child. Turbulance is primarily caused by low

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level winds. Even light winds, when associated with buildings, hills, or trees can cause moderate to severe turbulance from the surface up to 2000 or 3000 feet in altitude. This, of course, is exactly the operating regime of most helicopters.

I can personally guarantee that the smoothest part of a child's ride will be when it is carefully lifted by the paramedics from the helicopter and placed in the ambulance. To assert that a professional medical team will jostle a small child more than a 46 minute helicopter ride is nonsense.

While the necessity of the proposal seems contrived at best, the safety issues are very real.

The current helicopter landing sight at the University of Washington Intramural Field allows a wide-open, normal, controlled approach profile from all quadrants with no obstructions. The proposed helicopter landing sight at COH is surrounded by hills, tall trees, power lines, tall buildings, an elementary school and a densely populated residential area.

The approach profile proposed by Airlift Northwest calls for a 1500 ft/min rate of descent. A normal approach by a commercial jet aircraft is based on a 500-700 ft/min rate of descent. Remember how that feels on your ears and sinuses and thentry to appreciate the damage possible to a small child with a descent rate three times as great.

The proposed flight path also calls for excessive maneuvering in downwind landing situations. This is always a critical maneuver, but is made more so by the lack of escape routes from the proposed landing sight. A helicopter simply does not enter or sustain hover as well downwind, and a downwind departure with full fuel tanks, medical personnel, and at maximum gross weight, could be particularly demanding.

Emergency Medical Operations are conducted under the rules of Part 135 of the Federal Aviation Regulations. When operating under the Visual Flight Rules of this Part, helicopters must maintain 300 ft altitude over congested areas except in the landing environment. They must not operate under Visual Flight Rules when the in-flight visibility, as observed by the pilot, is less that one-half mile. Contrary to the testimony of the Airlift Northwest pilot in the DEIS, there is no FAA minimum ceiling specified for helicopters.

There are no FAA weather minimums, other than visibility and icing that are restrictions on Part 135 helicopter operations and inflight visibility is determined by the pilot and if the pilot, based on his observation of the weather, believes there might not be icing conditions, regardless of forecasts, then this restriction does not apply.

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FAR Part 135.213(a) states that for operation under VFR, the pilot in command may, if a National Weather Service weather report is not available,"use weather information based on the pilots own observations...."

Under Part 135, and EMS pilot is limited to eight hours flight time in a twenty-four hour period, except in the event of bad weather when there is no restriction.

It is reasonable to assume that a helicopter pilot will do everything in his power to transport a critically ill child, even into a marginal landing environment.

Given a single piloted aircraft, such as the Agusta, in marginal weather conditions, the pilot must not only maintain aircraft speed, altitude, and attitude, monitor critical engine operating parameters, and maintain navigational guidance by reference to his instruments, but he must also maintain visual reference with the surface, all the while talking on the radios and maneuvering his aircraft to avoid obstacles such as hills, trees, power lines, tall buildings, and elementary schools.

There is no question that helicopters play a vital role in the transport of critically ill patients.

I would only ask that you consider the following. First, the need for a helicopter landing site 2½ minutes closer to Children's Orthopedic Hospital is negligible.
Second, the shift from a wide open, inherently safe landing site, to a congested, difficult, and demanding landing site invites incident ranging from the merely injurious, to the catastrophic.

If for some profit motive or marketing consideration this proposal is considered favorably and is brought to fruition, and if one small child dies or is seriously injured as a result of this senseless plan, this community and the city of Seattle should be morally outraged.

Sincerely,

Bart E. Baxter

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COH

4814 Purdue Avenue NE
Seattle WA 98105
522 6201 (24 hr answering)
March 9, 1986

Department of Construction and Land Use
400 Municipal Building
Seattle WA 98104

Reference: Application CU84-022 Helipad at Children's Orthopedic Hospital and Medical Center

Dear People:

Please register my opposition to the proposed helipad. Having heard the approach and departure of the helicopter arrival March 4 or 5 evening, and then discussing the matter including the question of medical need with someone living near the edge of COHMC's property, I'm convinced approval of regular use of the helipad would be a mistake for the community and for Seattle.

Very truly yours,

Thomas E. Savage

Thomas E. Savage

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MAR 12 1987
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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LAURELHURST LETTER

LAURELHURST COMMUNITY CLUB

NOVEMBER | DECEMBER 1986

ALL-COMMUNITY MEETING

BOARD ELECTION TIME AGAIN!

An all-community general meeting will be held to elect members of the Board of Trustees of Laurelhurst Community Club and to discuss ongoing community issues.

TIME: December 11, Thursday, at 7:30 p.m.
PLACE: Laurelhurst Elementary School Auditorium

Except for Kate Hemer and Charlie Saunders, the current Board plus the following people will comprise the slate of nominees: Jack Beck, Adam Bruckner, David Hennings, Lucy Krause, John Kehoe, Jane Johnson, Sara Jane Johnson, and Yori Milo. We will miss Kate and Charlie, but hope that they will continue to attend meetings and help with community issues.

The current issues the Board is dealing with include: Children's Hospital proposed helipad and professional office building, Washington Retirement Park development at Villa Academy, the Beach Club property, other shoreline property, and the Springbrook Professional Building.

Galle and Williams Help LCC

Seattle City Councilmembers Virginia Galle and Jeanette Williams responded quickly to help the Community Club get a review of problems inherent in the plans for the Washington Retirement Park project. Taking time from a busy schedule, Galle and Williams met with representatives of the Department of Construction and Land Use and the Community Club, and followed up by contacting the Mayor.

The Mayor has agreed to consideration of inconsistencies of the plan as approved by the Council with those filed by WRP. Areas of concern include elimination of the cluster concept for independent living units, the project road within the buffer, lack of an effective covenant limiting future development, multiple access roads, and the proposed location of the main road at Nicklas Place N.E.

Kate Hemer

EAA PROPOSES MORE FLIGHTS OVER CENTRAL SEATTLE!

The Federal Aviation Administration is proposing to reroute jet traffic to Sea-Tac airport. Aircraft that now descend over Puget Sound and Elliott Bay would be rerouted to fly over north Seattle on a path that begins at a point 17 miles north of Seattle. When the departure direction from Sea-Tac is south, all arriving jets would be directed to fly directly over Lake City, Ravenna-Bryant, the University District, Capitol Hill, the Central Area, First Hill and Beacon Hill. These aircraft would be allowed to fly as low as 3000 feet.

Since Sea-Tac recently recorded 1000 flights/day (a new record), one could see and hear about 500 flights a day (roughly,30 or more per hour) passing inbound over North and Central Seattle.

CURRENTLY, the approach pattern used depends on flying conditions. The Instrument Landing System is used only when visibility is poor, strong winds are present or it is dark. Visual approaches are used when the cloud ceiling exceeds 3000 ft. and there is 4 miles of visibility at Boeing Field and Sea-Tac. When making a visual approach, aircraft must stay above 8000 ft. until over Puget Sound. They then descend over the Sound, flying over Elliott Bay to the outer marker at Boeing Field. They then make their landing following the Instrument Landing System signal.

THE PROPOSED PLAN would probably result in easier work for air traffic controllers and easier, faster landings for pilots. But, noise now dissipated over water will be moved directly over homes and neighborhoods. Noise levels experienced the worst of days in affected areas with the current plan would endure year around under the proposed plan.

This information was sent to us by the Ravenna-Bryant Community Association. Laurelhurst Board members have received complaints from residents about the noise of aircraft activity in this area, but it would be helpful to have an assessment of whether many people share this concern, especially in view of the proposed increase in air traffic which will impact this area. To express your views, please call or send a note to: Anita Francis, 5003 45th N.E. Seattle 98105, 524-9340. Your comments will be forwarded to the noise abatement office at Sea-Tac and will also help LCC determine whether to take a position on this issue.



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Linda Daniel 329-6000 Jane [illegible] 524-7735
Helen Kellehner Sensenev 52 [illegible]
Dick Louden (Broker) 527-9353

We are Laurelhurst neighbors and associates of Windermere Real Estate. Please call if we can help with any real estate need.

Kenneth Beuche	Betsy Lee	Gloria Hemmings	Lore DiJulio	Sally Maider	Ian Shapiro	Dan Riley
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	Hilde Neurath 524-1100 525-6995		Windermere Real Estate		Barbara Shisler 524-1100 525-8289	

LAURELHURST
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Holly Miller
Dept. of
Constr. & Land Use
600 Fourth Ave.
Seattle, WA 98104

Julia

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

November 20, 1986

Revised letter

Marcia Graber
2294 Old Day Creek Road
Sedro Wooley, Washington 98284

Dear Ms. Graber:

Thank you for sending me your thoughts about the proposed helipad at Children's Hospital and Medical Center (CHMC).

The Department of Construction and Land Use (DCLU) is the City agency responsible for evaluating individual applications with the ultimate decision being made by the City Council. They have asked CHMC to prepare an Environmental Impact Statement addressing factors including noise, safety and cumulative impacts which could result from the helipad.

If you have further questions about the decision process on the helipad, please call Julia Gibb at 625-4509; she will be glad to help you.

I am confident the City's decision on the helipad will acknowledge both the medical needs of children and the concerns of residents in the neighborhood surrounding CHMC.

Sincerely,

Charles Royer

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Childrens

EARLY EDISH
SUNDAY PAPER
JAN 18th

Hospitals' helicopter insurance is sky-high

Associated Press

SPOKANE — Spokane hospital officials say liability-insurance costs for helicopter ambulances are increasing because accidents nationwide are on the upswing.

Spokane's two helicopters have not been involved in accidents, but rates could jump 30 percent to 100 percent because of increased accident rates nationwide.

Nationally, helicopter ambulances have one of the highest accident rates in aviation, said Tom Einhorn, a co-founder of the National Emergency Medical Service Pilots' Association in Houston.

"When you compare it to commercial airlines, we're anywhere from 80 to 110 times worse," Einhorn said.

Those accidents, many involving fatalities, result in tremendous losses for insurance carriers and huge premium increases for helicopter operators.

Mike Ward, a vice president of Spokane's Sacred Heart Medical Center, said the cost of insurance for its helicopter may double in 1987.

Heartflite, Sacred Heart's helicopter, is leased from Eagle Helicopter and has been operating since June 1985.

Coverage for Deaconess Medical Center's helicopter, Lifebird, will increase about 30 percent, said Thomas J. Miller, director of operations at Felts Field Aviation Inc., which provides the helicopter and pilots to Deaconess. Lifebird has been operating for more than five years.

Ward and Miller declined to say exactly how much their insurance costs. But insurance officials and helicopter operators said the price can range from about $70,000 to $150,000 a year.

Deaconess officials said the higher insurance costs will not immediately increase their charges to patients for helicopter transport.

Ward said he was not sure how an increase might affect Sacred Heart's patient bills.

Einhorn said his pilots' association has recorded an accident rate of about 20 accidents per 100,000 hours of flying, about 100 times higher than the commercial airline industry accident rate.

Insurance officials said a single helicopter crash can cost millions.

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Med 9B. Pavilion

Nicola
Noise

LAURELHURST LETTER

LAURELHURST COMMUNITY CLUB FEBRUARY, 1987

Review Pending for Washington Retirement Parks Project

The City's recent determination that the plans for the Washington Retirement Parks Project comply with the Council's conditioned approval has been appealed. The Community Club Board and the Villa Neighbors organization filed separate appeals seeking a review by the City's Hearing Examiner.

Issues in the appeal include: (1) failure to adequately guarantee permanent retention of the required open space; (2) landscaping of the buffers; (3) adequate buffers; (4) limited access; (5) location of the access; (6) the lack of specificity necessary to assure conformance with the City Council's approval; and (7) the failure to include features important to the City in its approval of the preliminary plans, such as clustering the residential units and orienting all buildings facing the lake rather than the existing neighborhood.

The Hearing Examiner will hold a hearing on the appeals. The Examiner may: approve the City department's determination that the plans substantially comply with the Council approval of preliminary plans; may direct specific changes to the final plans; or may find that the plans do not substantially comply with the Council authorization, in which case the application would be remanded for processing as a new application.

A considerable effort was made in November to get the City to ask for revisions to the plans to address community concerns. Councilmember Virginia Galle spoke with Mayor Royer who (she understood) agreed to arrange a forum for possibly resolving some of the issues. However, this did not occur. The Department of Construction and Land Use (DCLU) issued its decision setting an appeal deadline of Christmas Day. To correct a clerical error, DCLU is reissuing the notice of its decision providing additional time for filing appeals. The first notice did not provide the correct time period for filing.

We have now determined that DCLU issued a preliminary approval well over a year ago, long before the community knew of the existence of revised plans. Unfortunately, there was no opportunity in the DCLU approval process for comment to the City prior to this commitment.

Kate Hemer

LCC Board

At an all-community meeting on December 11, 21 trustees were elected to the Board: Bettie Amick, Liz Anderson, Dick Barnum, Jack Beck, Adam Bruckner, Mike Bush, Margaret Campbell, Anita Francis, David Hennings, Al Hovland, Jane Johnson, Sara Jane Johnson, John Kehoe, Bob Klug, Lucy Krause, Ed Lapic, Rich Morse, Jane Piehl, Myron Sayles, Maryann Spangler, and Annie Warsinske. In addition, Kate Hemer and Jerry Schneider, experts on land use issues, continue to provide vital support to the Board.

At the JANUARY Board meeting, officers were elected: Bob Klug, President; Liz Anderson, Vice President; Ed Lapic, Treasurer, and Al Hovland, Secretary.

At the NOVEMBER Board meeting: Board members talked with Jim Street, Chair of the Seattle City Council Land Use Committee. We discussed problems with the multi-family and major institutions codes, primarily.

Property at 4000A 55th Ave NE: Dixie Porter reported a great ending for the issue involving that property. The neighbors bought the lot at a foreclosure auction. A covenant will be placed on the property, turning it into a non-buildable lot. Community support really helped. The lot is prone to landslide.

NW Juvenile Court Conference Committee: Annie Warsinske serves on this committee, which has the power of the Court to reach disposition of cases to help keep youthful offenders out of the court system.

The DECEMBER Board meeting was the annual Christmas dinner for the Board at Bettie Amick's. It was a very pleasant evening, and many thanks go to Bettie for hosting it.

The JANUARY Board meeting centered on a review of the many issues facing Laurelhurst, including the Villa Retirement Center, Helipad and Medical Office Building at Children's Hospital, Billboard, vandalism at the Community Center, downzone of some multi-family and single family areas, the Neighborhood Planning Study, 45th Street Condominium, and Sea-Tac Overflights. Proposed change in the Board's committees was discussed at length and tabled until the next meeting.

Al Hovland and Anita Francis

February Calendar

LCC Board, St. Stephens Church, 9 February, 7:30 pm
Northeast Regional Council, University Congregational Church, 5 February, 7:30 pm
Seattle Neighborhood Coalition, Dog House Restaurant, 2230 7th Ave, 14 February, 9:00 am
Central Seattle Community Council Federation, Office at 509 10th East, 7:30 pm, Feb. 26.

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Children's Hospital Heliport Update

Children's Hospital has offered a new proposal to limit the number of helicopter flights using the helipad they want to build on the hospital grounds. Although the Hospital's draft environmental impact statement says that all helicopters transporting children to the hospital would land on the hospital helipad, the hospital now says the helicopters would land at the hospital only when transporting children whose lives are in immediate danger. Nancy Greenawalt, hospital spokesperson, has said that out of 200 children airlifted to the hospital since the flights began, only 44, or about 2 a month, actually were flown directly to the hospital. The others landed at Harborview Medical Center and were then brought to Children's by ground ambulance.

A final impact statement, due for publication very soon will incorporate the new standard as the hospital's preferred alternative, Greenawalt said.

Area residents who have been concerned about the hospital heliport location still need to worry about the new proposal for a number of reasons:

1. Once a camel gets his nose in a tent, the rest of the camel usually ends up there too. Similarly, once a few flights to Children's heliport are allowed, it is difficult to envision any successful ways of limiting the number of flights. The City has not been able to stop unauthorized landings which have been taking place, so how can they stop overuse of the facility if permission is given to use if for "only a few flights"?

2. A recent study by the Aviation Safety Institute of Columbus, Ohio, shows that the current safety record of aeromedical helicopters is the worst in modern aviation history. 1986 was the worst year yet, with 31 accidents resulting in 21 deaths. A comparison of the accident rates for various aircraft is shown below.

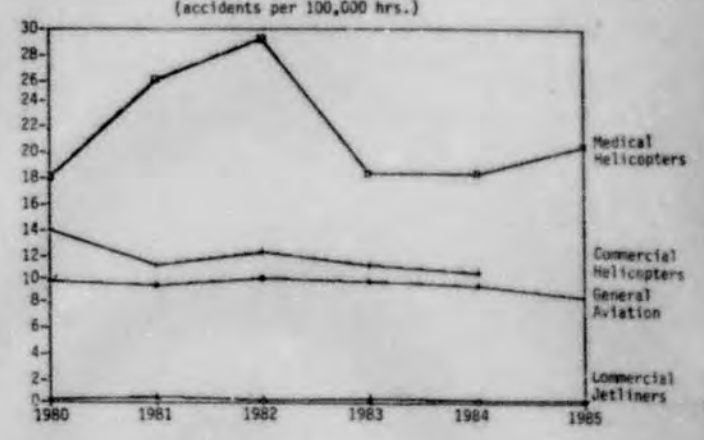
Neighbors are concerned that the safety risk to the community does not justify flying in helicopters to the cramped Children's Hospital site, especially since an alternative is nearby. The University of Washington soccer field is only 3 minutes away, has been approved by the University as a paved helipad, and is a wide open site, far away from hills or residences. Why choose an unsafe site when a safe one is so near ?

3. In spite of the fact that government officials health planners, members of this community, and others have called for a regional plan for the coordination of air services for over two years, no planning study has even been started. Children's with their influence and political savvy, could have taken a lead in promoting such a plan. Without a plan, serious problems will result, as pointed out by Dr.Bud Nicola, King County Health Director. These problems could include a proliferation of unneeded air ambulance services, inappropriate uses of the services to make them cost-effective, and a failure to address safety concerns.

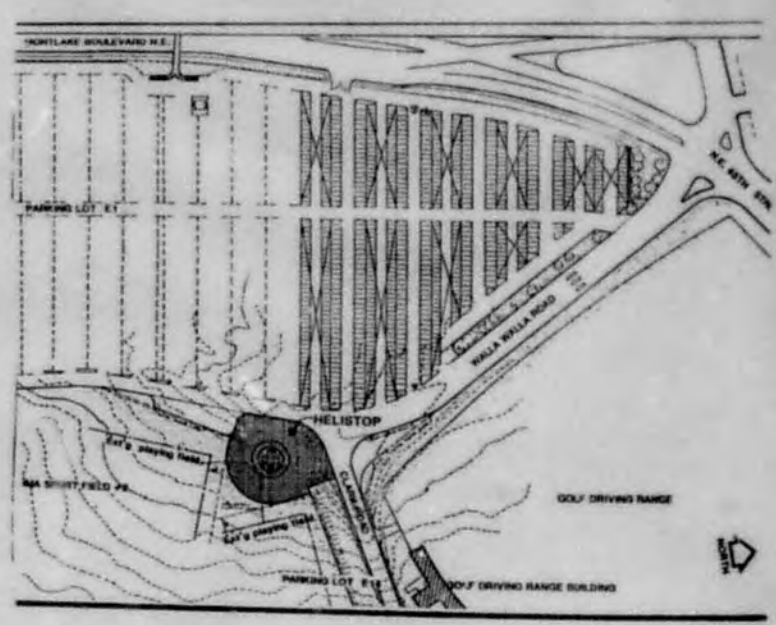
4. There is no enforcement, supervision, standards, or planning associated with air ambulance services, as no agency is responsible for monitoring them. Unfortunately, however, there are many changes which will occur at all landing sites and in the helicopter operations over time. Most of these will have a direct impact on the safety of helicopter operations. Yet, there is minimal or no supervision, no agency looking at these factors as a whole. These include changes in flight paths, changes in the hospital size and proximity to the helipad, and helicopter personnel such as pilots and mechanics.

Let's keep the camel out of the cent, the helicopter out of residential neighborhoods, and the helipad at the safest site than can be found say Citizens Concerned About Helicopter Transport.

U.S. AVIATION ACCIDENT RATES
(accidents per 100,000 hrs.)



	1980	1981	1982	1983	1984	1985
Medical Helicopters	18.2	26.1	29.3	18.5	18.5	20.7
Commercial "	13.91	11.16	12.17	11.18	10.54	
General Avaition	9.86	9.51	10.1	9.86	9.56	8.56
Commercial Jetliners	0.221	0.38	0.233	0.346	0.19	0.21



EAST CAMPUS HELISTOP SITE

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Uproar Over Jets

Complaints are soaring because of the increasing noise from jet airliners. Laurelhurst is heavily impacted from noise of (1) aircraft departing to the north and turning east, as well as (2) aircraft arriving from the north on the instrument arrival route at an altitude of only 2500-3000 feet (above mean sea level).

An informal survey conducted in the most recent Laurelhurst Letter indicated that many Laurelhurst residents are upset by the aircraft noise. Forty-one people responded to the poll, and for every one who responded, there are probably several others who did not voice their annoyance. Unfortunately, without action on the part of local residents, it is likely that aircraft noise will continue to increase here.

More noise likely: Due to complaints by Eastside residents, the Federal Aviation Administration is considering a change in the East Turn as an experiment. This "scatter plan" would spread out East Turn departures so that they would scatter more widely (mostly northerly) over Lake Washington than they currently do. This means that the neighborhoods north of the Evergreen Point Bridge will experience more overflights.The experiment is tentatively scheduled to run four months--April to July.

The Port plans to monitor community acceptance of this East Turn scatter plan by the number of phone calls received by the Port's Noise Hotline. As shown on the map on the back of this page, more complaints are already made by residents of Laurelhurst and nearby areas (zone 12) than by Eastside residents (zone 13). Unless Port Hotline receives even more calls from us, the Port will assume that the experiment is a success and make the change permanent.

This scatter plan has significant problems. First, it does not take into accour the fact that Laurelhurst and other nearby communities are already heavily impacted by aircraft arriving from the north on the instrument arrival route, at a low altitude, as well as seaplane traffic and other small planes. No ground level noise monitoring has been done to determine which North Seattle areas are most heavily impacted already and what effect this East Turn scatter plan would have.

Second, the scatter plan is an abandonment of the noise abatement procedures now in effect. These noise abatement procedures should not be lifted without careful study of the effects.

Third, the monitoring of the impact of the scatter plan, by use of the Noise Hotline, is most likely to be biased. Some have noted that the Eastside residents who are complaining about East Turn noise are few in number but very vocal and well-organized.

Actions can be taken that will help. The Central Seattle Community Federation has adopted a resolution stating its concern about the current aircraft noise level and opposing any changes that would increase jet flights over residential areas. The resolution lists positive steps: 1) Route aircraft over water and industrial areas so as to impact and put at risk the fewest people, (2) maintain the highest possible elevation for aircraft using the gradient slope descent for landing at Sea-Tac, (3) encourage airlines to use the quietest aircraft, (4) use curfews, (5) resist expansion of the airport if it means an increased number of flights over populated areas, and (6) conduct aircraft noise monitoring studies.

Helpful actions at this time include writing to Jim Wright, President of the Port Commission, Sea-Tac International Airport, P.O.Box 68727, Seattle 98168. Frequent calls to the Port's Noise Hotline are also important: 433-5393. They won't know planes bother us unless we tell them!

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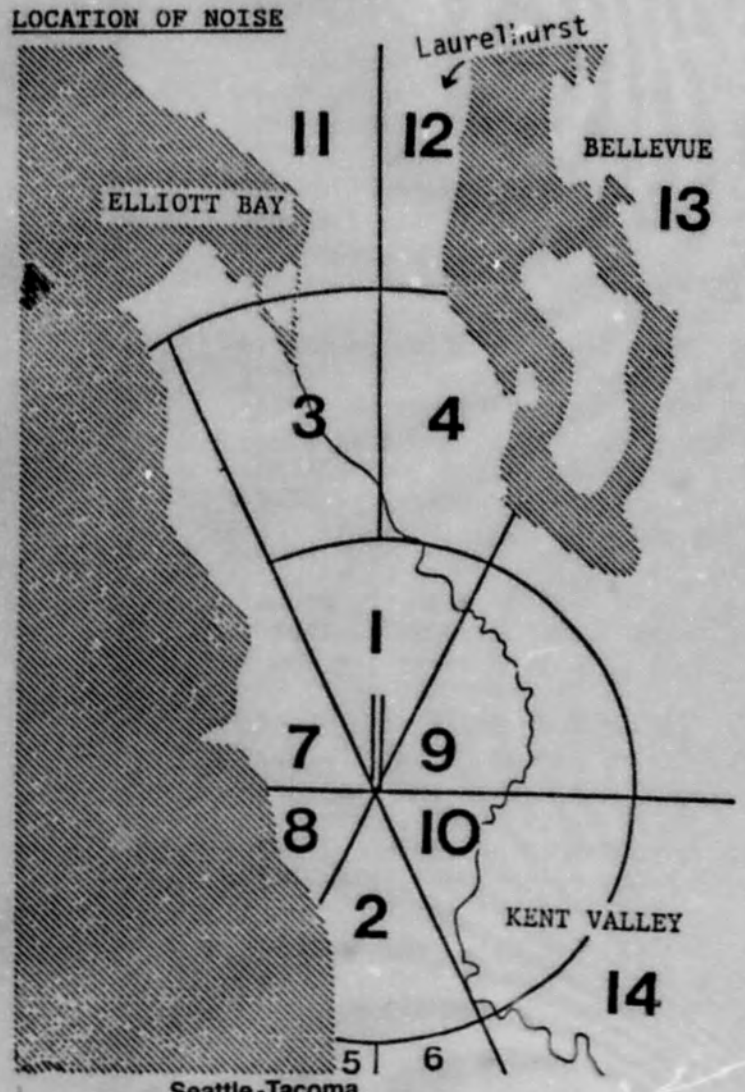
Port of Seattle

AIRCRAFT NOISE HOTLINE (433-5393) SUMMARY
SEATTLE-TACOMA INTERNATIONAL AIRPORT

TIMETABLE — JUNE, 1986

Number of Sea-Tac Related Complaints Received for Month	228
Busiest Noise Complaint Day of the Month	(Mon) 06/23/86
Number of Complaints on 06/23/86	17

LOCATION OF NOISE



	Number of Complaints	% of Complaints
Zone 1	82	36.0
Zone 2	32	14.0
Zone 3	1	.4
Zone 4	5	2.2
Zone 5	2	.9
Zone 6	5	2.2
Zone 7	4	1.8
Zone 8	6	2.6
Zone 9	11	4.8
Zone 10	1	.4
Zone 11	12	5.3
→ Zone 12	34	14.9
Zone 13	24	10.5
Zone 14	1	.4
Other	8	3.5
Unknown	-	-
TOTAL	228	100.0%

Seattle-Tacoma
International Airport
P.O. Box 68727
Seattle, WA 98168 U.S.A.
(206) 433-5388
Telex 703433

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BREAK-IN NEAR LAURELHURST ELEMENTARY SCHOOL

At about 11 a.m. on Tuesday, January 20, a Laurelhurst resident returned to her home near the Elementary School and saw a man walking down the street with two of her suitcases. She entered her house and, seeing that it had been ransacked and burglarized, called the police. She was able to describe the vehicle the man had gotten into. Later, the police apprehended him, but there were no stolen goods in the car, so they had to let him go. The car has been seen since then, with two men in it, driving slowly along Laurelhurst streets.

Unclassifieds

FOR SALE:

3 stereo speakers (AR-25) $100; Porsche bra cover (new) $35; Portable SCM typewriter $35; Bike panier rack with panniers $40; 1 set panniers (new) $40. Call eves or week-ends 527-1350.

Great looking, coordinated boy's ski outfit. Red & navy. Roffe stretch pants, size 16, CB Sports hooded jacket, man's small, and matching sweater size 16. Call J. Sayles 527-4878.

Cowichan Lake Indian sweater. Hand knit in 1935. Call 525-6363.

9-drawer, 78 in. long, pecan buffet. Handsome piece with brass pulls. $180. 522-8903.

WANTED:

Need R.N. to give IV push injections in patient's home or in your home if you are in Laurelhurst. Call 527-8824.

Desperately seeking nice condo unit at Crystal Mt. for President's Weekend. Responsible family, non-smokers, will pay top $ now. 525-6662.

Want garage to rent. I am willing to assist in the cleanup and repair of your garage to make it usable as a rental space for my boat & trailer. It would still be possible for you to use the garage for misc. garden tools, etc. Jack McGary, 522-3727.

Need infant crib, Gerry Baby Backpack Carrier; "twin" stroller. 526-1320.

Need childcare for 2 yr.old & 3 mos. old in our Laurelhurst home starting in April. MON & TUES ONLY. Call 526-1320.

Babysitter wanted on as-needed basis for infant in my Wallingford home. 632-7650.

SERVICES:

Day Care/babysitting by loving mother. My home. reasonable rates, flexible hours. I live across from grade school. 527-9662.

Classified ads, except repeatedly placed ads for commercial services, are free to Laurelhurst residents. The deadline for the March newsletter is February 16. Mail to Anita Francis, 5003 45th NE Seattle 98105

45th STREET CONDOMINIUM APARTMENT BUILDING

Since our last update, several things have happened behind the scenes. In late summer, 1986, two of the investors in Laurelhurst Associates, the partnership that now owns the two lots, had another architect, developer, and potential investor, Roger Newell take a look at the project. Bob Klug and I met with him and reviewed some initial ideas and sketches he had done on a redesign of the project. Although the total number of units had been reduced to 12 from the original 15, and the exterior was more esthetically pleasing than the original design, the height, bulk, and scale of the original design remained basically intact. This was unacceptable to the NE 45th Street Concerned Neighbors, but we thought it was a step in the right direction and asked to continue the discussions.

Shortly thereafter, Bob Klug and Attorney Jim Leach made a presentation to one of the partners for the Laurelhurst Associates to sell the two lots with substantial tax benefits and to minimize their out-of-pocket losses. The lots, if they were willing to sell, would be bought by a group of people within the community, or by a fund-raising effort of the recently established Laurelhurst Park and Open Space Foundation. The investors decided, however, not to sell and to proceed with the original plan of the 3 story, 15-unit structure.

In August 1986, our attorney, Peter Eglick, filed an appeal of the permit to the Land Use Committee of the City Council. Their attorney requested and was granted a one month delay in filing his comments on our appeal; the deadline was September 5, 1986. Through mid-January 1987, their attorney had still not filed their comments and response regarding our appeal to the Land Use Committee.

As soon as the hearing date is set, we will notify you and will ask that you attend the public hearing to let the City Council know that the community does not want this proposed project.

Additionally, we are still in need of money so that our attorney and architect can make a full and complete presentation of the facts in this case to the City Council. It is crucial that we get the Council to deny the building permits for the proposed project in favor of a structure or structures more like the surrounding development (single family and two-story townhouse condos). We have appreciated your contributions and support in the past and ask that you send your contributions to the NE 45th Street Concerned Neighbors, 4027 NE 45th Street, Seattle 98105. That you for your help and continued support. Myron Sayles

Mail Contribution to:
NE 45th Street Concerned Neighbors
4027 NE 45th
Seattle, WA 98105

Name_____

Telephone_____

Address_____

Date_____

Contribution: $10 $25 $50 $100

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Jane Piehl 522-8208
Myron Sayles 527-4878
Maryann Spangler
Annie Warsinske 524-0739

We are Laurelhurst neighbors and associates of Windermere Real Estate. Please call if we can help with any real estate need.

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527-9600	524-3928	527-8903	527-0212	524-7728	524-9386	525-7658

Hilde Neurath 524-1100 525-6995

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Anne Quinn 522-8918 Peggy Bush 525-7686
Linda Daniel 329-6000 Janet Stover 524-7735
Helen Kelleher Sensenbey 522-8297
Dick Louden (Broker) 527-9333
3616 NE 45 St 522-6411

Q U O R U M
Wm. Todd Cahill, Associate Broker
Quorum Real Estate, Laurelhurst, 3501 N.E. 45th St., Seattle, WA 98105, (206) 522-7003, Res. 525-8445

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Maggie & Jeff Weissman 524-4873 (Orders Welcome)

Increase in helicopter crashes raises concerns

By LAWRENCE KILMAN

NEW YORK (AP) — When a helicopter ambulance plowed into an Oregon wheat field the same day one crashed in Tennessee, it brought instant national attention to a problem that has concerned Don Wright and Tom Einhorn for more than two years.

"It is an industry in distress. We are experiencing the worst accident rate in modern aviation history right now," said Einhorn, who with Wright founded the National EMS Pilots Association in 1984.

Helicopters as ambulances are among the newest, fastest-growing medical care services. Four such services existed in 1978; today almost 150 are in business.

In emergencies, helicopters are faster than ambulances, especially in rural areas or traffic-jammed cities. They routinely transfer patients to hospitals where specialized treatment is available. About 75,000 patients will be flown this year, up from 62,400 last year, said Howard Collett, editor and publisher of Hospital Aviation magazine. Industry estimates say about 20 percent of patients served by helicopters would have died without quick attention.

But at the same time, accidents have been mounting.

A pilot, a nurse and a paramedic were killed in the Oregon crash near Pendleton Dec. 3; a patient, a pilot and two nurses died in Tennessee hours later. The two accidents were the 30th and 31st medical helicopter accidents reported in 1986 to the National EMS Pilots Association, which offers the most complete such statistics. Twenty-one people were killed in accidents in 1986.

In 1985, 13 people died in 14 medical helicopter accidents.

Based on hours of flying time, medical helicopters are twice as likely to crash as other types of helicopters, and 2.5 times as likely to crash as small planes and other noncommercial aircraft, according to the pilots' association.

Helicopter rescues are more dangerous than other types of flights because pilots may have to land on highway median strips or in fields, facing ground hazards unknown at conventional landing pads. And such pilots accept risky missions more readily, knowing patients' lives are literally in the balance.

Most of the minor accidents in 1986 were caused by mechanical problems — power losses, doors falling off in flight, fuel linkage problems. The more serious accidents occurred when the helicopters struck power lines or were flown into the ground, accidents where pilot error and weather conditions often were contributing factors.

"I guess you can understand that flying to an accident in the middle of the night where you have two or three people pinned in a car can be a stressful situation," said Einhorn.

"We don't have the luxury other pilots have. We don't know where we're going days in advance. We have about five minutes' alert. You have to get into the air, know where you're going, in an area you've never been to before at 3 o'clock in the morning in marginal weather."

The pilots' association contends fatigue is the most serious problem and wants helicopter services to add more pilots. It also says better training and navigation equipment for hazardous weather flying are necessary.

"This industry is growing so rapidly, anyone can come in and put a medical helicopter in a hospital," Einhorn said. "You can put a Bell 47, like you see on 'M*A*S*H,' and put one pilot in there and call yourself an EMS (emergency medical service) operation."

"With any growth comes problems, and this is a problem we need to deal with," said Nina Merrill, executive director of the American Society of Hospital-Based Emergency Air Medical Services, an industry group of 145 members that started in 1980 with 25.

Most emergency medical service helicopters are rented to hospitals by private companies, and Merrill's group has been providing safety guidelines.

So has the National EMS Pilots Association, consisting of about 300 doctors, nurses, paramedics and mechanics as well as pilots. The two groups sometimes disagree.

Merrill said a new list of improved minimum safety standards has been drafted and will be submitted to members for approval.

Separate guidelines drafted by the pilots' group call for a minimum of four pilots to work different shifts for each aircraft. Einhorn said such staffing is needed to avoid fatigue problems.

"I'm not sure you can write one standard across the board, based on the geographical diversity of our members," Merrill said. "If you have one aircraft doing 90 flights a month, I don't think any two people can keep up with that. But if you're doing 30 flights, that's a different story."

Scott Tish, the lone pilot for Lifeguard, a Pendleton-based organization that lost three employees in an October crash, said he is not a member of the pilots' association, but he plans to join the group.

"For a long time I think the pilots were considered to be little more than truck drivers," Tish said. "I think this association takes into consideration the pilots' needs and concerns.

"They have set up what they consider to be a model system, and I think it's all great, but it costs a lot of money," Tish said, adding that Lifeguard plans to hire two more pilots. "But what they are aiming at is good."

David Long, director of Life Flight, based at Emanuel Hospital & Medical Center in Portland, said his pilots are members of the pilots' association.

"The group will have credibility as long as it doesn't become strictly a union group," Long said. "I support anything that increases safety. We plan to hire a fourth pilot by April and that will make us one of only six programs in the nation to have four pilots."

Einhorn said the industry should set new safety standards quickly, or the government is likely to step in with its own regulations — a move neither the pilots' group nor the industry group wants.

"If something isn't done in a hurry, nobody is going to have to worry about regulations because this industry will cease to exist," Einhorn said.

The accidents already have raised governmental concern.

The National Transportation Safety Board intends to study the safety of EMS aircraft next year, said Ted Lopatkiewicz, a spokesman for the agency.

The board does not generally study "public use" helicopters such as emergency response aircraft, but the new study is needed "because we just noticed, reading the papers, that there are more of these accidents," Lopatkiewicz said.

Mike Burke, chief pilot for a helicopter company involved in a fatal crash in Michigan in foggy weather, said pilots had requested new equipment for flying in bad weather before the crash occurred.

"From the hospital's point of view, they really didn't understand what we were talking about," he said. "But an accident makes it very dramatic. We now have the kind of aircraft we were talking about."

Helicopter accidents

Thirty-one emergency medical helicopters were involved in accidents in 1986, with the loss of 21 lives, as reported by various sources to the National EMS Pilots Association. Locations are where the helicopter was based, not necessarily where the accident occurred.

	Date	Place	How accident occurred	Casualties, if any
1.	Jan. 19	Baltimore	Crashed into trees	Two killed
2.	Jan. 26	Santa Ana, Calif.	Struck wires on takeoff	Minor injuries to four
3.	Jan. 27	Missoula, Mont.	Struck building on takeoff	No injuries
4.	April 5	Pittsburgh	Power loss on takeoff	No injuries
5.	April 19	Los Angeles	Propeller hit unknown object while hovering	No injuries
6.	April 25	Chicago	Tail rotor struck building on takeoff	No injuries
7.	April 30	Galveston, Texas	Engine cowling fell off in flight	No injuries
8.	May 4	Galveston, Texas	Baggage door dropped off in flight	No injuries
9.	May 8	San Diego	Power loss at takeoff	One injured
10.	May 28*	Norcross, Ga.	Power loss in flight	No injuries
11.	June 2	Jackson, Miss.	Struck wire	Three killed
12.	June 10	Columbus, Ohio	Helicopter on ground hit by a truck	No injuries
13.	July 2	Houston	Engine cowling fell off at takeoff	No injuries
14.	[illegible]	Houston	Propeller hit [illegible] during hovering	No injuries
15.	Jul[illegible]	Post Falls, Idaho	Window fell off in flight	No injuries
[illegible]	[illegible]	Augusta, Ga.	Struck wire at takeoff	No injuries
[illegible]	[illegible]	Durham, N.C.	Power loss in flight	Five minor injuries
[illegible]	[illegible]	Greenville, N.C.	Hydraulic failure in flight	No injuries
18.	[illegible]	Charleston, S.C.	Fuel linkage failure in refueling	No injuries
19.	[illegible]	Grand Forks, N.D.	Unanticipated acceleration in flight	No injuries
20.	Aug. 10	Missoula, Mont.	Struck ground at takeoff	Four injuries
21.	Aug. 23	Tyler, Texas	Struck wire at takeoff	No injuries
22.	Aug. 23	Ann Arbor, Mich.	Engine failure at takeoff	No injuries
23.	Aug. 29*	Pensacola, Fla.	Engine failure during landing	No injuries
24.	Sept. 21	Durham, N.C.	Engine or wing fell off in flight	No injuries
25.	Sept. 23	Winston-Salem, N.C.	Struck ridge in flight	Three killed
26.	Nov. 2	Kodiak, Alaska	Struck ground	Six killed
27.	Nov. 5	Lewistown, Pa.	Struck bird in flight	One minor injury
28.	Nov. 7	Billings, Mont.	Tail rotor struck unknown object	Three injuries, two serious
29.	Dec. 3	Nashville, Tenn.	Struck ground	Four killed
30.	Dec. 3	Pendleton, Ore.	Struck ground	Three killed
31.				

* The pilots' association says the accidents were reported without dates, and the association refuses to supply the information, precluding an independent check.

The Oregonian/ Associated Press

"We don't have the luxury other pilots have. We don't know where we're going days in advance."



CIVILIAN **MAST** MILITARY ASSISTANCE IN SAFETY & TRAFFIC COMMITTEE OF STATE OF WASHINGTON, INC.

801 Broadway Suite 927 Seattle, Wash 98122 (206) 682-6333

RECEIVED
OCT 20 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

October 15, 1986

Ms. Julia Gibb
Seattle Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Re: Comments on DEIS Children's Hospital Heli-Stop

Dear Ms. Gibb:

I have reviewed all MAST Flights for the past ten years as a part of my regular duties with the MAST Coordinating Committee.

On only one occasion, in the winter of 1986, was it necessary to deliver an infant directly to the hospital's door, rather than landing at Graves' Field.

My data shows no other bad patient outcome resulting from landing at the Grave Field site.

Last winter I asked the Seattle Fire Department, Chief Jerry Burt and Shepard Ambulance, Mr. Ken Ruef, if they knew of any bad outcomes occuring during the transport of pediatric patients from a MAST helicopter at Graves' Field to Children's Hospital.

Neither activity knew of any of any bad result at that time.

Warm regards,

Jay M. Kranz, MD., Chairman
MAST Coordinating Committee

cc: Capt. Dan Madden

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October 17, 1986

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DEPT. OF CONST. & LAND USE

Holly Miller, Director
Department of Construction and Land Use
408 Seattle Municipal Building
Seattle, WA 98104

Subject: DEIS on Helistop Proposed by Children's Hospital

Dear Director Miller:

The DEIS is seriously inadequate.

The environmental disclosure should be accompanied by a master plan to enable the community and the City Council to evaluate the proposed helistop in light of the proponent's long range planned use of the site. The major institutions policy states that a master plan shall be required when development is planned which, when taken into account with other recent development within the boundaries, creates a significant cumulative impact on the surrounding area. Recent development within the COH boundaries includes an increase in the Hospital's short stay facilities, doubling of its oxygen storage capactiy, development of an employee center and a proposed mixed use development to cover more than 132,000 sq.ft. and have more than 600 occupants and an undisclosed number of visitors. A program change to staff a trauma center is also underway.

The environmental effects of the proposed helistop operation must be analyzed in conjunction with the application for a helistop by the University of Washington Hospital and the proposal for a master plan by Harborview Hospital. SEPA requires that proposals that are related to each other closely enough to be in effect, a single course of action shall be evaluated in the same environmental document. SEPA also provides that agencies may analyze similar actions in a single environmental document.

The helistops proposed by all three hospitals are specifically intended to serve Airlift Northwest. Only through a consolidated review of the need, projected use, and environmental consequences can alternatives be evaluated which supercede the corporate turf and financial interests of the individual hospitals. One such alternative which should be evaluated to determine if it would provide superior medical care while minimizing adverse effects on residential communities is the proposal to centralize emergency medical care requiring helicopter transport at Harborview, the region's trauma center.

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The DEIS does not address the City's residential land use policies or other pertinent policies such as Goals of Seattle 2000. A more complete discussion of the proposal in relation to the major institution policies is needed including a review of implementation guideline seven which calls for decentralization of facilities.

The proposal is based upon an unsubstantiated assumption of need making the projections for use and environmental impact determinations problematic. An analysis of the need must be accomplished.

If credibility is to be given Dr. Nicola's determination of need, it must be documented. What questions were asked? Of whom? What control of bias was maintained? How do Nicola's findings compare with other researchers investigating the relative benefits of interhospital transport of patients by helicopter compared with ground transport?

In light of testimony in September's AMA News by Dr. Ronald Stewart, (President of the National Association of EMS Physicians), the Nicola recommendation is highly questionnable. Stewart states that data is sparce and that "we are not certain that air transport improves patients outcomes; [in fact] preliminary data suggests that it may be detrimental."

Because it is natural to assume there is a need for helicopters when health and safety issues are involved, I will remind you of some local history. In the early 1970s, the Seattle Police Department operated two helicopters. As I recall, the hard questions on need came only after an accident during a "joyride" to view skinny-dipping off the Arboreteum freeway ramp. An analysis of need (the Clayton Report) established that for the police work, the helicopter was one-half as effective and twice as costly as the patrol car. It's been more than a decade since we've "needed" police helicopters.

Not only is the need unsubstantiated but the projections for use and therefore the expected environmental impacts are purely speculative. Children's Hospital, which advertizes widely on TV and in both Time and Newsweek, has proposed no limitations on the use of the proposed helistop.

How does the proponent intend to restrict occurrences to life threatening emergencies? What are the triage guidelines which will be used in the operation of helicopters coming into the helistop? What is the protocol which will govern the dispatch of service? What review of the use is proposed?

Do the projections exclude transfers of patients who could be safely transferred by ground or to a closer qualified

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hospital? Do the projections exclude trauma and burn patients who should be sent to Harborview?

What marketing activities will COH pursue which will affect the level of helistop activity.? Has this proposal been integrated into state, and regional and local EMS programs to assure that the projections of COH's share of the market are reliable?

What charges will be imposed on patients using the service? And what ramifications will the charges have on the patient or physician either in selecting the helicopter as a means of transportation or in determining that COH is the appropriate hospital?

The hospital should define the patients for whom the service is intended, detail the triage practices it will impose, develop use projections which are tied to population data and regional service areas and provide for a strong internal audit function before a meaningful analysis of the environemntal impact can be made.

Just as with the projections of use, the projections of impacts based on the proposed flight paths are speculative. No one but the pilot has control over landing and departure. The impacts projected based on the type of helicopter use is also conjecture as COH has no control over the type of helicopter landing at the site.

Because of the impacts which cannot be mitigated, the proposal should be revised to strictly define the need, establish enforceable means of restricting occurences and give weight to alternatives which limit the number of sites and locate the site(s) so as to minimize impacts on residential communities. Such a revision is needed if the proposal is to be described in terms of the objective rather than the proponent's preferred solution.

Sincerely,

Kate W. Hemer

Kate W. Hemer
4537 55th Northeast
Seattle, WA 98105

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To: Julia Gibb

Lothar H. Pinker, M.D.

GENERAL SURGERY
TRAUMA

1201 - 116TH NORTHEAST
BELLEVUE, WA 98004
206 - 454-5331

RECEIVED
NOV 25 1986
DEPT. OF CONST. & LAND USE

19 November 1986

Nancy Greenwalt
Director of Government Affairs
4800 Sandpoint Way N.E.
BOX C-5371
Seattle, WA 98105

Dear Miss Greenwalt,

As we discussed, I'm enclosing for you a copy of the Draft materials on Air Ambulance Criteria. This is beginning to be drafted in proposed WAC form. Some of the areas that are still open to negotiation deal with the interaction between air transport units and the County medical program director in which a patient is to be picked up. This is of particular concern in areas outside of King County in the prehospital helicopter mode. In King County, the only area of concern that I have been able to aduce so far is that realative to use of helicopters to transfer patients either prehospital or interhospital to Children's Orthopedics. Since the medical director of the helicopter service must receive letters of designation from the County medical program director, (in this case Dr. Nicola) and there will be some sort of requirement by the County medical program director for run review, how Children's Orthopedic finally comes out in this local hassle will depend upon negotiations with Dr. Nicola.

While I am somewhat heartened by your recent conversation suggesting that the apparent public posture demonstrated by Children's Orthopedic medical director program directors a year or so ago is in a changing state, I am afraid the public controversy surrounding Children's Hospital and the use of helicopters will make necessary some form of run review involving adequate medical considerations besides those of the Children's Orthopedic positions and Dr. Mike Copas. Such a review may do nothing to quiet the continued furor of the Laurelhurst community, but certainly should go far to answer concerns that exist in the legitimate medical community.

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As you can see, this is a working document which will ultimately be designed to have affect across the State, so such doesn't significantly hinder Children's Orthopedic hospital nor help the Laurelhurst community as in all matters that deal with these types of controversies, the Washington State Medical Association committees try to deal with issues related to quality of patient care and patient care safety. Local issues must perforce be acted out on the local stage beyond the sphere of the Washington State Medical Association. I hope this information is helpful to you. I would happy to discuss this further if I can be of any assistance to COH or the Laurelhurst community in resolving their problems.

Sincerely yours,

L.H. Pinkers, M.D. FACS

LHP:ys
cc: Dr. Bud Nicola
Holly Miller

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No enforcement

October 29, 1986

AIR AMBULANCE POLICIES
EMERGENCY MEDICAL SERVICES
STATE OF WASHINGTON

DRAFT

PURPOSE

The purpose of this document is to set forth air ambulance policies adopted by the State of Washington Department of Social and Health Services to promote and protect the health and safety of the people of this state. Field use of an air ambulance shall only occur when there is reasonable cause to believe that the patient's death or increased morbidity will result if any means other than air ambulance is utilized.

DEFINITIONS

A. Department

The State of Washington Department of Social and Health Services

B. Committee

The Emergency Medical Services Advisory Committee appointed by the Governor, pursuant to RCW 18.73.040.

C. Air Ambulance

Any privately or publicly owned air vehicle specifically designed, constructed or modified which is intended to be used for and is equipped with the intent to be used for the transportation of individuals who are sick, injured, or otherwise incapacitated or helpless.

D. Local Medical Program Director

A licensed physician authorized by the department to perform duties specified in RCW 18.71 and 18.73.

E. Basic Life Support

Pre-hospital and inter-hospital emergency care or medical direction which includes some or all of the techniques and procedures taught in a state approved emergency medical technician basic training course.

F. Advanced Life Support

An advanced level of pre-hospital and inter-hospital emergency care that includes basic life support functions plus some or all of the following techniques or procedures:

1. Cardiac monitoring
2. Cardiac defibrillation
3. Telemetered electrocardiography

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4. Administration of specific medications, drugs, and solutions
5. Use of adjunctive medical devices
6. Trauma care
7. Other techniques and procedures authorized by a physician

G. Air Ambulance Support Personnel

1. Air Ambulance Medical Director

A physician licensed and certified by the State of Washington pursuant to RCW 18.71. A physician knowledgeable of potential medical complications which may arise because of aeromedical evacuations, who is contracted by the air ambulance service and is responsible for overseeing and assuring that the appropriate aircraft, medical personnel and equipment are provided for patients transported by the air ambulance service. The local medical program director may designate a licensed physician to perform his/her duties. The air ambulance medical director functions through delegation of responsibility of the local Medical Program Director.

2. Registered Nurse

A person licensed and certified by the State of Washington to perform nursing functions pursuant to RCW 18.88.

3. Paramedic

An emergency medical technician who has completed an advanced life support training program approved by the department, who is certified by the department as qualified to render services enumerated in RCW 18.71.

4. Emergency Medical Technician

An individual who has completed a basic life support training program approved by the department, and who is certified by the department pursuant to RCW 18.73.

5. Pilot

An individual certified by the Federal Aeronautics Administration and licensed with the State of Washington Department of Transportation pursuant to RCW 47.68. This individual must meet certain criteria set forth by the department.

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H. Patient

An individual who, as the result of illness or injury, needs immediate medical attention, whose physical or mental condition is such that he is in imminent danger of loss of life or significant health impairment, or who may be otherwise incapacitated or helpless as a result of a physical or mental condition.

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The department is authorized to issue licenses to services conforming to these regulatory standards.

A. Requirements for licensure

1. The department is authorized to issue licenses to services conforming to these regulatory standards.
2. No agency or person either as owner agent or otherwise shall furnish, operate, conduct, maintain, advertise, engage in or profess to engage in air ambulance services in this state unless the agency or person holds a currently valid license to do so.
3. An application for an original or renewal license shall be made to the department and shall contain as a minimum, but is not limited to, the following:
   a. Financial statement of ambulance service operating revenues and expenses for the previous fiscal year. Services operating for a profit shall also provide a balance sheet.
   b. Articles of incorporation and current business license. Federal Aviation 135 certification is required by all agencies.
   c. The name and address of the owner of the air ambulance service or proposed ambulance service.
   d. The name under which the applicant is doing business or proposes to do business.
   e. The training and experience of the applicant in the transporation and care of patients.
   f. A description and general location of each aircraft to be used as an air ambulance, including the make, model, year of manufacture, insignia, name or monogram, or other distinguishing characteristics. Upon approval by the committee for licensure, a detailed description including FAA number or other distinguishing characteristics shall be provided to the department.
   g. The geographical service area, location and description of the place or places from which the ambulance service is intended to operate.
   h. Name of the training officer who will assume responsibility for the ambulance personnel continuing education program.

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i. The air ambulance medical director for a geographic area who shall review treatment protocols, assess field performance and critique air ambulance runs with the local Medical Program Director. The air ambulance medical director shall be delegated in writing by the local Medical Program Director.

j. Agreement to abide by the review process designated by the department and/or the local Medical Program Director.

k. A proposed roster of medical personnel which includes level of certification or licensure.

l. Agreement to provide reports to the department for each trip made, on forms or a data format specified by the department.

m. They shall provide letters of support from local medical program directors and the local EMS council in areas of operation.

4. The department shall review each application for licensure based upon type of service to be offered, equipment, trained personnel, and whether the public convenience and necessity requires the proposed service. Before issuing a license to a new service, the department shall inspect the vehicle, the ambulance equipment and the personnel roster.

5. An ambulance license will be issued for a period of three years from the date of issue and will remain valid for the period unless revoked or suspended by the department. Annual inspections may be conducted to assure compliance. The vehicle license will be for a period of one year and updated annually.

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B. Denial, Suspension or Revocation of License

Grounds for denial, suspension or revocation of air ambulance license shall include, but are not limited to proof that the applicant and/or service:

1. Has been guilty of misrepresentation in obtaining the license.
2. Has engaged or attempted to engage in service that is not authorized by the license.
3. Has demonstrated incompetence or has otherwise been unable to provide adequate service.
4. Has violated or aided and abetted in the violation of any provisions contained in RCW chapters 18.73 and 18.71.
5. Has demonstrated unprofessional conduct in the course of providing services.
6. Has failed to meet the requirements as specified in code, policies and procedures.
7. Has failed to meet requirements in associated statute and rule.

C. Selection and Utilization of Pre-hospital Air Ambulance Services

The selection and utilization of an air ambulance service shall be determined by the medical program director, air ambulance medical director or the referring physician prior to response based upon the following:

1. The level of medical care the patient's illness or injury requires during the transport.
2. The urgency of transport (immediate or not immediate). In special circumstances, because of the urgency of transport, an action of providing less than minimal air ambulance transport care may occur.
3. The dispatch protocols adopted by the Medical Program Director in the county of origin.
4. Any agency (requesting agency and transporting service) that dispatches a service that does not meet the minimum requirements is required to prepare and submit a written justification to the local medical program director and the state Emergency Medical Services Training and Licensing Section within 14 days of the action.

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D. Air Ambulance Personnel Requirements

1. Air Ambulance Medical Director

a. Each air ambulance service must have an air ambulance medical director (or his/her delegate) who is a licensed physician knowledgeable of the air medical requirements of patients. It is the responsibility of the air ambulance service applicant to provide in writing to the department the name of the medical director and approved designee. If the medical director is replaced or removed, the department must be notified within thirty days after the action. The air ambulance service must contract for a replacement of the air ambulance medical director within thirty days after the action in order to retain licensure as an air ambulance service.

b. The medical director (and delegate) must have training in altitude physiology and be familiar with the emergency medical services communications system.

c. The medical director (or delegate) will:

(1) Be knowledgeable of the capabilities and limitations of the aircraft used by his service.

(2) Be knowledgeable of each of the medical attendants' capabilities relative to meeting the patient's medical needs.

(3) Be knowledgeable of potential medical complications which may arise because of aeromedical evacuation of patients being transported by the air ambulance.

(4) Match during interfacility transports appropriate aircraft, medical personnel and medical equipment necessary in the care of patients' medical needs or any anticipated inflight complications.

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(5) Be knowledgeable in the application, use, maintenance, removal and hazards of any routine or special medical equipment used in the transport of patients by the air ambulance service.

(6) Assure current certification, training requirements, and education requirements are met by all medical attendants providing services for the air ambulance service.

(7) Ensure that all medical attendants are adequately trained to perform inflight duties prior to functioning in an inflight capacity.

(8) Ensure that each medical attendant meets the requirements necessary to provide given levels of medical care.

designated by

d. The medical director is responsible to coordinate with local medical program director(s).

2. Air Ambulance Medical Attendant

a. At least one medical attendant shall be provided who:

(1) Has current Washington State certification or licensure as a Paramedic, Registered Nurse, or Physician.

(2) Must have training and be familiar with altitude physiology, aircraft safety and Washington emergency medical systems communications, as determined by the department.

(3) Must be knowledgeable in the application, operation, care, and removal of all medical equipment used in the care of the patient. The medical attendant(s) must have a knowledge of potential inflight complications and their treatment which may arise from the use of such devices.

(4) When ordering or giving medications to a patient who is to be or is being transported, must be licensed or certified to give such medications.

(5) Will be required to know and follow all policies and procedures of the air ambulance service's medical director.

(6) Will be responsible for assuring that aircraft used is an approved basic medical care air ambulance and that all equipment required for a basic medical transport is on the aircraft and is in working order at the start of a patient transport.

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(7) Must have available during transport a current copy of all written protocols authorized for use by the medical director. Patient care shall be governed by these authorized written protocols.

b. The air ambulance medical director shall designate attendants with specialized skills to meet the specific needs of the patient.

3. Pilot

In addition to being licensed with the State of Washington Department of Transportation pursuant to RCW 47.68, the pilot must:

a. Possess commercial rotorcraft certification and a minimum of 2,000 rotorcraft flight hours as pilot in command.

b. Be factory trained or equally prepared and have at least five (5) hours in the specific type of aircraft, before flying as pilot in command on patient missions.

c. Meet FAA requirements for medical certification, licensing and type of ratings for the flight(s).

d. Have training and be familiar with altitude physiology and EMS communications.

e. File a flight plan in accordance with FAA standards.

f. Obtain recurrency training annually on factory review of the aircraft and its systems and refresher course and competency training in emergency procedures. The operator shall maintain the aircraft according to FAA requirements.

g. The final decision to fly or not to fly will be made by the pilot.

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E. Records

1. A record shall be made for each trip on forms or data format specified by the department. Copies shall be transmitted in accordance with instructions provided by the department. Storage of forms and use of information contained therein will be in accordance with state law to assure patient confidentiality. Copies of the above trip records shall be maintained and stored by each ambulance service for a minimum of ten years. The method of storage shall lend itself to ready retrieval of specified records.
2. Personnel Records - A personnel file shall be maintained for ambulance personnel which shall include their qualifications and training.
3. Records required herein shall be available for inspection by representatives of the department.

F. Communications

1. All air ambulances shall be equipped with two-way communications equipment or telephone capable of ambulance to hospital communication.
2. All air ambulance aircraft will carry required FAA radio communication equipment.

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CRITERIA FOR USE OF "PREHOSPITAL" AIR AMBULANCE

I. To provide rapid delivery of a critical patient(s)* to an appropriate definitive care facility when ground transport times would be protracted (more than 15 - 20 minutes).

For example: Long distances
Terrain problems
Traffic congestion
Long field extraction times
Hazardous road conditions or other road obstruction

* CRITICAL CASES - EXAMPLES

A. TRAUMA

1. Physiologic Criteria

   a. Trauma score 12 or less

   b. Glascow Coma Scale 10 or less

2. Mechanism of Injury Criteria

   a. Motor vehicle accident with:

      Extrication time more than 20 minutes
      Structural intrusion into victim's space by more than 1 foot
      Victim ejected from the vehicle
      Associated death in the same vehicle
      Pedestrian struck and thrown 15 feet or more
      Child under 12 years struck by vehicle

   b. Falls of 15 or more feet

   c. Evidence of rapid deceleration

3. Anatomic Criteria

   a. Penetrating injury anywhere from the head through the groin

   b. Amputation above the ankle or the wrist with potential reimplantation

   c. Critical burns or burns by inhalation injury, electrical burns, or other accompanying trauma

   d. High voltage electrical injuries (more than 1,000 volts)

   e. Spinal cord injuries

   f. Toxic inhalation injuries

   g. Three or more long bone fractures

   h. Injuries of two or more body systems

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4. Comorbid Factors

   a. Age - 12 or less/60 or older

   b. Underlying medical conditions, for example

5. Criticality Criteria

   a. Deteriorating conditions which may include Loss of consciousness, onset of shock and/or respiratory distress within 30 minutes of injury (define vs. remove)

B. Medical - requiring emergent (within 15 minutes) definitive care center intervention, for example

   Rupturing aortic aneurysm

   Severe hypo or hyperthermia

   Acute subarachnoid hemorrhage

C. Obstetric or neonatal - requiring emergent (within 15 minutes) definitive care center intervention

II. To provide rapid delivery of special critical care medical personnel to the scene otherwise staffed by non-critical care personnel, for example, paramedics/RNs/physicians assistants/EMTs - experts to assist in disaster or hazardous material incidents

III. To provide extrication from otherwise ground inaccessible sites and/or assist in search and rescue operations (mountains/islands)

IV. To provide integrated support in multiple patient incidents, e.g., most seriously injured patients - to deliver skilled personnel or needed supplies/equipment

CRITERIA FOR NON-UTILIZATION OF A HELICOPTER

I. Obviously fatal injury

II. Cardiac arrest of any etiology

III. If the ground ambulance is capable of arriving at the hospital with the patient before the air ambulance can arrive at the scene of the accident or illness.

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CRITERIA FOR INTERHOSPITAL AIR AMBULANCE UTILIZATION

GENERAL

1. Requirement for critical care enroute, not otherwise available
2. Time critical injury or illness
3. Need to minimize time out of hospital
4. Alternate travel means unavailable or undesirable

SPECIAL CONDITIONS

1. Cardiac
   a. Acute coronary occlusion
   b. Cardiogenic shock
   c. Dysrhythmias, life threatening
   d. Pericardial tamponade
   e. CHF with decompensation
2. Respiratory
   a. Respiratory failure
   b. ARDS
   c. Ventilator dependency
   d. Severe asthma
   e. Epiglottitis
   f. Aspiration
3. Other Medical
   a. Renal failure (acute fluid overload or electrolyte imbalance) requiring dialysis
   b. CNS bleeds requiring airway and/or ventilator management
   c. Shock (hemorrhagic, DKA, septic, anaphylaxis)
   d. Coma requiring airway and/or ventilator management
   e. Overdose requiring airway and/or ventilator management or accompanied by shock, dysrhythmias
4. Trauma
   a. Multisystem trauma (Champion-Sacco Criteria)
   b. Trauma score $\leq$12
   c. Glasgow Coma Score $\leq$8
   d. Severe extremity injury (amputation, crush injury, unstable long bone fracture)
5. Other Surgical
   a. Acute vascular catastrophe
   b. Acute abdomen
6. OB
   a. Premature labor
   b. Pregnancy induced hypertension
   c. Poorly controlled D.M.
   d. Premature rupture of membranes
   e. Prolapsed cord
   f. Vaginal bleeding (including abruptio placenta, placenta previa)
   g. Fetal distress

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7. Neonatal
   a. Respiratory distress syndrome
   b. Prematurity
   c. Sepsis
   d. Congenital anomalies
   e. CHF
8. Pediatrics
   a. Respiratory distress
   b. Decreased level of consciousness
   c. Poisoning
   d. Severe infections (epiglottitis, meningitis, severe pneumonia)
   e. CHF

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10.3

Lothar H. Pinkers, M.D.

GENERAL SURGERY
TRAUMA

1201 - 116TH NORTHEAST
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206 - 454-5331

16 October 1986

RECEIVED

OCT 21 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Holly Miller, Director
Seattle Construction and Land Use
400 Municipal Building
Seattle, WA 98104

RE: Comments on Draft EIS Statement for Children's Hospital Helistop

Dear Ms Miller,

I have read the material in the environmental impact statement and additional material submitted to me by one Jerry B. Schneider who is a member of the Laurelhurts Citizens Group discussing this issue. The additional material that Mr. Schneider submits is a letter from Kenneth L. Mattox, M.D., professor of surgery, Baylor College of Medicine, and a photocopy of an article in the Journal of Emergency Medicine date May 30, 1986 by Dr. Mattox.

First of all, let me say that issue is quite complex, it is heavily clouded by emotion, both on the part of the Children's Orthopedic Hospital, Airlift Northwest, and the Laurelhurst citizens. In doing an extensive literature search on the use of Helicopters for prehospital transportation and interhospital transportation, the bibliography of which has been used in part by Dr. Nicola has shown clearly that there are not adequate criteria for the use of helicopters as a mode of transport. Most of the articles are self serving written to demonstrate how good that particular service is. The Washington State Medical Association, since it is a State wide organization which looks at the needs of the entire State cannot specifically deal with local issues. However, I believe that I can as a well educated observer, make comment on the Children's Orthopedic program. These comments stem from opposite areas. In the first place, helicopters are expensive to own and operate. This tends to ask for over utilization in order to offset costs. There is an inherent danger in their operation, particularly with pilots that have inadequate training and hours of flight time. On the opposite side of the coin, these instruments are exceedingly useful when properly employed both in prehospital and interhospital care. It is this very latter question which is so difficult to really assess. The comments made by Dr. Mattox and by Dr. Nicola summarize the problem quite well.

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Children's Orthopedic as a tertiary care center needs to have the ability to deliver critically ill or injured children to its door. For a small number in any years time, there needs to be direct transportation without an intervening additional ambulance ride. Children's Orthopedic Hospital has been placed in a residential area long years ago and, shy of moving it out of that area completely, the primary mission of the hospital has to be recognized. That time of discussion has long since passed. I am quite skeptical about the commentary made by the Children's Orthopedic administration. They tend to overinflate their importance and try to bulldoze the community into submission by waving the flag of suffering children. Dr. Nicola, I think, has a better handle on this and utilization figures that he discussed seem reasonable to me. The Laurelhurst Community, on the other hand, is equally over emotional in its opposition to helicopter flights and their attempt to simplfy the transportation of critically ill children or adults to mere safety factors. I personally believe that there is a combination of points which are really the more satisfactory. One, I think Dr. Nicola's suggestion for limited access is quite good. On the other hand, I think the Children's Orthopedic Hospital needs to construct an adequately safe and permanent landing ground outside of its emergency entrance so that those limited permitted flights can arrive directly and safely without intervening ground transportation.

Lastly, I will send to you under separate cover what is only a working copy of WSMA committee dealing with helicopter standards. These are really not for publication yet, because they will be couched in terms of Washington Administrative Code in the relatively near future. Significant points however, are as follows:

1. Helicopter transportation or air transportation services should be integrated completely with the EMS program in the county of origin.

2. The dispatch should be under medical control and follows the same guide lines and criteria (and be integrated with) the dispatch guidelines existing in the County for land units.

3. The run reviews specifically should be reviewed by the County Medical Program Director or his designé . In a politically sensitive area like King County and the City of Seattle, I would advise that Dr. Nicola not only to do this himself, but make sure that a non involved [redacted] joins him in , the review of these run records for appropriateness and quality of care. It would be totally inappropriate if the the review was only by Children's Orthopedic Hospital and the medical director for Airlift Northwest.

4. There is great concern in the Washington State Medical Association EMS Standards Committee for the safety of flights on emergency runs. We are currently looking at a recommendation of three thousand to four thousand pilot hours of additional training for EMS helicopter pilots. It

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is felt that this additional training may well reduce the hazards.

5. It will be a point of the administrative code that the decision to lift off, will be that of the pilot's alone, protecting that pilot from the overzealous orders of the air transport unit medical director.

It is my impression that allowing the Children's Orthopedic hospital to construct an adequate heliport for safety is necessary. It is also necessary in their conditional use permit to insist upon adequate run review, dispatch standards, preplanned interplay between the proposed helicopter unit and existing EMS systems to minimize "overutilization" and focus public attention on the appropriateness of air transport when it is properly used.

I would be happy to discuss any of these concepts with you or the draft material which I will submit to you as additional resource material.

Sincerely yours,

L.H. Pinkers, M.D. FACS

LHP:ys
Enclosure

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CREIGHTON UNIVERSITY

School of Medicine
Department of Anesthesiology

RECEIVED
JAN 13 1987
SHAPIRO AND ASSOCIATES, INC.

January 9, 1987

Mr. Ray Sachs
Shapiro and Associates, Inc.
The Smith Tower, Suite 1812
506 Second Avenue
Seattle, Washington 98104

Dear Mr. Sachs:

I appreciated the opportunity to review portions of your environmental impact statement for the proposed helistop at the Children's Hospital and Medical Center of Seattle. In general, I think you have done a credible job of reviewing the objective data available. My present opinion remains that most hospital-based helicopter programs are in fact quite safely operated. That notwithstanding, the statistics cannot be ignored: the incidence of fatal helicopter accidents associated with medical operations is outrageously high. In the final analysis, the safety of an operation depends upon the presence of at least one strong figure within the program (medical director, program administrator, chief pilot, or chief flight nurse) who is firmly committed to having a safe operation. Placing safety as the first concern of the program is essential. Making that the first priority means that public relations must be compromised, medical care must be compromised, commitment to the patient must be compromised, and every team member's ego must be subordinated to that single top priority: safety.

In any medical care delivery operation, the traditional first priority is total commitment to the patient and a good outcome for the patient. In EMS helicopter operations, that cannot be the first goal. The first goal is the safety of the helicopter crew. As long as the team members are willing to put their own safety first, I believe it is possible to have transport programs with safety at least as good as that experienced by ground transport programs.

I hope these comments are of value to you.

Sincerely yours,

Thomas J. Poulton, M.D., F.A.A.P., F.C.C.P.
Associate Professor and Vice-Chairman, Department of Anesthesiology
Medical Director, Life Flight Helicopter Operations

TJP/lf

601 North 30th Street Omaha, Nebraska 68131 (402) 449-4848

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Tuesday. August 26

mailist
SA6
8405870

Ann Homer Hauberg
1000 N. W. Northwood Road
Seattle, Washington 98177

RECEIVED
AUG 27
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Julie.

As a Mother of four children, I know what it is to have a very sick child. therefore. I am very much in favor of building a heliotop near The Children's Hospital emergency room. We live on Bainbridge Island in the summer and have many friends who are here all year. We are dependent on

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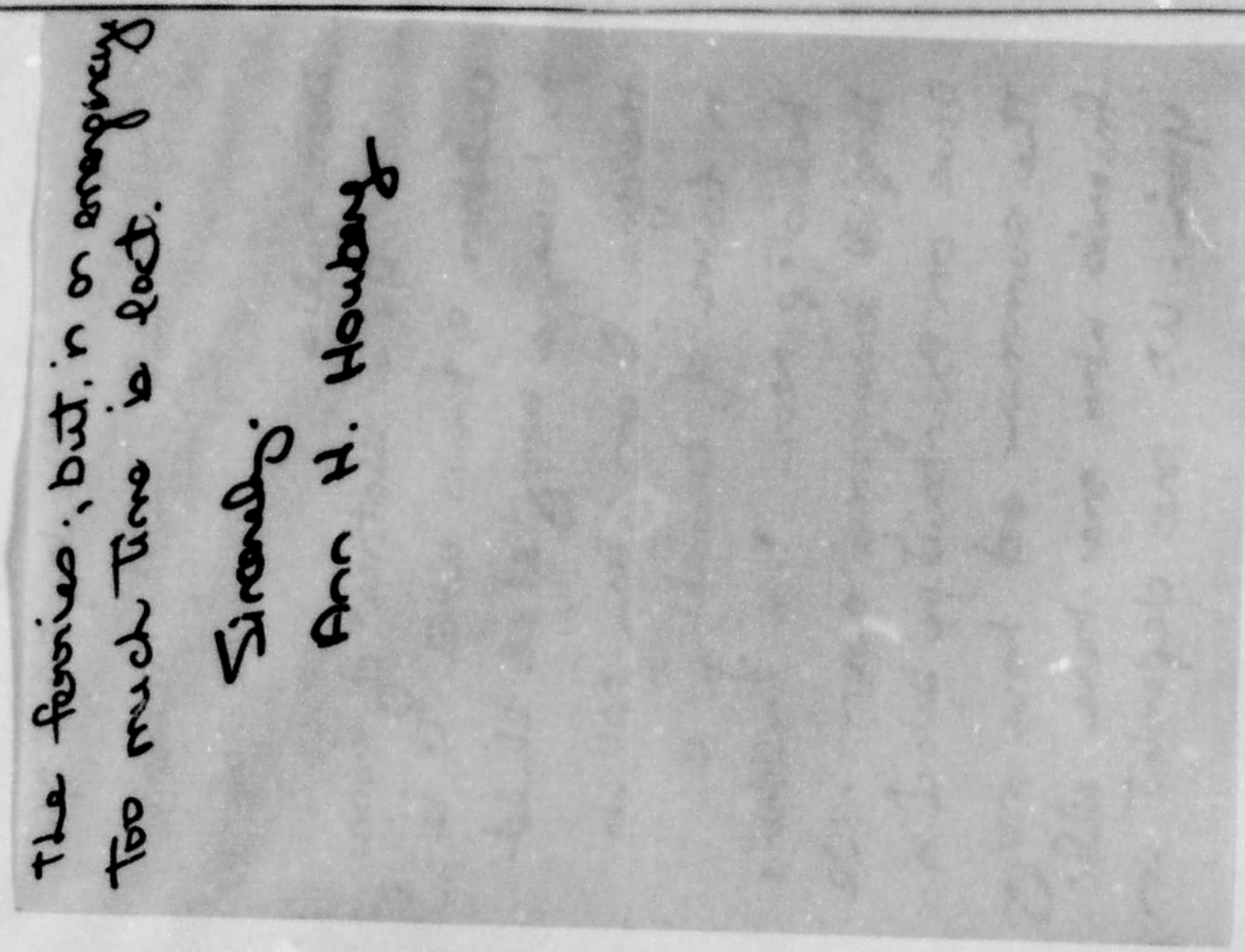

12

Seattle Area Hospital Council

Third Floor
190 Queen Anne Avenue North
Seattle, Washington 98109
(206) 281-8989

October 21, 1986

RECEIVED
OCT 22 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Katy Chaney
Director, Land Use Division
Seattle Department of Construction & Land Use
400 Municipal Building
Seattle, WA 98104

Dear Katy,

I have received your letter of October 10 regarding Children's Hospital Helistop Draft Environmental Impact statement. The Hospital Council, as a matter of policy, does not get involved in individual institution's Certificate of Need applications or zoning applications with the City of Seattle. The current competitive environment in which hospitals operate, prohibits such involvement by the Hospital Council. The Council is involved in emergency medical services matters, particularly in terms of involvement with the King County Emergency Medical Services Division, but we would only review general matters of policy and procedure, not specific matters related to only one institution. We appreciate your invitation to submit comment, and hopefully this letter will clarify our position. Should you have any questions, please let me know.

Sincerely,

James L. Nell
President

JLN/mjd

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TESTIMONY:
LIZ ANDERSON
4746 45th NE
SEATTLE .WA.
PRESENTED Sept. 23 1986
PUBLIC HEARING DEIS/COH
HELIPAD

It is very difficult to reduce testimony on this Draft to 10 minutes, so my remarks tonight will address only the safety aspects of this proposal. I'd like to submit, as part of the record of tonight's testimony, a segment of a CBS broadcast which was aired August 29, 1986. This tape makes some important points that are not represented in the DEIS.

OCT 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

I would like to see included in the Draft, in the discussion of the EMS helicopter safety record, the statement that current statistics reveal that its record is the worst in aviation history. I would like to see a change in the concluding remarks on p. 92 which state that " the risk of helicopter accidents is a potentially significant impact that cannot be entirely mitigated". I request that the word "potentially" be removed from that sentence; the risk of helicopter accidents is a significant impact that cannot be mitigated. The use of the word potentially minimizes the conclusion.

refer to DEIS for map

This slide shows the primary and seconday approach-departure paths that ALN'W proposes to use to transport patients to COH. The primary path on the left of the map is plotted over supposedly the least populated areas of the community and will be used when the weather is good. Please define in the next Draft specifically what weather conditions will permit the use of this path. The secondary approach-departure path is plotted almost directly over the Villa Academy Elementary School, St Bridget's Church, what will be the Washington Retirement Park, and the Laurelhurst Elementary School. This flight path, according to the Draft, will be used during the winter months when the wind is out of the Northwest and is 17 knots or better. I do not find it particularly consoling that ALNW won't fly

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in winds of 40 knots. I would like to see included in the draft a detailed discussion of what the weather policies of the FAA and ALNW are and how they compare to the standards proposed by the National Emergency Medical Services Pilots Association (NEMPSA). Also included should be a statement of policy about whether ALNW plans to comply with these standards. This issue will be discussed later, with particular attention to marginal weather conditions and pilot discretion.

These flight paths will be approved based on information supplied on FAA form 7480. I would like to submit the following slide to be included in tonight's record. This is the most recent FAA form 7480 that has been submitted by COH ,describing these flight paths. As you can see, there is not much information supplied. The flight path is described in the section "magnetic direction of compass" and the information supplied by COH reads "In-West; Out-West". Under the section "Obstructions", only a fifty foot cypress tree and lamp post are listed. There is no mention of telephone wires or poles, existing buildings or proposed buildings. Please have included in the next Draft or Final EIS a copy of the updated FAA application form 7480.

According to the DEIS, the FAA has guidelines, but not standards, for helistop construction and for regulations that pertain to certifying pilots and personnel. Please include a comprehensive discussion of how exactly the helistop site is determined safe and by whom? In addition, standards for pilot training and experience, site construction, and site safety are being defined by NEMPSA. These standards represent a significant step forward to improving safety in this industry. The EIS needs to include these standards and specify the proposal's compliance with them. The omission of standards for training, staffing, and pilot experience is particularly striking

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as EMS helicopter transport has been described as a more demanding field of aviation than any other, short of actual warfare. Please also include in these discussions who will be held accountable for the actions of pilots transporting patients to COH, being sure to include other helicopter services as well as ALNW.

Another problem arises over safety procedures, particularly those called into play under "marginal weather conditions". Please include a discussion of how weather conditions at COH will be determined by incoming pilots, flying for other helicopter services as well as for ALNW. Both the draft (p.62) and NEMPSA agree that flying in marginal weather presents major safety risks, yet ALNW policy, as stated in the draft, is to allow pilot discretion to be used in questionable weather conditions. How will pilots decide when it is safe to fly in these kinds of conditions? Is leaving the decision to pilot discretion advisable, particulary given cautions both cited in the draft and by NEMPSA that EMS "pilots show a willingess to fly in adverse weather when other commerical helipcter pilots would not fly". These concerns need to be addressed in the EIS. (The pressures which can be brought to bear on pilots are very real and may make a decision to not fly, while a safe decision, a difficult one to make.)

Another concern with the material presented in the Draft focuses on the process COH has used in determining acccident probablity. We will submit tonight a calculation based on what we feel is more representative of the worst case scenario, as required by the DEIS. Our figures , which have been verified by a statistician from the University of Washington, show one accident every 6.59 years while the Draft projects one accident every 22.7 years. Please reconcile this discrepency in the next EIS.

see testimony of Anita Francis for calculation

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We would also like to see a comparison of safety advantages and disadvantages of alternative sites. This comparison is lacking in the Draft and represents a serious oversight in a consideration of safety issues. To illustrate, an ALNW pilot is cited as saying that an improved site is preferable to an unimproved site. This, however, does not clarify whether an improved site at the East Campus of the University of Washington would not be safer than an improved site at COH. To complete the consideration of alternative sites, as required by Seattle's Land Use Code, safety advantages and disadvantages of all opitons need to be assessed.

A comprehensive discussion should be contained in the Draft dealing with the issue of liability. The following questions should be answered. What are the limits of coverage currently held in regards to personal and property damage? Who arethe carriers for ALNW, SJC, and HAT? What are the projected costs of this coverage for the future? How have the risks been calculated to determine the premiums for the currently held coverage?

Lastly, the information which is provided on safety in the DEIS is undermined by its biased, non-objective nature. Many of the sources used are of questional credibility, because of a conflict of interest. For example, Mr. Hill's authority on such issues as site safety and pilot qualifications must be viewed with some skepticism; he is a pilot for ALNW, the agency intimately involved in this project. His opinions should be backed with other objective sources. Further, a supporting statement from the Agusta marketing representative on the safety of her helicopters strikes us as less reliable than we would hope to find in a document of this importance. Even in cases when the sources are reliable and verifiable, such as the table on p. 64, COH has interpreted the data in a unique fashion. Alternate interpretations (Airnet) should also have been provided.

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As a final note, throughout the draft and in all areas, not just those concerned with safety, the use of personal communication leaves the reader without the capability of verifying the validity of information cited. In fact, in checking on a source, we found that he was unaware that his name was being used in the document. To our knowledge, it is generally considered policy to make sure that approval to use personal communications are obtained before publications are issued. Access to both personal communications and bibliographic entries should be a required part of the EIS.

In summation, we feel that this DEIS is unacceptable in its present form to the extent that the city should require that another Draft be written, rather than amending this document. A final EIS would disallow the community from commenting on it beofre it reached the hands of the Hearing Examiner. This DEIS, produced by CDH, is a sales pitch not an analysis.

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As a final note, throughout the draft and in all areas, not just those concerned with safety, the use of personal communication leaves the reader without the capability of verifying the validity of information cited. In fact, in checking on a source, we found that he was unaware that his name was being used in the document. To our knowledge, it is generally considered policy to make sure that approval to use personal communications are obtained before publications are issued. Access to both personal communications and bibliographic entries should be a required part of the EIS.

In summation, we feel that this DEIS is unacceptable in its present form to the extent that the city should require that another Draft be written rather than amending this document to produce a final EIS which would circulation the community prior commenting before it reached the hands of the hearing examiner.

This DEIS produced by COH is a sales pitch not an Analysis.

Signed,
L. Fay Anderson
10/17/86

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2-4 Recd Feb. 3d afternoon acc to Nancy Greenawalt. Told her to get sheet to delivery person. JB

RECEIVED
FEB 4 - 1986
DEPT. OF CONST. & LAND USE

THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

February 3, 1986

Beatrice Farrar Ryan
Director
Department of Construction
and Land Use
Room 400, Municipal Building
Seattle, WA 98104

Dear Ms. Ryan:

In your Notice of Decision dated January 13, 1986 regarding Children's Orthopedic Hospital and Medical Center's (COHMC) application for a conditional land use permit to build a helistop, you requested public comment on the scope of the Environmental Impact Statement (EIS).

COHMC examined the issue of alternative sites quite thoroughly prior to applying for a permit to locate a helistop outside the Emergency Room. The most important considerations were whether a proposed site met our objectives, which are: to minimize the number of patient transfers from one vehicle to another, to decrease transport time from the referring hospital to the Emergency Room entrance at COHMC, and to reduce the impact of helicopter landings on the Hospital and the neighborhood with regard to noise and safety. Other considerations on possible on-campus sites included topography, existing roadways, and distance from the Emergency Room.

Two sites continue to surface in discussions as possible alternatives to the ER landing site. They are the Hospital roof and the Hospital's parking garage. We believe the scope of the EIS should exclude these two sites as possible alternatives for the following reasons:

1. Noise - without conducting a formal noise study, a visual examination of both sites suggests that the noise level when landing a helicopter on either site would significantly exceed those noise levels at the ER site primarily because there would be no building or land buffer to protect the surrounding neighborhood.

2. Safety - both sites significantly increase the potential risk to public safety because the helistop would be located on occupied buildings. In the unlikely event of an accident, it would be potentially more damaging to land on a building than on the ground because of possible damage to property and human injury

P.O. BOX C5371 • 4800 SAND POINT WAY N.E. • SEATTLE, WASHINGTON 98105 • (206) 526-2000

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3. Patient care - medical objective - again, both sites involve considerable more patient handlings and transfers over longer distances than the site next to the ER. A helistop located atop the parking garage would require that the child be transferred from the helicopter to an ambulance, then from the ambulance to the Hospital ER, in effect resulting in the same situation present when landing a helicopter at Graves Field.

4. Cost - the issue of a rooftop helistop has measurable structural implications. As you are aware, the Hospital was constructed at two different times. The roof of the newer part of the Hospital was designed to hold a 25 lb. live load per square foot. In addition, there is no unobstructed roof space large enough on the newer roof to accommodate a helistop. The old Hospital was designed to hold a 20 lb. live load per square foot. There is an unobstructed open space large enough to accommodate a helistop, but it is located above the eighth floor (a considerable distance from the emergency and intensive care rooms). The approximate weight of the Augusta helicopter is 5400 lbs. (Maximum gross weight of the Augusta is 5730 lbs. Average empty weight is 3892 lbs.) The FAA recommends that a helistop landing pad be able to hold 2 to 2½ times the helicopter weight for safety reasons. The conclusion of the Hospital's architectural consultants from NBBJ is that the existing building cannot support a helicopter landing pad without significant structural modifications. At a minimum, contractors would have to go back into the building and construct an additional landing pad that must span to major columns that support the building. This could easily cost in excess of $150,000 beyond that already necessary to build the helistop. The additional cost would have to be passed on to patients.

To summarize, not only do these two sites (Hospital roof and parking garage roof) not meet the Hospital's objectives and the community's objectives, but they also would be significantly more expensive to implement than the originally proposed site. COHMC recognizes that an application for a conditional use permit requires that we examine additional on-campus sites. However, in the process of examining possible sites, COHMC concluded that none of the alternative on-campus sites met our objectives. Therefore, COHMC requests that the scope of an EIS be limited to significant issues surrounding a helistop located outside the Emergency Room as compared to locating a helistop at Graves Field.

Sincerely,

Treuman Katz
Chief Executive Officer

dj

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

May 15, 1986

RECEIVED

MAY 19 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I have been an employee of the hospital for the past ten years and am a member of the management team of the hospital.

I feel that the helistop is critically important to the care of the children we treat at our hospital. The difference between saving a child's life and the neighborhood's concern about noise can not be measured. Certainly the sooner a child can reach our hospital and be treated by our specialized physicians and nurses, the better chance they will have to survive. I strongly support the use of helicopters to bring those children who require immediate treatment to our hospital. I would want that opportunity to be available for those children I know and love.

Thank you for this opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Susan P. Stubbs

Susan P. Stubbs, RRA
Director, Medical Record Department

PO Box C5371
98105

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LAUREL CREST RESIDENTIAL PARK
CONDOMINIUM ASSOCIATION

To: Kato
Julia

RECEIVED
JUN 6 - 1986
DEPT. OF CONST. & LAND USE

Ms. Holly Miller, Director
Department of Construction
and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

The following resolution concerning the siting of heliports for emergency medical care is endorsed by the Board of Directors of Laurel Crest Residential Park Condominium Association.

The Board of Trustees of the Laurelhurst Community Club supports the development of a regional plan for the siting of heliports for emergency medical care. This plan should be based on an analysis of the medical need, the potential adverse impacts on communities, and the costs of helicopter services.

The designation of sites should be limited to the minimum necessary to meet the needs of the region. Where there is choice, the location of the heliports should be limited to sites where overflights and landings will have the least impact on residential communities.

Criteria for use must be established in the regional plan so that helicopter service is limited to emergencies. These criteria should define conditions, such as difficulty of access, time constraints, and life-threatening situations, which make helicopter transport the only reasonable choice.

The Hospital's projections for helicopter use and its contract for services with Airlift Northwest indicate the proposal is for a commercial transportation service which is costly, may not be limited to medical emergencies, and includes financial incentives for overuse.

Quality emergency care has been satisfactoraly provided by helicopter transport to the University's intramural field and Harborview's trauma center. At this time, the Board of Trustees of the Laurelhurst Community Club opposes the approval of a helistop at Children's Orthopedic Hospital until a medical need for the helistop on campus is substantiated.

Marci Catanzaro
Dr. Marci Catanzaro, President
4801 Terrace Dr. NE 98105 522-8336

*
Albert A. Feldmann, Vice-Pres.

Kermit Hanson
Dr. Kermit Hanson, Treasurer

Larry Hennings
Larry Hennings, Jr.-Ass't Treas.

Elizabeth Spaethe
Elizabeth Spaethe, Secretary

* - Mr. Feldmann is on an extended vacation and is still out of the city

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May 28, 1986

RECEIVED

JUN 24 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb
Department of Construction & Land Use
400 Municipal Boulevard
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a parent and my child was at COHMC when he was a baby. Fortunately it was not a matter of life or death.

I am concerned for the well being of our children if this is denied. I would like to know that if our children needed to come to COHMC in a hurry, the helicopter can land directly at the hospital. It would save so many lives.

Thank you for the opportunity to make my comments. Please convey my opinion to the Seattle City Council. Also herein are signatures of concerned people in favor of the helistop.

Sincerely,

Carolyn M Zimmer

sent to Carolyn only

Carolyn M. Zimmer
Vicky J. Mohler
J. K. Fleurat
Joan M Short
Diane S. Lee
Douglas Whitcomb
John F. Berger
John O. Harris
William H. Brace
Dusta S. Brown
Michael J Yamaya
Lois J Zimmer

Colleen Murphy
Debbie A. Horning
Timothy E Jones
Roger D. Wake
Christine M. Hanrahan
Roberta L. Wenzel
Judy Patterson
Agnes Rischard
Timothy E. Bruce
Brad C Hamelin
Robert W. Lex
Steven P. Kness
William E. Woodbe Jr
James B Campbell Jr

Mary C. Lukovich
James W Tekal

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Dear Mrs Gibb.

We are writing in support of the Childrens Orthopedic Hospital and Medical Centers request for a conditional land use permit to build a helistop outside their emergency room.

We are parents, Grandparents, neighbors, and friends.

We understand the concerns of those who are objecting but feel saving a life out weighs their concerns.

Please convey our opinions to the Seattle City Council.

Thank You

Sincerely

Joyce March

sent to Joyce Gibb pm

Duane Z Marsh

Lila S Peterson

Mr. & Mrs. Rick Woolman

Mr & Mrs Rick Bop

Harriet Phipps

RECEIVED
JUN 27 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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Resolution, November 14,1985

RECEIVED
MAY 8 - 1986
DEPT. OF CONST. & LAND USE

The Board of Trustees of the Laurelhurst Community Club supports the development of a regional plan for the siting of heliports for emergency medical care. This plan should be based on an analysis of the medical need, the potential adverse impacts on communities, and the costs of helicopter services.

The designation of sites should be limited to the minimum necessary to meet the needs of the region. Where there is a choice, the location of the heliports should be limited to sites where overflights and landings will have the least impact on residential communities.

Criteria for use must be established in the regional plan so that helicopter service is limited to emergencies. These criteria should define conditions, such as difficulty of access, time constraints, and life-threatening situations, which make helicopter transport the only reasonable choice.

The Hospital's projections for helicopter use and its contract for services with Airlift Northwest indicate the proposal is for a commercial transportation service which is costly, may not be limited to medical emergencies, and includes financial incentives for overuse.

Quality emergency care has been satisfactorally provided by helicopter transport to the University's intramural field and Harborview's trauma Center. At this time, the Board of Trustees of the Laurelhurst Community Club opposes the approval of a helistop at Children's Orthopedic Hospital until a medical need for the helistop on campus is substantiated.

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May 2, 1986

Larry A. Thompson
Executive Director
Puget Sound Health Systems Agency
601 Valley Street
Seattle, WA 98109

Dear Mr. Thompson:

In response to a proposal for a helistop at the Children's Orthopedic Hospital, members of the Laurelhurst community have asked what controls would govern such a development. We have found there are no controls proposed, and there is no integration of the current or proposed hospital helicopter service with the existing emergency medical service program in King County, the Puget Sound Region or the State. Additionally , there has been intentional circumvention of the State's certificate of need review and public hearing process by providers of air ambulance services.

It is urgent that a plan with defensible treatment and transfer protocols, patient triage and hospital classification guidelines be in place. The lack of a plan leads to misuse and overuse of helicopters, excessive costs and unnecessary safety hazards, air and noise pollution.

We have recently reviewed a copy of your draft proposal for development of a regional plan. We hope the timeframe projected can be shortened appreciably. Certainly, Phase III and Phase IV could be undertaken immediately. We consider ourselves affected parties and hope to be represented as such if not represented on the steering committee.

The goal of the plan should be to assure the highest qualty of medical care with the least adverse effects on costs and the safety and welfare of the general public. A reasonable balance is required.

Objectives of the plan should include:

- State certification which assures costs relative to need;
- Regional service areas which maximize time benefits;
- Designation of appropriate receiving hospitals tc limit adverse impacts of overflights and landings;
- Dispatch guidelines which assure use only for emergencies and only when the helicopter is the superior choice; and
- Periodic review of the use to provide a check on the administration of the program.

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I have attached a copy of a resolution on this issue by the Laurelhurst Community Club. Please keep us advised of your progress.

Sincerely,

Kate W. Hemer

Kate W. Hemer, CoChairman
Land Use Committee
Laurelhurst Community Club
4537 55th Northeast
Seattle, WA 98105

Jerry Schneider

Jerry Schneider or Anita Francis
Citizens Concerned with
Helicopter Transport
5003 45th Northeast
Seattle, WA 98105

cc: Bud Nicola, M.D.
Holly Miller
Cynthia Sullivan
L.H. Pinkers, M.D.

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May 16, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

RECEIVED
MAY 19 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am an employee of Children's Orthopedic Hospital. Having raised four children myself, I can readily identify with a parent whose child's life might actually be saved by use of this service.

As far as the concerns about noise, it has been my personal experience that there is very little noise involved in a landing. My office is in the wing adjacent to the landing site and in clear view of the helicopter. I have been more distracted by the sound of local fire-engines than by the noise of the helicopter.

It is my opinion that the concern about noise and safety should be minimal. The possibility of saving even one child's life by this rapid transport is of far greater concern. The greatest deciding factor that repeatedly comes to mind is "What if it were my child in need?".

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council

Sincerely,

Mary Lydum

Mary Lydum, Secretary
Medical Records Department
Children's Orthopedic Hospital and Medical Center
PO Box C5371
98105

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RECEIVED

MAY 19 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 8, 1986

Ms. Julie Gibb
Dept. of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a heli-stop outside their emergency room.

I am an employee of Seattle Central Community College and understand the concerns of parents who have children who need emergency care at the Children's Orthopedic Hospital.

I sympathize with those who are objecting to this permit due to the noise, but I feel that the good that will be realized outweights any objection that the residents may have.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Deborah J. Uno

Deborah J. Uno, Coordinator
Foreign Student Services
1701 Broadway
98122

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8405870 Dec. 10, 1986

Julia Gibb
Dept. of Construction & Land Use
400 Municipal Building
Seattle, WA. 98104

RECEIVED
DEC 11 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb:

I am writing in support of Children's Hospital and Medical Center's request for a conditional land use permit to build a helistop outside of their emergency room.

I am a resident of Redmond and a Grandmother and I also have a nephew that had to be a patient at Children's and as a family we are so pleased that the hospital was there when it was needed and I realize that the helicopter is a very necessry thing to have available.

I understand the concerns of those who are objecting, but I have heard the helicopter and do not believe that concerns about moise should outweigh the good that will be realized.
I feel that those children that are sick enough to need the helicopter should not be moved more than is absolutely necessary. Each move is a trauma to their little bodies.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

City of Seattle
Charles Royer, *Mayor*

King County
Tim Hill, *Executive*

Seattle-King County Department of Public Health
Bud Nicola, M.D., M.H.S.A., *Director*

August 13, 1986

Ms. Helen Newman
4252 N. E. 50th
Seattle, WA 98105

RE: Proposed Helistop at Children's Orthopedic Hospital

Dear Ms. Newman:

Thank you for your letter of August 4, 1986 regarding the use of helicopters to transport patients to Children's Orthopedic Hospital. I am not familiar with the incident of July 7th when KIRO's helicopter was used to transport a patient to Children's. I am aware that KIRO has graciously offered to transport critically ill or injured patients when no regular air ambulance service is available. Transports of this sort are very infrequent, and must be authorized by the State of Washington.

Your letter raised a number of other issues regarding the effectiveness and environmental impact of helicopters to transport patients to Children's Orthopedic Hospital. Later this month, the City of Seattle Department of Construction and Land Use will release a Draft Environmental Impact Statement (EIS) regarding the proposed helistop at Children's. The EIS addresses the questions raised in your letter. I would recommend you contact the Department of Construction and Land Use at 625-4509, and request a copy of the Environmental Impact Statement for review and comment.

Thank you for writing.

Sincerely,

Bud Nicola

Bud Nicola, M.D.
Director

BN:ph

cc: Seattle City Council

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August 4, 1986

Dr. R. M. Nicola
Seattle-King County Health Dept.
400 Yesler Bldg.
Seattle, WA. 98104

Dear Dr. Nicola:

On July 7, 1986 at 7:40 P.M., the Channel 7 news helicopter delivered to Children's Orthopedic Hospital a drowning victim. A few days later I read in the newspaper that the patient had died. Has a news helicopter the permission to transport a gravely ill patient to COH? If yes, how can the COH distinguish and control the bringing in of patients, gravely ill or not?

In flying a helicopter tremendous vibration and noise would produce stress to the gravely ill patient and questions of help in the survival are raised.

I would like to know the data on how many children have succumbed or how many have survived due to helicopter transport? This is one of the most important questions to which nobody seems to know the answer.

AirLift Northwest charges $2,000 per trip. One helicopter costs one and a half million. With the danger to 200 children in one block from the landing at Laurelhurst Elementary School, and the residents of the 136 units in the Laurelon Terrace Condominiums next to it, plus an oxygen tank right next to the landing site, is it worth it to endanger that many people?

Please answer these crucial questions by return mail before the hearing which may occur the end of this month.

Thank you.

Sincerely yours,

Helen Newman
4252 N.E. 50th
Seattle, WA. 98105

525-4817

cc: George Benson
Virginia Galle
Jan Noland
Paul Kraabel
Norm Rice
Dolores Sibonga
Sam Smith
Jim Street
Jeanette Williams

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August 23, 1986

RECEIVED
AUG 26 1986
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dr. R. M. Nicola
Emergency Medical Services
508 Smith Tower
506 Second Ave.
Seattle, WA. 98104-2388

Dear Dr. Nicola:

Thank you for your letter of August 13, 1986 in promptly to my letter of August 4, 1986, but you did not answer any of my questions.

How many children have been helped by helicopter transport, and how many have died? What medical problems have there been with the landings at the nearby soccer field?

Sincerely yours,

Helen Newman
4252 N.E. 50th
Seattle, WA. 98105

525-4817

cc: George Benson
Virginia Galle
Jan Noland
Paul Kraabel
Norm Rice
Dolores Sibonga
Sam Smith
Jim Street
Jeanette Williams

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APR 30 1986
DEPT. OF CONST. & LAND USE

Holly Miller
Director, DCLU
5th Floor, Municipal Building
Seattle, WA 98104

Dear Ms. Miller:

Enclosed is a copy of a letter to Frank Chestnut of the Department of Social and Health Services in Olympia. It requests that DSHS require (for the third time) the Childrens Orthopedic Hospital to submit a Certificate of Need application and go through that process.

DSHS was forced to reverse its two previous decisions to require a Certificate of Need because of deficiencies in its rules and legal action by COH. The rules have recently been changed so it is possible that DSHS can now succeed in making COH go through the Certificate of Need process. The University Hospital situation may be different as they have already built their rooftop helipad and simply need a permit to use it.

St. Luke's Hospital in Bellingham was required recently to submit a Certificate of Need application to DSHS. It was reviewed by the Washington State Hospital Commission and it failed all of their criteria. They have asked for and received a 2-month extension so that they can revise their application before the hearing, now scheduled for May 22.

If COH is required to justify its air ambulance/ helipad proposal via the Certificate of Need process, much information that is currently unavailable (and is not likely to be contained in the EIS now being prepared) will become available for public review. This information would also be helpful to DCLU in preparing its recommendations as well as to the City Council and others who will be involved in the permit review pro .

We urge you to monitor closely Frank Chestnut's efforts to deal with this problem and to express any of your concerns directly to him. There has not been much coordination between DCLU and DSHS on this issue to date and we hope that you will improve the level of interagency coordination as this issue reaches the final stages of the process. Both agencies have important roles to play in dealing with this issue.

Sincerely,

Liz Anderson

Liz Anderson
Co-Chair, Land Use
Committee

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Julia

5-2-86

RECEIVED
MAY 5 - 1986
DEPT. OF CONSVT. & LAND MGT.

Dear Ms. Miller,

Here is the enclosure that I inadvertently left out of our most recent letter to you, dated 4-28-86.

Thanks for letting us know.

Liz Anderson
(amf)

5003 45th N.E.
Seattle, WA 98105
April 26, 1986

RECEIVED
MAY 15 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Frank Chestnut, Director
Certificate of Need Program ET-33
Department of Social and Health Services
Olympia, Washington 98504

Dear Mr. Chestnut:

We applaud the changes that have been made recently to the rules that govern the applicability of the Certificate of Need legislation (WAC 248-19-230). We request that you use these new rules to require that Children's Hospital prepare a Certificate of Need application for their proposed helipad and associated air ambulance service.

The City of Seattle's Department of Construction and Land Use has determined that this project might have a significant impact on the environment and has required COH to prepare an environmental impact statement. The draft environmental impact statement is expected to be available in May or June. After it is distributed, there will be a hearing and a comment period of 30-45 days, then it goes to the City Council for a final decision. It is likely that Council action will take place in August or September. As far as we know, University Hospital has not yet applied for a permit from the City to use their helipad.

The Puget Sound HSA has developed a proposal for a regional planning study that is now under review in King County and the City. A 12-month study limited to King County with a budget of $37,000 has been proposed. It is hoped that the geographic scope and budget will be expanded. This study is not likely to begin before July.

Dr.Lothar Pinkers is working with a medical society committee to develop some medical criteria and guidelines that will help define the appropriate role of air ambulance services in the region. This work is expected to be completed in June or July.

We have examined the Hospital Commission's review of the air ambulance Certificate of Need prepared by St. Luke's Hospital and feel that it shows how important the process is. The same process is very much needed in relation to the pending proposals of COH and University Hospital.

Since August, 1985, there have been about 19 helicopter landings on the grassy knoll adjacent to the COH emergency room. There have also been several helicopter landings of COH-bound patients at Harborview with a subsequent transfer to COH by ground ambulance. There has been one landing of a MAST helicopter at COH but MAST has used the intra-mural field at the University of Washington for the rest of their land-ings for UW and COH-bound patients. The City has cited COH twice for violating the City's land use code. The first violation was dismissed because it was prepared improperly by DCLU. The second was continued with a compliance hearing date of September 9, 1986.

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Helicopter transportation should be developed in accordance with a regional plan using criteria developed by physicians in the area. This is a logical and reasonable way to proceed, given the large public investment that has already been made in Extended 911 and Fire Aid services in the Central Puget Sound Region, the extensive existing private ground ambulance system, and the availability of MAST services.

To date, we have seen no solid projections of the level of need for helicopter transportation (demand side) that are population-based and that take the existing EMS system into account (supply side). We feel that both COH and University Hospital should prepare Certificate of Need applications that define the air ambulance role clearly. University Hospital has expressed a willingness to do so if COH is also required to do one. This seems only fair. We hope you will quickly determine that both hospitals should be required to justify their proposals by going through the Certificate of Need process. Such applications would provide information that would greatly ease the job of preparing a regional plan and lend further support to the medical society committee and its efforts toward development and implementation of criteria or guidelines for emergency helicopter transport.

We are hopeful that it will not become necessary to involve a lawyer in the resolution of this reviewability matter. We believe it is the responsibility of state and local governments to work together in this situation toward a common goal of a well-planned and well-coordinated emergency transport system to ensure the continued support of the public.

Please give us a written response to this request as soon as possible.

Sincerely,

Citizens Concerned About Helicopter Transport
Steering Committee
Liz Anderson
Jerry Schneider
Anita Francis

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HELISTOP (Continued)

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Hospital helicopters are overused by a factor of 90%, according to studies noted in a recent report of the Washington State Hospital Cost Commission.

We are unwilling to assume that a service to COH is justified and, if justified, would not be overused.

We have asked COH to spell out its proposed conditions of use and to justify the need. Because hospitals are regulated by the State, it is necessary that need relative to cost be ascertained through the State's Certificate of Need process. Because helicopters operate most effectively in a regional area, it is necessary for planning to occur on a regional basis. The medical indicators for helicopter transport must be decided by the medical community.

Our community has been requesting these actions for over a year, with some success. A regional planning effort has been initiated by the Puget Sound Health Systems Agency and the Washington Medical Association is developing medical guidelines. However, COH may continue to refuse to pursue a Certificate of Need or define limitations on use of the proposed helistop.

On the enclosed Opinion Poll, we have listed key conditions which assure, in other regions, that helicopter service is focused on quality health care at the least cost to the patient and the communities. These conditions assure that hospital helicopters will be used only for emergencies in which the helicopter is the superior choice of transportation and that the service is directed to the hospital best able to care for the emergency. We'd like to know if you agree that these are reasonable and responsible requests.

Kate Hemer



LCC Board Meeting

Highlights of June 9, 1986 meeting:

Laurelhurst Park security: Neighbors near the Park presented their concerns about our park being turned into a party location for young people from all over the northend and eastside. There has been vandalism, speeding cars, and drinking. Possible solutions were discussed. It was decided to present the problem to the general meeting to be held on June 11. (Ed's note: The all-community meeting on June 11 was a big success. Over 150 people were there, and the Police Captain, Mr. Farrar, was impressed with the level of concern about the Park and will take steps to correct the situation, he said.)
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Large Billboard, near U. Village: Residents' letters have been coming in to the Department of Construction and Land Use protesting this bit sign. These are very important in letting them know that this is an issue that matters to us.
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Major Institutions Code: A letter was sent to the City Council asking for a moratorium on the provisions of this code. Citizens and major institutions are equally unhappy with the code.

Al Hovland

Unclassifieds

WANTED: Sandhurst Preschool needs a small refrigerator, vacuum cleaner & books for parent education library. Our hopes are high, our budget is limited. Call Sue: 524-0588
FOR SALE: Airline travel dog kennel. Fits 50-65 lb. dog. $25. Call 524-6152.
FOR SALE: Baby equipment & clothes. Carseats, stroller gate, portabed, etc. & maternity clothes size 8-10. Call 527-5121.
WANTED: Place to dock 14 ft. BOSTON WHALER in August. Call Bonnie, Millard, Che, or Gabe Mott. 527-0671.
FOR SALE: SAILBOAT. Stable, exc. sailing boat, 21 ft. Totem, 4 sails, 5 hp eng.,dinghy $1800. 523-6390.
FOR SALE: Old leaded glass French doors 7 ft high, 15 panes, good cond. $200 or best offer. Yellow 10 speed boy's bike (small) for 8-10 yr old.$60.525-6662
FOR SALE: Antique Art Nouveau golden oak buffet.62x 22x60.Appraised $1500.Offers accepted.527-2907.
FOR SALE: Treated 2x4's--8' & 14' lengths. Avail. at 20¢ a foot. Call 527-2907.
FOR SALE: Yamaha spinet organ. Walnut, nice cond. $600. Call 523-0347.
FOR RENT: New Sun Valley home. Elkhorn location, 1 block from tennis courts & pool.3 BR,3 baths.Brochure avail. 525-4139.(Has every modern convenience.)
WANTED: Professional couple living in Laurelhurst want to rent another home here: 3+BR/ We don't smoke, don't have animals or children. Want to pay less than $850 per mo. Rich or Barbara 527-5510.
HOUSESITTING WANTED: Marsha Russell. References. Excellent care. Work phone: 329-8737
Do you need a Housesitter? Very responsible UW student seeks summer housesitting. 20 y/o fem,non-smoker Laurelhurst reference. Julie Warrick 527-6647.

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Treasurer	Ed Lapic	522-9086
Newsletter Editor	Anita Francis	524-9340
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	Maryann Spangler	
	Annie Warsinske	524-0739
Special Assistant to the President	Lucy Krause	527-9194
Past President	John Kehoe	523-3219

We are Laurelhurst neighbors and associates of Windermere Real Estate. Please call if we can help with any real estate need.

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Dick Loudon (broker) 527-9333
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LAURELHURST LETTER

LAURELHURST COMMUNITY CLUB

JULY

CAMPAIGN AGAINST BILLBOARD HEATS UP

Ackerley Communications and Northwest General Contractors of Bellevue want to put up a large, 14 ft. by 48 ft., billboard on a single pole, about 46 ft. above ground level, near the N.E. 45th St. entrance to the University Village Shopping Center. The billboard would be between the building still under construction and the entrance to the shopping center. The readable side would point toward the Burgermaster; the blank side toward the N.E. 45th St. Viaduct.

Northwest General Contractors also want to build the 3 story, 15 unit apartment condominium on the two vacant lots on N.E. 45th St., or the so-called balckberry patch.

Also, Northwest General Contractors is in a major battle with the University Village over the use of parking space in the shopping center. The building hard upon the entrance and the billboard are the tactics of the developer in this struggle. As many of us remember, Ackerley Communications tried to put up a billboard at Almvig's several years ago without a valid permit. After extensive negotiations, that billboard was relegated to Baskins and Robbins at N.E. 45th and Union Bay Place.

The billboard near the University Village would be the same size and type; a very large, ugly structure. In discussions with the Department of Construction and Land Use (DCLU), it is apparent that the City can regulate the billboard, specifically its size, height, and location such that a billboard at this site would be less advantageous to the developer.

It is important that DCLU understand that this billboard creates serious problems. (1) It is completely out of scale with adjacent structures and would seriously disrupt the city scape along N.E. 45th St. (2) The billboard through its size, direction, and location, would obstruct the entrance sign of the University Village; the shopping center has the right to identify itself without undue obstruction (3) Sec 24.44.010 of the Municipal Code states that there shall be a minimum distance of 100 ft. between signs; the distance between the Shopping Center sign and this billboard would be only 50 ft. (4) The obstruction of the Shopping Center entrance sign plus the building near the entrance with no setback means that early recognition of the entrance and exit will not occur; as a result, it will increase traffic congestion and the accident rate will increase. (5) The property owner, Northwest General Contractors, wants access and use of the parking space in the Shopping Center; the billboard is the latest tactic in connection with that strategy.

View Ridge Community Council is helping to gather signatures on the statement aginst the billboard, writing letters to DCLU; the University Village will use its legal counsel, and Laurelhurst Community Club Club is gathering signatures and sending letters to DCLY. Copies of the statement against the billboard were placed in various shops in University Village, Windermere Realty, and Laurelhurst Community Center.

The comment period ended on July 3. We will keep you informed as to how this issue is resolved. The community response has been strong and should be effective.

Bob Klug, President
Laurelhurst Community Club
527-4892 or 447-4054

LAURELHURST OPINION POLL

Your opinion on the Children's Orthopedic Hospital helistop proposal is needed now! A hearing on the helistop will be held by the City in August or September. Your Community Club Board has been representing you on the helistop issue and we would like some reassurance that most of you still agree with the Board's position. If not, we will modify it to be more representative of your opinions. We would also want to submit your responses to the City as part of our testimony to the City Council.

To help you understand the Board's current position, excerpts from a recent presentation are provided in the newsletter on page 2, "Proposed Helistop Lacks Limits." After reading this article, please complete the questionnaire, and return it to us at the address on the reverse side of the questionnaire.

Thanks for your participation. It is very important to us.

Anita Francis, Newsletter Editor
Laurelhurst Community Club Board

Things to Know:

Crime Watch: 522-4066
Aircraft Noise Hotline: 433-5393
Next Newsletter Deadline: July 8.

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Al Hovland

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WANTED: Professional couple living in Laurelhurst want to rent another home here: 3+BR/ We don't smoke, don't have animals or children. Want to pay less than $850 per mo. Rich or Barbara 527-5510.

HOUSESITTING WANTED: Marsha Russell. References. Excellent care. Work phone: 329-8737

Do you need a Housesitter? Very responsible UW student seeks summer housesitting. 20 y/o fem,non-smoker Laurelhurst reference. Julie Warrick 527-6647.

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* * LAURELHURST OPINION POLL * *

June, 1986

Dear Neighbor,

In response to a proposal for a helistop at Children's Orthopedic Hospital, members of the Laurelhurst community have asked what controls would govern such a development. We have found there are no controls proposed, and there is no integration of the current or proposed hospital helicopter service with the existing emergency medical service program in King County, the Puget Sound region or the State. Additionally, there has been intentional circumvention of the State's certificate of need review and public hearing process by providers of air ambulance services.

It is urgent that a plan be in place before siting and use decisions are made. The lack of planning leads to misuse and overuse of helicopters, excessive costs and unnecessary safety hazards, air and noise pollution.

The goal of the plan should be to assure the highest quality of emergency medical care with the least adverse effects on costs and the safety and welfare of the general public. It follows that the designation of sites should be limited to the minimum necessary to meet the needs of the region. Where there is a choice, the location of heliports should be limited to sites where overflights and landings will have the least impact on residential communities.

Conditions imposed in states which plan for helicopter service are included in the position statement below. We hope you'll take the time to respond to this statement with your comments.

Sincerely,

Liz Anderson and Kate Hemer, Co-Chairs, Land Use Committee

----------Fold, seal, and return by mail to address on reverse side----------

LAURELHURST HELISTOP QUESTIONNAIRE

The Laurelhurst Community supports the position that a helistop should NOT be sited on the COH campus until the following conditions are met:

* Need should be established through the State's certificate of need process
* Geographical service areas must be established to ensure that patients are transported quickly to the nearest qualified hospital
* For transfer of patients, hospitals must be classified according to their emergency care capability
* Patient conditions requiring helicopter transport must be defined by the State Medical Association
* Enforceable rules must assure that the helicopter is used only for emergencies and only when no better choice is available
* An evaluation of flights, conducted periodically by an objective and credible review panel to ensure against overuse and misuse, must be implemented

Circle your choice. Add comments on top of reverse side (your name and address are optional):

STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

July 24, 1986

RECEIVED
JUL 25 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Holly Miller
Director
Department of Construction and
Land Use
400 Municipal Building
600 4th Avenue
Seattle, WA 98104

Re: Illegal Helicopter Landings at Childrens Orthopedic Hospital

Dear Ms. Miller:

This is an addendum to my earlier letter regarding my concern over illegal helicopter landings at Childrens Orthopedic Hospital. Due to recent developments, I feel compelled to supplement that letter with the following information.

Due to the dramatically increasing number of helicopter flights into Childrens Orthopedic Hospital (there was another one at 11:00 p.m. last night), I called tne hospital and spoke to Nancy Greenwalt, Community Relations Representative at Childrens Orthopedic Hospital.

According to Ms. Greenwalt. the Hospital has conducted some kind of noise monitoring to determine the effect of the helicopter flights on the community and has determined that the noise was the same as a large diesel truck going by. Although I respect Ms. Greenwalt as a dedicated person in a difficult position, I strongly disagree with this statement. The vibrations of the helicopter are much more severe than a diesel truck going by. For example, a diesel truck has never vibrated the plates off my walls whereas this did happen to me on Sunday, July 13 when a helicopter came over at 5:00 p.m.

Ms. Greenwalt also stated that one of the noise monitors had been placed ~~had been placed~~ in a condominium at Laurelon Terrace where I live. Laurelon Terrace consists mainly of two-story buildings. Although Ms. Greenwalt did not say where the noise monitor was located, I expect that the monitor was probably placed in a sheltered ground floor location rather than an exposed second floor location. I don't think anyone who lives on a second floor condominium would agree that the noise level equates to a diesel truck going by. If you are interested I would be happy to have a noise monitor installed in my second floor condominium.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Finally, more than noise is at issue here. A substantial part of the disruption caused by the helicopter relates to vibrations which wouldn't be present unless a large diesel truck drove right past my front door. Moreover, I am concerned about helicopters coming low for their final approach to Childrens Orthopedic Hospital and the danger to which I am exposed in the advent of adverse weather conditions or mechanical problem in the helicopter. Additionally, we are not talking about replacing truck noise with helicopter noise but instead adding the noise, vibrations and overhead menace of the helicopters to the already existing truck noise.

I again request that the City maintain its present regulations regarding helicopter landings at Childrens Orthopedic Hospital and proceed with even stronger enforcement of those regulations until this apparent violation is stopped.

Sincerely,

Pat Lundquist

Pat Lundquist
4685 41st N.E.
Seattle, WA 98105

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July 31, 1986

Julia Gibb
Dept. of Construction and Land Use
400 Municipal Bldg.
Seattle, Wa 98104

RECEIVED
AUG 4 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb,

I am writing in support of Children's Orthopedic Hospital and Medical Centers request for a conditional land use permit to build a helistop outside their emergency room.

I am a resident of Port Townsend, and have grandchildren visiting here regularly. If any of these children would require the services of COHMC in a hurry, I want to know that the helicopter can land directly at the hospital.

It is not possible for me to understand the concerns of those who would object to this life saving service for children. Please convey my opinions to the Seattle City Council.

Sincerely,

Kay Cushman
166 Colman Drive
Port Townsend, Wa 98368

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KAH TAI CARE CENTER

Pacific Northwest Evangelical Free Church Homes, Inc.

751 Kearney Street
Port Townsend, Washington 98368
Telephone (206) 385-3555

July 30, 1986

RECEIVED
JUL 31 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb;

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a Nursing Home Administrator and realize the value of time in critical or life threatning situations. It is not difficult to understand the objections of those living in the area of the hospital but I think they are more fearful than realistic. Those of us who live significant distances from Seattle have a definite need of speedy and safe access to Children's Orthopedic Hospital in times of extreme emergency. It doesn't make much sense to get from somewhere on the Olympic Peninsula only to have a potential problem from landing on the U of W soccer field and transporting to the hospital.

In a matter as vital and important as this it is time to put aside selfish fears and concerns and support this very humane and life promising service.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

George Avis
Administrator

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WILLIAM E. HOWARD
PORT TOWNSEND, WASHINGTON

RECEIVED
JUL 31 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

July 30, 1986

Ms. Julia Gibb
Department of Construction and
Land Use
400 Municipal Building
Seattle, WA 98104

RE: Children's Hospital Request for Heliport

Dear Ms. Gibb:

I write this letter in support of the request of Children's Hospital for a conditional land use permit to build a heliport outside their emergency room.

Two years ago, when my son was ten years old, he suffered what was feared to be a very serious head injury. He was transported by helicopter from Jefferson General Hospital in Port Townsend to Seattle for emergency treatment. Fortunately my son's injury was less severe than first diagnosed and he quickly recovered; however, that experience has brought home to me the importance of air transport for emergency medical services.

In the case of my son, it was necessary to remove him from the helicopter and place him in an ambulance for transport to the hospital emergency room. At the time I was concerned about that procedure. It was obvious that it would have been much more advantageous if he could have been removed from the helicopter and taken directly to the emergency room.

Children's Hospital is requesting authorization to build a helicopter landing site immediately outside their emergency room. That location certainly makes good sense.

I understand that some members of the Laurelhurst community object to the proposal because of noise and safety factors. In light of the limited number of flights required those concerns simply do not reflect the greater interests of the community.

It is my request that you convey my concerns to the Seattle City Council when this matter comes before them for consideration.

Very truly yours,

William E. Howard

WILLIAM E. HOWARD

WEH:maw

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207 Birch Avenue
Grandview, WA 98930
August 11, 1986

RECEIVED

AUG 15 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a parent that has had to make use of air transportation for my son who was desperately ill at birth. The hospital did a wonderful job with what was available and I am very thankful to them. I know that the helistop will make situations like ours much better. While I was at the hospital with my son, I had the opportunity to hear the helicopter and do not believe that concerns about noise and safety outweigh the good that will be realized.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Karen M. Rounds

Karen M. Rounds

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Dear Ms. Gibb:

Aug. 9, 1986

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am
* an employee, nurse, physician
* a parent
* a neighbor
* a Seattle resident
* a supporter of OH

I understand the concerns of those who are objecting, but I
* treat the children and know this is necessary - give examples.
* want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.
* have heard the helicopter and do not believe that concerns about noise and safety outweigh the good that will be realized.
* etc. believe in saving children's lives Now. (copters will become quieter as science progresses.)

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

H. Donald Bliss
1429 Quincy St.
Port Townsend, Wa: 98368

RECEIVED
AUG 12 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

4840 38th. Ave. N. E.
Seattle, Wa. 98105
August 5, 1986

RECEIVED
AUG 8 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Lucia Gibb
Department of Construction Land Use
400 Municipal Bldg.
Seattle, Wa. 98104

Dear Ms. Gibb,

We received a communication in the mail yesterday about the proposed Helipad near the Children's Hospital which is near our home, although we live West of it instead of on the hill.

We were gone during the winter and thought the whole thing had been resolved when we saw helicopters landing there this summer, but find that it is not.

I am appalled at those stupid, selfish people in Laurelhurst opposing something which is as good as being able to bring ill children into the hospital as fast as possible.

We have lived here for 52 years and there are many noises much worse than the helicopters make. Sandpoint Way has sirens screeching picking up speeders, etc., and the ambulances which bring children to the hospital along with the air traffic which we have all hours of the day.

I am sorry that more people who think that a helipad is not a bad idea do not speak out.

Sincerely,

Margaret R. Cline

Paul and Margaret Cline

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PORT TOWNSEND POLICE DEPARTMENT
607 Water Street
Port Townsend, WA 98368
(206) 385-2322
Emergency 911

Robert H. Hinton, Chief

RECEIVED
AUG 14 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

8-14-86

Julia Gibb
Dept. of Construction & Land Use
400 Municipal Bldg.
Seattle, WA 98104

Dear Ms. Gibb,

I am writing this letter in support of Children's Hospital & Medical Center's request for a conditional land use permit to build a heli-stop outside their emergency room.

I am a sergeant with the Port Townsend City Police Department and reside 2 blocks from a heli-port adjacent to Jefferson General Hospital in Port Townsend. I understand the concerns to those who are objecting, but I also understand the lives that are being saved by helicopters landing at the hospital in emergency cases. I deal with emergency situations on a daily basis and understand that time is a critical factor.

Our home is in the flight path of the helicopter's landing at Jefferson General Hospital. When I hear them above our house I don't think of them as an annoyance, I think of them as a life-saving measure used in the field of medicine today.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Robert A. Boice
Sgt. PTPD

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CITY COUNCIL TRANSMITTAL

C. F. # N/A

Date Sent: 2/13/86

Reply Requested By: N/A

TO: Beatrice Ryan

FROM: Jim Stutt

Subject: Childrens Orthopedic Helipad

ACTION — required

	Review and Return File With Your Answer to Sender
	Review and Answer Petitioner, Return File and Copy of Answer to Sender
	Review and Make Recommendations, Return File and Recommendations to Sender ( ) In Duplicate
	Prepare Legislation and Return File to Sender

RECEIVED
FEB 14 1986
DEPT OF CONSTRUCTION & MAINTENANCE
LAND USE DIVISION

Additional Information: please add to file

Karen L Campbell
Signature

LDI – 110–5002 CS 20.19

RECEIVED
FEB 14 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

February 10, 1986

RECEIVED
FEB 13 19[illegible]
JIM STREET
SEATTLE CITY COUNCIL MEMBER

Seattle City Council
600 Fourth Avenue
Seattle, Washington 98134

Dear Sirs:

We, the Clara E. Walker Orthopedic Guild, wanted to write and let you know that we would very much like to see you vote in favor of the helicopter pad at the Children's Orthopedic Hospital. We feel that if the administration of COH can improve the quality of care that so many of our children need with this pad, then they should have it. None of us know when COH may have to save the life of one of our dear little ones and how sad and mad we would be if one could not get the care needed because some people didn't think it was necessary. Looking forward to your favorable vote.

Sincerely,
Clara E. Walker Orthopedic Guild
CLARA E WALKER ORTHOPEDIC GUILD

Mrs. Ida Ashbridge
Mrs. Mavis Beall
Mrs. Linda Brazelton
Mrs. Marianne Buerger
Mrs. Jeanne Burbidge
Mrs. Judy Comstock
Mrs. Cathy DeMatteis
Mrs. Barbara Downs
Mrs. Cheri Endicott
Mrs. Marian Freeman
Mrs. Sue Heller
Mrs. Gisela Hohendorf
Mrs. Teddy Isaacson
Mrs. Nancy Johnson
Mrs. Joan McMahon 7923 Brittany Dr. SW. 98166
Mrs. Carol Nicholson
Mrs. Mary Joan Olason
Mrs. Sally Soest
Mrs. Mary Tynan
Mrs. Joan Winward
Mrs. MaryLou Zeigen

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CITY COUNCIL TRANSMITTAL

C. F. #

TO: Beatrice Ryan, Director
DCLU

Date Sent: 2/27/86

Reply Requested By: N/A

FROM:

Subject: Childrens Orthopedic Helipad

ACTION — required

	Review and Return File With Your Answer to Sender
	Review and Answer Petitioner, Return File and Copy of Answer to Sender
	Review and Make Recommendations, Return File and Recommendations to Sender ( ) In Duplicate
	Prepare Legislation and Return File to Sender

RECEIVED
FEB 29 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Additional Information: Please add to file

Karen Campbell
Signature

LDI – 110–5002 CS 20.19

RECEIVED
FEB 27 1986
JIM STREET

Councilman Jim Street
Chairman
Land Use Committee
Seattle City Council
600 Fourth Street
Seattle, WA 98104

Dear Mr. Street:

I wish to express my support for the continued operation of emergency helicopter landings at Childrens Orthopedic Hospital.

As you are aware, this issue is of more than local importance, because Childrens Orthopedic Hospital provides critical medical services to children and their families in a wide geographical area.

In some cases, Childrens Orthopedic Hospital is the only medical center capable of providing the emergency care that is needed to save a child's life. In such circumstances it would seem unforgivable to deny the child the speediest possible access to medical care.

As the Council considers this issue, please urge each of them to imagine, for a moment, how they would feel if their own child's life were at stake.

Thank you.

Very truly yours,

Nancy J Johnson
Clara E Walker Guild
COH

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1986

Recd after comment period closed (2-3-86) JG

ALBERT A. FELDMANN
P. O. BOX 85568 UNIVERSITY STATION
SEATTLE, WASHINGTON 98105 (206)525-5610

Feb. 1. 1986

RECEIVED
FEB - 4 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

The Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle,WA 98104

Sir:

As Vicepresident of the Laurelcrest Condominium Owners Association I speak for eighty (80)families in identifying significant issues involved in the planned construction of a helistop facility on the grounds of Childrens Orthopedic Hospital and Medical Center.I was also present at the public hearing conducted by Dr. Nicola,City Health Officer,on October 24. 1985.

1. At no time during 1½ hours of testimony did spokesmen for Childrens Orthopedic Hospital present evidence that one single life was endangered, let alone lost,by landing a helicopter at the nearby University of Washington field and transferring the patient by ambulance to the hospital less than 2 miles away.Arguments about landing difficulties at night,or in inclement weather,totally ignored the existence of a heliport at the nearby Sandpoint Naval Base,available for such emergencies.

2. The numerous occasions during the past three months when helicopters landed on the hospital grounds,in violation of city ordinances,at all hours demonstrated just how bad the noise level is.The fact that within the same time period two helicopters carrying patients to hospitals crashed, killing patients and crew,demonstrates that such disasters are not so farfetched and are most likely to occur during inclement weather.

3. The public declaration by an administrative officerof Childrens Orthopedic Hospital that the hospital must fulfil its mission as regional resource, which is more important than any significant environmental impact on the residents of the surrounding area,makes any promise to use the planned helistop for emergencies only quite suspect.Misrepresentation of the costs of the helicopter service by Childrens Orthopedic Hospital,to avoid having to apply for a Certificate of Need ,is another proof of its bad faith.

The Board of the Laurelcrest Condominium Owners Association strongly opposes any permission by the Department of Construction and Land Use to construct an emergency helistop facility accessory to Childrens Orthopedic Hospital and Medical Center.

Sincerely yours
Albert A Feldmann
Albert A. Feldmann

4873 Terrace Dr. NE
Seattle, WA 98105

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Julio

RECEIVED

FEB -5 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

President
Board of Directors
Laurelon Terrace Condominium
Homeowner's Association
4015 N. E. 46th
Seattle, Washington 98105
January 30, 1986

Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

RE: The Environmental Impact Statement for the Emergency Helistop Facility at Children's Orthopedic Hospital, 4800 Sand Point Way, Seattle, Washington

The members of the Board of Directors of The Laurelon Terrace Condominium Homeowner's Association are the elected representatives of the owners of 136 family dwelling units located on the West boundary of The Children's Orthopedic Hospital.

Recently, there have been several (5-10) unauthorized helicopter landings at the hospital. The flight paths for most of the landings were low angle approaches over several of the Laurelon Terrace Condominium residences. The extreme noise and reverberations generated during these flights, has been stressful to elderly residents and the night flights have been especially so, due to the anxiety of waiting for the helicopter to depart.

We respectfully request your thorough investigation of the following:

1. MEDICAL NEED:

Is there truly a medical need for a helicopter landing site at Children's Orthopedic Hospital? Would the site be used only for bona fide critical cases and not for "marketing" purposes?

2. SAFETY:

Can there be assurances that the flight path for all landings would be a route that would minimize danger and noise for the surrounding community of homes, schools and businesses?

3. FREQUENCY OF FLIGHTS:

At least some of the recent flights were actually two trips (four over-flights) for one patient. One flight to pick up a medical team and another to deliver the patient to the hospital. There are many conflicting accounts of the anticipated number of flights per month and the costs associated therewith.

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Director, Dept. of Construction and Land Use January 30, 1986

4. ALTERNATE SITES:

The present landing site at the nearby soccer field has served well for many years. Is it actually no longer a suitable landing site? If not, why not? Is there a medically acceptable alternate landing site? The approach to a landing site at The Sand Point Naval Station could be mostly over water. There is presently a landing site at Harbor View Hospital and may soon be a landing site at University Hospital which is even closer than the Sandpoint Naval Station or Harbor View. Perhaps Seattle's Medic I, with the best response record in the nation, could be utilized.

5. COST:

We do not wish to imply that a dollar value be placed on a human life. Common sense, however, requires that initial and recurring costs be considered as a vital part of your investigation. Duplication of services would not be cost effective and should be avoided.

6. QUALITY OF LIFE:

The residents of Laurelon Terrace have always supported the Children's Hospital and will continue to support this outstanding institution with both money and voluntary service. The surrounding community is entitled to health, safety and tranquillity, rights which should not be ignored, but have been abridged by the hospital in their endeavor to institute emergency helicopter service.

Thank you for the opportunity to express our concern in this matter. Please notify us of the time, date and place of any public hearing regarding this project.

Patricia L. Scanlon

Patricia Scanlon, President
Board of Directors
Laurelon Terrace Condominium
Homeowner's Association

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Seattle Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

MASTER USE PERMIT

January 13 1986

RECEIVED
FEB - 5 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

NOTICE OF DECISION (DECLARATION OF SIGNIFICANCE & SCOPING)

The Director of the Department of Construction and Land Use has reviewed the Master Use Permit application described below and has issued a Declaration of Significance (DS) on this project..
The public is invited to identify specific significant environmental impacts and issues which should be addressed in the Environmental Impact Statement.
If an EIS is prepared, you will be notified of the time, date and place of the public hearing.

Comments on the scope of the Environmental Impact Statement are to be sent to the following address by FEBRUARY 03, 1986 :

Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

The Declaration of Significance is a part of the file on this matter and is available for public viewing in Room 408 of the Seattle Municipal Building

NORTHEAST

4800 SAND POINT WY NE ZONE 1-4/1-2/SF 5 PROJ #8405870/KROLL 16W
TO CONSTRUCT AN EMERGENCY HELISTOP FACILITY ACCESSORY TO AN EXISTING HOSPITAL/ MEDICAL CENTER.

In view of the close proximity of school, churches and residences and the availability of the helicopter landing spot at the U of W. field I do not feel that this construction is necessary. I live within three blocks of the proposed site and have been quite aware of the noise during landings also

Mrs Eleanor R Emery
4814 NE 44th St, Seattle Wa. 98105

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RECEIVED
FEB 3 1986
SEATTLE CITY

4737 45th Ave. N.E.
Seattle, Wn. 98105
January 30, 1986

Dear Mr. Street,

This letter is to express the grave concern of the entire neighborhood regarding the extreme danger of helicopter landings at Childrens' Orthopedic Hospital (COH).

It has been determined after exhaustive study by experts that a helipad at COH is entirely unnecessary, that it would duplicate services already being provided. Our apprehension is for the safety of people living in the proximity of the hospital whose homes, limbs and very lives are at risk every time a helicopter attempts to land or take off .This area is zoned First Class Residential and there are children playing nearby. Laurelhurst Elementary School is just 2 blocks from COH.

There have been several extremely noisy helicopter landings in the past few months, hazardously close to houses and trees. The helicopters have not followed a previously prescribed landing approach. Their landings have been haphazard, unpredictable, sometimes 50 feet above a house. Thus far they have not been impacted by wind. However, sudden downdrafts caused by a south wind over COH could have disastrous consequences as the helicopted approaches the pad. Let's not create "an accident waiting to happen"!

Please take immediate action to permanently deny a permit for a helipad at COH.

Urgently,

Helen and David Belvin

Helen and David Belvin

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RECEIVED
FEB - 3 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

JG

4757 45th Ave. N.E.
Seattle, Wn. 98105
January 30, 1986

Dear Mrs. Ryan,

This letter is to express the grave concern of the entire neighborhood regarding the extreme danger of helicopter landings at Childrens' Orthopedic Hospital (COH).

It has been determined after exhaustive study by experts that a helipad at COH is entirely unnecessary, that it would duplicate services already being provided. Our apprehension is for the safety of people living in the proximity of the hospital whose homes, limbs and very lives are at risk every time a helicopter attempts to land or take off .This area is zoned First Class Residential and there are children playing nearby. Laurelhurst Elementary School is just 2 blocks from COH.

There have been several extremely noisy helicopter landings in the past few months, hazardously close to houses and trees. The helicopters have not followed a previously prescribed landing approach. Their landings have been haphazard, unpredictable, sometimes 50 feet above a house. Thus far they have not been impacted by wind. However, sudden downdrafts caused by a south wind over COH could have disastrous consequences as the helicopted approaches the pad. Let's not create "an accident waiting to happen"!

Please take immediate action to permanently deny a permit for a helipad at COH.

Urgently,

Helen & David Belvin

Helen and David Belvin

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MR. DAVID S. BELVIN
4757 - 45th Northeast
Seattle, Washington 98105

SEATTLE WA 981
PM
31 JAN
1986

USA 22

Mrs. Beatrice Ryan, Interim Director
Seattle Dept. of Construction & Land Use
600 - 4th Ave. - Municipal Bldg.
Seattle, Wn. 98104

Duplicate

Jul.a

Seattle City Council

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

February 4, 1986

RECEIVED

FEB - 5 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Helen and David Belvin
4757 45th Avenue N.E.
Seattle, Washington 98105

Dear Mr. and Ms. Belvin:

Thank you for your recent letter regarding the Children's Orthopedic Hospital heliport application.

The application is for a Council Conditional Use permit and at present is being reviewed by the Director of the Department of Construction and Land Use (DCLU). Her recommendation will be reviewed by the Hearing Examiner who will conduct a public hearing and prepare a recommendation for the City Council. A record is now being formed, and I am forwarding your correspondence to DCLU so that it may be included in that record. The Council will take it into consideration when we come to review this application.

I appreciate your interest. Thank you for taking the time to write.

Respectfully,

PAUL KRAABEL, Member
Seattle City Council

PK:cm

Cc: Beatrice Ferrar Ryan, Interim Director
DCLU

An equal employment opportunity—affirmative action employer
Eleventh Floor, Municipal Building, Seattle, Washington 98104

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4757 45th Ave. N.E.
Seattle, Wn. 98105
January 30, 1986

Dear Mr. Kraabel,

This letter is to express the grave concern of the entire neighborhood regarding the extreme danger of helicopter landings at Childrens' Orthopedic Hospital (COH).

It has been determined after exhaustive study by experts that a helipad at COH is entirely unnecessary, that it would duplicate services already being provided. Our apprehension is for the safety of people living in the proximity of the hospital whose homes, limbs and very lives are at risk every time a helicopter attempts to land or take off .This area is zoned First Class Residential and there are children playing nearby. Laurelhurst Elementary School is just 2 blocks from COH.

There have been several extremely noisy helicopter landings in the past few months, hazardously close to houses and trees. The helicopters have not followed a previously prescribed landing approach. Their landings have been haphazard, unpredictable, sometimes 50 feet above a house. Thus far they have not been impacted by wind. However, sudden downdrafts caused by a south wind over COH could have disastrous consequences as the helicopted approaches the pad. Let's not create "an accident waiting to happen"!

Please take immediate action to permanently deny a permit for a helipad at COH.

Urgently,

Helen and David Belvin

Helen and David Belvin

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OLIVER LAWRENCE
10660 Lakeside Ave. N.E.
Seattle, Wa. 98125

NANCY LAWRENCE
10660 Lakeside Ave N.E.
Seattle, WA 98125

J6 5

January 20, 1986

Director
Dept. of Construction and Land Use
Room 400 Municipal Bldg.
Seattle, WA 98104

RECEIVED
JAN 23 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

To Whom It May Concern:

I strongly recommend that you allow the Children's Orthopedic Hospital to construct an emergency helistop facility accessory to the hospital. When patients need helicopter transportation time is of the essence. An ambulance ride from Harborview to 4800 Sandpoint Way may well mean death, rather than life, for the child. I would much rather hear the helicopter now and then rather than delay treatment for a sick patient.

I wonder if the people who are trying to prevent the construction of the helistop facility lived where they now live when the Naval Air Station was active and Friday nights & Saturday Nights for years lines of planes practiced landing and immediate takeoff on the north end of Lake Washington-weekend after weekend. No one asked us whether we approved. I worked full time 5 days a week and part-time Saturdays and Sundays. Many weekends I was

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sleepy from virtually sleepless nights. If you have any more questions, feel free to phone me at 364-8021

Sincerely,
Nancy Lawrence

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JAN 23 1986
DEPT OF CONSERVATION & LAND USE
LAND USE DIVISION

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Jan. 18, 1986

Director,
Dept. Construction & Land use
Seattle, Wa.
Dear Sir:

I've written before. Please consider what you are doing in the matter of the helipad at the Children's Hospital.

The Children Hospital chose to settle in Sandalwood rather than near arboriums or along Lake Union. Now they are working diligently and single-mindedly to pursue their aims regardless of the effect on the community.

During the observation trip by the city at the hosp. all the helicopter trips came in high & then swooped down all three trips approach low & right over the roofs of the low condo group between 42nd & 45th St. the noise is horrendous & frightening.

Everyone knows landings & take-offs are the most dangerous

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JAN 24 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mrs. Phyllis L. Jackson
4307 N. E. 57 St.
Seattle, Washington 98105

Jan. 22, 1986

To Whom it May Concern;

I certainly do believe that Children's Orthopedic Hospital should have a helipad for transporting children in critical or acute condition. I cannot imagine anyone objecting if it were their child or grandchild, where minutes count.

Fire engines, ambulances and Medic One are noisy too, but they do save lives. It is a very poor trade-off when the noise consideration comes first!

Mrs. Phyllis L. Jackson

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RECEIVED
JAN 27 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

4554 45th Ave NE
Seattle WA 98105
25 January 1986

Director, DCLU
Municipal Building #400
Seattle WA 98104

Dear Director:

As an across-the-street neighbor of the Childrens Orthopedic Hospital I wish to record my strong opposition to the construction of a helipad and the introduction of regular helicopter service by the COH. I have had no part in the actions of the Laurelhurst Community Club; hence my opinion is not a repetition, but an independent and additional expression of opposition.

If the helipad is constructed, it is perfectly obvious what will happen: (1) after that expenditure, there will never be a subsequent vote of disapproval; and (2) the expenditure will have to be justified by maximizing the use of helicopters. Whatever the Hospital people may say now, and may honestly believe, all the psychological forces will be toward increased use of helicopters for all kinds of purposes. There will be no way of monitoring these flights. There will inevitably be a very bad effect on a residential neighborhood already suffereing from the constantly increasing density of traffic generated by hospital business.

Please note this: some time ago a hospital employee was heard to remark that she hoped the helicopter flights would soon be in so that she could use them for commuter service to Sea-Tac airport. That is precisely the kind of thing that there will be no way of stopping if helicopters are ever permitted.

There has been a great deal of doomsday talk about "saving a life." Even the hospital, however, though it is given to translating things into life-and-death terms, has not claimed that a life has ever been lost under the present system. The present system has obviously worked very well indeed. The desire for helicopter landings here clearly reflects, though the motive may be unconscious, not a dire need but a desire for, and a fascination by, new techniques, mechanical aids, sheer convenience, etc.

"Saving a life" is simply not relevant. But talk about it obscures another value which gets lost in the excitement--namely, the quality of life for hundreds, and probably thousands, of people in a residential neighborhood which should be saved from further inroads of a business-and-industry way of life.

I hope that your division will rule against the construction of the helipad.

Sincerely yours,

Robert B. Heilman

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11

JAS
Jan. 25/86

Dear Mr. Portman -

I wish to state my objections to the use of helicopters at COH.

They have been using Graves field which is not directly within a residential area. They have not had any deaths related to the 3 to 5 min. drive to COH from this site, which I believe is much safer.

I live within 300 ft. of the main parking lot. I've seen the helicopters land and take off. The take off usually takes place over the filled parking lot. I believe the safety of this is questionable.

Also the noise! One would gladly put up with it in a life or death situation but I do not believe this is the case. This will be made use of to the extent that it is financially rewarding, and I resent the use of Childrens lives to promote its approval

Sincerely
Lola Galtz
4708 - 44th St E.
523-5010

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B JJ

4652 - 41st Ave N.E.
Seattle, Wash. 98105

RECEIVED
JAN 29 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Director
Dept. of Construction & Land Use
Room 400 Municipal Bldg
Seattle, Wash. 98104

Dear Sirs:

This is to protest the permit for a Heliotop at the Orthopedic Hospital at 4800 Sand Point Hwy N.E. Zone 1-4-1-2/SF 5-Dvaj +8405870/K Roll-16-N

We are concerned not only about the noise, but also about the fact that they sometimes crash. Just last week a helicopter crashed at the Meat Packing Plant in Austin, Minn.

They have been flying very low here right over our apartment.

I sincerely hope you will consider the plight of all the people who live here as it is a high density population area.

Very Truly Yours
Ariel G. Nelson

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M Julio

1 February 1986

Beatrice Ryan, Interim Director
Department of Construction and Land Use
Room 400 Municipal Building
Seattle, Washington 98104

RECEIVED
JAN 30 1986
DEPT. OF CONST. & LAND USE

Dear Ms. Ryan,

The purpose of this letter is suggest a scope and content for the Environmental Impact Statement that DCLU has asked Children's Hospital to prepare in connection with its application to construct a helistop on its campus. These suggestions have been developed by several members of Citizens Concerned about Helicopter Transportation and represent the views of those living in the impacted neighborhoods. We believe that the EIS should cover five areas: noise, vibration, safety, air quality and alternatives. Further, we believe that the term alternatives should not to be limited only to landing sites but that alternative service alternatives should be considered as well. We urge DCLU to include the following requirements in their definition of the scope and content of this EIS:

1. The noise measurements should be made at several different landing sites and should include several landings at each site. One needs several landings in order to get enought data to derive statistically significant results. All types of helicopters that might be using the landing sites should have their noise measured. This is especially true for the Huey and Blackhawk helicopters that are now being (or are likely to be) operated by MAST. The background noise measurements at each site should be made at homesites in the neighborhoods directly adjacent to the proposed landing sites, not by busy adjacent arterials. Several noise measurement instruments should be used to record the noise instead of using just one and extrapolating its results to other locations. The number of people living within various contour levels of noise should be determined for each alternative landing site. The demographic characteristics of these people should be determined. The flight path and landing profile to be used by the helicopters during the noise testing should be carefully worked out and strictly adhered to. A noise expert from the Seattle-King County Health Department should be present as an observer during all noise tests and should approve the procedures to be used before they are implemented. The residents of the impacted neighborhoods should be given at least two days advance notice as to when the noise tests are to be conducted and should be invited to observe them as well. The helicopters should be loaded in the same way that they will be loaded when flying actual missions. Fuel levels, a full medical team and special equipment should be on board during the noise tests.

2. All vibration measurements should be conducted at the same time as the noise tests are made. Suitable instruments should be placed in several homes in adjacent impacted neighborhoods and vibration levels recorded during multiple landings at each of the proposed sites. Background vibration measurements should also be made at each of the residential sites to provide baseline data.

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3. The safety analysis should be customized to each proposed landing site as each will have special characteristics that need to be taken into account. Safety levels are closely associated with the frequency of flights and the types of helicopters and pilots used. Estimates of the number of flights to be made should be based on a careful analysis of the population that can be served better by helicopters than by ground transport or fixed-wing transport. To do this, one must first estimate the number of people that live in areas that can be served better and faster with ground transport. Then one needs to add those that are beyond the flying range of each of the helicopters that are likely to be used. The remainder is the population that could benefit from helicopter transport and appropriate incidence ratios can be applied to them to derive estimates of flight frequencies. Once these are known for 5 and 10 years in the future, some risk factors can be derived that can define the safety levels associated with each alternative site. Other factors that should be investigated include pilot capabilities and training, the availability of specialized equipment for dealing with adverse weather conditions, appropriate communications equipment, suitable levels of liability insurance and definitions of the parties that are responsible for any accidents that may occur.

4. One can expect that there will be significant amounts of jet engine exhaust gases blown into the surrounding neighborhoods while the helicopter is landing, running on the ground and taking off. We know from observing landings at the intramural field and at COH that these gases smell very bad and presume that they can be expected to have some adverse health effects. What is the content of the exhaust gases from twin jet engines like those on the Agusta and MAST helicopters? What are the likely health effects of these exhaust gases on the residents of the neighborhood? These estimates should be based on the projections of use and detailed analyses of jet engine exhaust gases from the machines most likely to be used at the various alternative sites. A model of dispersion should be used to estimate how the gases can be expected to move from the landing site into the neighborhoods.

5. There are several alternatives that should be investigated as follows:

a. The do-nothing alternative. A clear and detailed description of the way that MAST helicopter service has been provided to COH during the past five years should be presented to provide baseline data to use in the evaluation of the do-something alternatives. The benefits, costs and impacts of continuing past practices for another 10 years should be presented in this section.

b. Landing MAST and Airlift Northwest helicopters at the UW intramural field. There are several suboptions under this general heading. They involve locating a site suitable for all-weather operations that have good access to ground transportation vehicles. Careful noise and vibration measurements need to be made at all alternative landing site locations in this area. The University of Washington should be an active participant in these investigations because of the UW's responsibility for the safety of the people that are often involved in sports activities at their intramural fields. This section should describe the benefits, costs and environmental impacts of using

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feasible intramural field sites for landing helicopters.

c. Landing MAST and Airlift Northwest helicopters at Children's Hospital. There are two suboptions under this general heading. One would be to land on the roof of the hospital and the other would be to land on a specially constructed helipad located near the entrance to the emergency room on the north side of the COH complex. Extensive noise and vibration studies should be conducted at both sites. Since a helicopter cannot presently land on the roof of the hospital, such landings should be simulated as closely as possible in order to get adequate noise, vibration and safety data.

d. Landing MAST and Airlift Northwest helicopters at a site at the Sandpoint Naval Support Facility There are several landing site options that should be investigated by the applicant at the Sandpoint NSF. Extensive noise and vibration studies should be conducted at all sites found to be feasible at the NSF.

e. Concentrating all initial care for critically ill neonates and children at Harborview Hospital. This alternative would assume that all children arriving by helicopter be seen first at Harborview and then be transferred to COH or other locations by ground ambulance if appropriate. Such an arrangement would concentrate all helicopter landing activity at Harborview and eliminate the problem at COH and University Hospitals. A careful investigation of this alternative is needed to determine its benefits, costs and environmental impacts to both providers and consumers of emergency medical services.

It is recognized that the University Hospital intends to operate a helicopter service with a landing site on the roof of its new East Wing in the near future. We believe that it would be beneficial for all concerned to have both of these proposals revieved concurrently. If this is not possible, the COH EIS should contain as complete a description of the proposed UW helicopter service and its relationships to the service proposed by COH. If any way can be found for the two hospitals to share a helistop, such an alternative should be given careful study.

Yours sincerely,

Jerry Schneider Anita Francis

Jerry Schneider and Anita Francis, Members
Citizens Concerned about Helicopter Transport

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RECEIVED
JAN 31 1986
DEPT. OF CONST. & LAND USE

January 31, 1986

Beatrice Farrar Ryan, Interim Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

RE: Scope of the EIS of Proposed Helistop at 4800 Sand Point Way

Dear Ms. Ryan:

We understand from discussion with Department staff that the EIS for the proposed helistop will cover a minimum of four areas: noise, vibration, safety and alternatives. Further, we understand that the term alternatives is not to be limited to alternative landing sites but that service alternatives will be considered as well. We appreciate the opportunity to comment on the proposed scope.

We ask that two additional areas be addressed: the cumulative impact which can be expected if a permit for the proposed helistop is granted and the effect on air quality.

Establishing a helistop at COH would set a precedent of City approval for onsite landings for interhospital transfers. The precedent can be expected to apply to all hospitals. As you know, the University Hospital is actively preparing a request for approval of a helistop. To compete, other hospitals will have to provide this service also. The areawide implications of an initial approval of onsite helicopter landings are significant.

Helicopters require several times the quantity of air polluting fuel as the alternative ground transportation vehicles. The Council should be aware of the effects of jet exhaust gases on the neighborhoods in making its decision on the helistop proposal.

The validity of the projections of environmental impacts will depend upon the accuracy of the proponent's projections for use. We look to the environmental impact statement for a definition and projection of the proposed use. The project's objective and criteria for use should include a list of limitations which would be imposed and a plan for the monitoring and enforcement of those limitations.

Reasonable limitations might include that the helistop would not be used: for transfer of patients who could be safely transferred by ground; or for transfer flights originating within seventy or outside one hundred and fifty miles of the hospital; or for flights where the origin is closer to another hospital qualified to treat the patient; or for trauma or burn patients which will go to Harborview; or for neonatal cases unless University Hospital beds are not available; or for any purpose other than transport of patients to the hospital; or for landing heavy or inadequately maintained equipment.

The limitations on use must be clarified. The effects on the community of one landing a year are quite different from those of one thousand landings. With the use defined, the number of expected occurrences can be derived from pertinent data on the population and area which would be served. We expect to see that data and the proponent's criteria for use discussed as it relates to the area's land use and environmental policies and to City goals.

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In addition, the validity of the projections of environmental impact is also dependent on the hospital's future growth and program development. For the Council to adequately assess the effect of the proposed helistop, the hospital's five, ten and twenty year plans for development should be included. The environmental consequences would be quite different if projected from a COH plan to return to its original objective of providing for chronically ill children than they would be if the plan is to evolve as a trauma center.

We expect your experienced staff to fully anticipate the needed scope and content requirements. We do have one special request. We would like the analysis to include the potential impacts on the children and staff in the hospital. The quasi-public nature of the hospital's work make this consideration both reasonable and responsible.

We know that you are committed to preparing a professional analysis and unbiased document. If it is appropriate and allowable, we would like a representative from our community present at the scoping meeting. Otherwise, we would like to review minutes of the meeting when they are available.

Sincerely,

Robert Klug, President
Laurelhurst Community Club

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JG

3650 42nd Ave. N.E.
Seattle, Washington 98105
January 29,1986

Ms. Beatrice Farrar Ryan
Interim Director
Seattle Department of Construction and Land Use
Room 400, Municipal Building
Seattle, Washington 98104

RECEIVED
FEB - 3 1986

Dear Ms Ryan:

Thank you very much for being as watchful as you are over the proceedings Children's Orthopedic Hospital is using to get permission to construct a helipad. A private helicopter service in any residential neighborhood should always be looked at very carefully before permission is granted. We urge you to include in the environmental impact statement considerations regarding noise, safety of the area residents, and the increased fire hazard that a low flying aircraft would surely bring with it. I am not against helicopter service for sick children. I have lived in this neighborhood for five years and have been awakened by the MAST helicopter many times as it brings sick children to the emergency room. To the best of my knowledge, this service has worked admirably over the last ten years and I believe that no child's life has ever been lost in the three minute transfer between the playing field at UW and the emergency room at COH. I am convinced that no other means of emergency transport is needed and I hope your department will scrutinize this issue very carefully.

Sincerely yours,

Carolyn Margon

Carolyn Margon

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Julia 4

METRO
Municipality of Metropolitan Seattle

Exchange Bldg. • 821 Second Ave., Seattle, Washington 98104

RECEIVED
JAN 21 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

January 16, 1986

Beatrice Ryan, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Declaration of Significance and Scoping Notice:
8405870: Helistop Facility Accessory

Dear Ms. Ryan:

Metro staff has reviewed this request for scoping comments and anticipates no significant adverse impacts to wastewater facilities or water quality.

Thank you for the opportunity to participate in this scoping effort.

Very truly yours,

Gregory Bush

Gregory M. Bush, Manager
Environmental Planning Division

GMB:dww

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SEATTLE CITY COUNCIL LEGISLATIVE
JAN 23 1986

391[illegible] 48th Place N.E.
Seattle, Washington 98105
January 17, 1986

Mr. Jim Street
600 - 4th Avenue
11th Floor, Municipal Building
Seattle, Washington 98104

Dear Mr. Street:

As a Laurelhurst property owner, I wish to express my views on the land-use issue to be considered soon by the City Council concerning the construction of a helipad by Children's Orthopedic Hospital and Medical Center.

I urge the council to approve the hospital's request for a conditional land use permit. The concerns which I have heard and read on the part of some Laurelhurst residents seem to focus primarily on noise and safety. It seems to me that a few minutes of helicopter noise occasionally is a minor matter when the life of a child may depend upon the utmost speed. As for safety, I'm sure we face far more danger daily from automobiles, pollution, and criminals than from the possibility of a crash by Airlift Northwest's helicopter.

It is proper and natural for residents of any community to be actively concerned about any proposal which alters zoning and land use. However, this request does not seem out of line. When one buys property near a hospital, one should expect the noise of ambulances, increased traffic and parking problems, and possibly the transport of emergency cases by airplane. I believe that those opposing this request represent a highly vocal minority.

Sincerely,

Carolyn S.R.B. Scott

Carolyn S.R.B. Scott
(Mrs. David R.M. Scott)

David R.M. Scott

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January 14, 1986

RECEIVED
JAN 15 19[illegible]
DEPT. OF CONST. & LAND USE

DIRECTOR
Dept. of Construction & Land Use
Room 400, Municipal Building
Seattle, Washington 98104

Re: Helistop- Children's Orthopedic Hospital

Dear DIRECTOR:

Thank you for your notice of decision, dated 1-13-86 and opportunity to address the issue of environmental impact of the proposed helistop at COH.

My first letter related to the helicopter site at COH was written 11-15-84 to the president of the Boa.d of Trustees at COH. Subsequently I have written dozens of letters and copies which have been sent to city, county, state officials and departments and which should be on file in the various offices. I have copies of these letters. I have attended many, many meetings.

I am a member of the Board of Trustees of Laurelhurst Community Club and the Laurelon Terrace Homeowners Board of Trustees; but I speak as a concerned, individual citizen here. (I have lived in Laurelhurst since 1953.)

My concerns, which I suggest ought to be included in the environmental impact statement, are as follows:

1. Safety - Let's stop tragedy from occurring before it happens. We read about helicopters and other small planes crashing within city neighborhoods across our nation. The COH helipad site is within a high density residential neighborhood. Approximately 150 feet from Laurelon Terrace condominium complex, consisting of 136 units, the flight pattern will cut a diagonal path across these condos. It is within 1½ blocks of an elementary school as well as a block from many single family residences. Site allows no margin of error--engine failure, malfunction, poor weather conditions (visibility), etc. These residents are not expendable

2. Vibration and noise factors - Low-flying and landing helicopters cause very real disturbance and pose unhealthy conditions as noise decibels are well above acceptable level for healthful endurance. Vibrations are felt and are disturbing especially to all within the flight pattern across Laurelon Terrace but also to all nearby residents. Flights will be anytime during day or night disrupting not only peace of mind but sleep, too.

3. MAST helicopters - The proposed site is not large enough to accommodate these large planes. On 12-6-85 at 10:17 a.m., a low-flying (approximately 200 feet) MAST helicopter circled several times over the Laurelhurst area, the Laurelon Terrace Condominium area, and the Laurelhurst Elementary School. School was in session. Hundreds of children's lives were endangered as well as hundreds of residents' lives. The MAST helicopter could not land on site repeatedly used by other helicopters at COH because of inadequate space; therefore, it landed in the parking area after circling several times. Time was lost and extra transfer of patient required.

4. Alternate sites - Several other sites are available and adequate. There are no problems on record, no loss of life has been documented for landings (past and present) at UW soccer field with transfer by ambulance within two minutes from COH. Another site is Sand Point Naval Station which is just five minutes from COH. In addition, a helipad is to be soon in place at University Hospital a short distance from COH, also.

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The quality of life, the health and safety of residents whose homes are contiguous to COH and those within a block or two ought to be considered as high priority. For many residents the helicopter landing at COH would be like it landing on their roof top or in their front yard. Is COH, is the City of Seattle prepared to take responsibility and pay for loss of life and property in case of crash? The rights of these residents are being abridged and/or ignored.

Within the past five to six months, repeated helicopter landings have occurred and have been documented by residents. These landings have occurred without permit; these landings are illegal. The impact has been felt.

Please consider the above-mentioned factors carefully. This institutional encroachment in a densely populated residential neighborhood is a clear endangerment of life, property, and environment. Of course, it likewise is a horrendous duplication and excessive expenditure -- these impacts are economic and must be considered by another department as rise in medical costs escalates.

Thank you.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

524-4151

cc:mes

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July 15, 1986

RECEIVED
JUL 16 1986
DEPT. OF CONST. & LAND USE

Ms. Holly Miller
Director
Department of Construction &
Land Use
400 Municipal Building
400 4th Avenue
Seattle, WA 98104

Re: Illegal Helicopter Landings at
Childrens Orthopedic Hospital

Dear Ms. Miller:

On Sunday, July 13, 1986 at 5:01 a helicopter came in for another illegal landing. The noise and vibrations were extremely loud and jarring. In fact, the vibrations were so strong and l[illegible] that I heard a crash in my kitchen and went in to find one (of a matching pair) of my favorite English antique "Blue Willow" plates had been vibrated out of the plate hanger and crashed and broken all over the floor. I later saw one of the elderly ladies (91 years old) going over to check on her neighbor (also elderly) to see if she had survived the onslaught of another illegal helicopter landing.

The value of my property has been severely impacted by this intrusion into our community. I realize there is another side to the story (one that the hospital uses to influence people to accept this incredibly disruptive plan of theirs which I feel is motivated more by economics for the hospital if the bottom line were known).

I live in direct line of approach to the hospital and would never have bought in the area if I had known what I know now. The parking garage was added after I bought my condo (4-5 years ago) and from an esthetic standpoint, it is nothing but ugly and spoiled the hillside on which it sits, further deteriorating the surroundings.

This letter may sound strong but it is a reaction to the invasion of undesirable forces which we who live in the shadow of Childrens Orthopedic cannot get away from. We are trapped and must suffer whatever comes over our heads. It's too late to get away once you have heard the approaching of those helicopters, its like being in a combat zone and somehow you feel sympathy for people who have been in a war zone.

Either the Orthopedic should buy out the approaches or cease and desist their illegal practice.

Sincerely,
Pat Lundquist
Pat Lundquist, 4685 41st N.E. (525-5653 Eves)
98105

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21235 24th Avenue So.
Seattle, WA 98198
July 16, 1986

RECEIVED
JUL 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Attn: Julia Gibb

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am the mother of a 5 month old baby girl. I can understand the concerns of those who are objecting, but I want to know that if my daughter needed to come to Children's Orthopedic in a hurry, the helicopter could land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Barbara E. Cook

Barbara E. Cook

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RECEIVED
JUL 1 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

6016 57th Avenue Northeast
Seattle, Washington 98115
Monday June 30, 1986

Ms. Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I wish to give my support to the proposal to build a heli-pad at Children's Hospital and Medical Center. I am sure that such a facility would help save lives and would not be used to the extent that it would cause any problem for the area's residents. I myself am an employee at the hospital and live just a mile away from it. Thank-you.

Sincerely yours,

David M. Nemerever

David M. Nemerever

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Office Of The Mayor
City of Seattle

Charles Royer, Mayor

July 15, 1986

Marie Davis and John L. Prinzin
4810 134th Place Northeast
Marysville, Washington 98270

Dear Marie Davis and John L. Prinzin:

Thank you for sending me your thoughts about the proposed helistop at Children's Hospital.

The proposal presently before the City is to construct a helistop. The Department of Construction and Land Use (DCLU), is the City agency responsible for evaluating individual applications with the ultimate decision being made by the City Council. They have asked COH to prepare an Environmental Impact Statement addressing factors including noise, safety and cumulative impacts which could result from the helistop.

I sent a copy of your letter to Julia Gibb, the DCLU Land Use Specialist reviewing the application. She will notify you when the Draft Environmental Impact Statement is available for review and comment and about any public hearings that may be scheduled.

If you have further questions about the decision process on the helistop, please call Julia Gibb at 625-4509; she will be glad to help you.

I am confident the City's decision on the helistop will acknowledge both the medical needs of children and the concerns of residents in the neighborhood surrounding Children's Hospital.

Sincerely,

Charles Royer

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Mayor Royer
Seattle, Washington

RECEIVED
JUN 18 1986
MAYOR'S OFFICE

Dear Mayor Royer;

I am a citizen concerned about the proposal before the Seattle City Council to ban the helicopter landing site at Childrens Orthopedic Hospital, because of noise pollution.

In the event of an emergency, espically when a child is involved, there should be no barriers. A child is our most important resource and everything should be done to sustain his or her life.

Perhaps noise levels could be more closely monitored at rock concerts and sporting events instead of at our hospitals, where lives are being saved not endangered.

We as concerned citizens should all work to put down such a proposal.

Thank You,
Sincerely Yours;

Marie Davis
John L Preinzen
4810 134th Pl. N.E.
Marysville 98270

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Katy / Julia yes FYI
DOCP

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

July 15, 1986

Mardee Leigh and Charles L. Lang
1206 Ash, Apartment 2
Marysville, Washington 98270

Dear Mardee Leigh and Charles Lang:

Thank you for sending me your thoughts about the proposed helistop at Children's Hospital.

The proposal presently before the City is to construct a helistop. The Department of Construction and Land Use (DCLU), is the City agency responsible for evaluating individual applications with the ultimate decision being made by the City Council. They have asked COH to prepare an Environmental Impact Statement addressing factors including noise, safety and cumulative impacts which could result from the helistop.

I sent a copy of your letter to Julia Gibb, the DCLU Land Use Specialist reviewing the application. She will notify you when the Draft Environmental Impact Statement is available for review and comment and about any public hearings that may be scheduled.

If you have further questions about the decision process on the helistop, please call Julia Gibb at 625-4509; she will be glad to help you.

I am confident the City's decision on the helistop will acknowledge both the medical needs of children and the concerns of residents in the neighborhood surrounding Children's Hospital.

Sincerely,

Charles Royer

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Marie Davis and John L. Prinzin
4810 134th Place Northeast
Marysville, Washington 98270

Julia

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

July 15, 1986

Mardee Leigh and Charles L. Lang
1206 Ash, Apartment 2
Marysville, Washington 98270

Dear Mardee Leigh and Charles Lang:

Thank you for sending me your thoughts about the proposed helistop at Children's Hospital.

The proposal presently before the City is to construct a helistop. The Department of Construction and Land Use (DCLU), is the City agency responsible for evaluating individual applications with the ultimate decision being made by the City Council. They have asked COH to prepare an Environmental Impact Statement addressing factors including noise, safety and cumulative impacts which could result from the helistop.

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If you have further questions about the decision process on the helistop, please call Julia Gibb at 625-4509; she will be glad to help you.

I am confident the City's decision on the helistop will acknowledge both the medical needs of children and the concerns of residents in the neighborhood surrounding Children's Hospital.

Sincerely,

Charles Royer

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DCW MAYOR'S RESPONSE DUE 7/3 LOG P409

RECEIVED
JUN 17 1986
MAYOR'S OFFICE

Mayor Royer
Seattle, Washington

Dear Mayor Royer;

I am a citizen concerned about the proposal before the Seattle City Council to ban the helicopter landing site at Childrens Orthopedi Hospital, because of noise pollution.

In the event of an emergency, espically when a child is involved, there should be no barriers. A child is our most important resource and everything should be done to sustain his or her life.

Perhaps noise levels could be more closely monitored at rock concerts and sporting events instead of at our hospitals, where lives are being saved not endangered.

We as concered citizens should all work to put down such a proposal.

Thank You,
Sincerely Yours;
Maudee Leigh Lang
1206 Ash Apt. 2

M. Lang
1206 Ash
Apt 2
Mount Vernon Wash
98270

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Mayor Royer
Seattle, Wash'ngton

Dear Mayor Royer;

RECEIVED
JUN 17 1986
MAYOR'S OFFICE

I am a citizen concerned about the proposal before the Seattle City Council to ban the helicopter landing site at Childrens Orthopedic Hospital, because of noise pollution.

In the event of an emergency, espically when a child is involved, there should be no barriers. A child is our most important resource and everything should be done to sustain his or her life.

Perhaps noise levels could be more closely monitored at rock concerts and sporting events instead of at our hospitals, where lives are being saved not endangered.

We as concered citizens should all work to put down such a proposal.

Thank You,
Sincerely Yours;

Charles E. Lang

1206 Ash Apt. 2
98270

Lang
1206 Ash
Apt. 2
Mouk. WA
98270

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RECEIVED
JUL 10 1986
DEPT. OF CONST. & LAND USE

LAWYER'S RESPONSE DUE 7/21 LOG H 4192

July 3, 1986

RECEIVED
JUL 9 1986

Mayor Charles Royer
1200 Municipal Building
Seattle, Washington

Dear Mayor Royer,

Enclosed is a copy of a letter, written to Mr. Glenn Wright.. of KIRO Television.

We think you should have a copy...as, perhaps..you might want to do sometning, about this proposed 'nuisance problem.'

Maybe you do not care, either..and..cannot..or do not want to anything to help us in the matter of noise pollution. We have voted for you..but, we are quite dismayed at how you've let our, once beautiful city, 'slip and slide' into pestilence/pollution of all kinds. Just name it!! We REALLY THOUGHT you were going to 'work for the people!' Ha!..the joke is on us!! Politics again! 'you rub my back..and..I'll rub yours!!' At least, that's what it seems to be.

You have our comments..for whatever they're worth to you.. probably nothing!!

Sincerely,
Mr. & Mrs. Robert H. Means

Mr. & Mrs. Robert H. Means
5038 - 48th N. E.
Seattle, Washington
98105--

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July 3, 1986

Mr. Glenn Wright, Vice President, General Manager
KIRO Broadcasting
2807 - 3rd Avenue
Seattle, Washington

Dear Mr. Wright,

Your editorial, last night, on a proposed 'heli-port'..or..a 'heli-pad' at Children's Orthopedic Hospital, has us just infuriated!! And...that's putting it mildly!!

If a heli-pad is shoved down our throats..the way Seattle's becoming a so-called 'sanctuary city' was, also...then, our neighborhood will become a 'living hell' of even more noise pollution. It already has been the latter, since 1970. Even worse, when all of the jets started flying over, this area, in 1982. It's just NOISE..EVERY DAY!!

Both of us were born and raised in Seattle..and..have lived in this house all of our married lives..29 years. Never did we think we would live to see Seattle become just EXACTLY LIKE the dirty, polluted and unfriendly cities..in the east part, of our country.

We have thought about moving..but, we cannot afford anything better..than, what we have...so..we're stuck here. We just cannot understand such total ignorance, on your part, Mr. Wright, about what constant noise pollution and stress, from said pollution, does to people. It makes them sick!! Once a heli-pad is established, then helicopters won't just be coming here..'once and awhile'..as you said, last night. People will be hiring helicopters to fly in here... ALL OF THE TIME..morning, noon and night!!

You must think we're just a bunch of 'dumb-bunnies' and selfish people, out here. Not so!! We have had all of this noise pollution 'up to here!'...we ARE FED UP!! Yes, a baby's life was saved..and.. that is good!! But, what about ALL of the many other souls/lives, who live here..and..what continual noise will do to all of us??? Do we not count for anything?? One life, against MANY...is minimal.

You do not even live, here, Mr. Wright...so, what do you know?? It's easy for you and others, who do not live here..to 'preach' for a noisy heli-pad..and..the hell with all of us, in this neighborhood.

Lastly...keep your nose out of things that do not pertain to yourself. What with all of the 'info' on noise pollution on TV, magazines, newspapers, etc.....now can you still be so very blind and completely thoughtless on this situation?? Anyway, we have had

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our say, on this matter. Thank you for your time.

Sincerely,

Mr. & Mrs. Robert H. Means
5038 - 48th N. E.
Seattle, Washington
98105--

cc: Mayor Charles Royer

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RECEIVED

JUN 16 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a guild member of the Christopher Funk Guild for Children's Hospital in Marysville, Washington.

I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Jan A. Kipperberg

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June 12, 1986

RECEIVED
JUN 16 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Wa. 98104

Dear Ms. Gibb,

I am writing in support of Children's Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a parent, a Seattle resident and an employee of Children's hospital and I understand the concerns of those who are objecting but I have heard the helicopter and do not believe that concerns about noise and safety outweight the good that will be realized in that children in medical emergencies can come to Children's hospital in a hurry, the helicopter can land directly at the hospital's emergency room entrance.

Thank your for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely

Joyce Ishida

Joyce H. Ishida
6854 18th N. E.
Seattle, Wa. 98115

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June 1986

RECEIVED
JUN 10 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Wash. 98104

Dear Ms. Gibb,

I am writing in support of Children's Hospital and Medical Center's request for a conditional land use permit to build a helistop outside thier emergency room.

On March 14, 1986, I became the father of a 26 week premature infant who weighed 1010 grams. I consider myself extremely fortunate to live in the north end of the city (Lake City) where we have immediate access to medical centers like Children's and the University Hospital. Our child is alive, but only because of the availability of the NICU's expert medical attention on a timely basis.

I feel that our elected officals and those appointed to safeguard the publics welfare should consider my child's chances had we been living on Whidbey Island, Squim or Bellingham.

Please convey my opinions to the Seattle City Council.

Sincerely,

Gerard C. Kirchner

Gerard C. Kirchner
1528 N. E. 91st Street
Seattle, Washington 98115

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RECEIVED
JUN 16 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

4205 N.E. 45th
Seattle - Wa. 98105
June 13, 1985

Department of Construction + Land Use
Municipal Bldg.
Seattle - Wa. 98104
Gentlemen + Ladies:

I am writing to protest a Helipad at Orthopedic Hospital.

With or without approval this service has been going on for many months.

As for the regulation on building costs and limits it is a known fact that the hospital had already constructed the helicopter pad before applying for permit, thereby eliminating cost factor.

It is a scary situation having these machines flying so low over our homes - shaking not all sound and shaking our homes so badly that pictures fall off the walls and breaking figurines.

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There is no hospital in the area who has better access to emergency care than C.O.H. Consider the Sand Point facility and the U.W. Wash. landing spaces (2). (Three minutes to hospitals)

One C.O.H. doctor wrote a letter to the morning paper saying that it would take ten minutes from Union Bay landing to transport a child to the hospital. Well, I am an elderly citizen and I could push a stretcher from Union Bay to the hospital in less than ten minutes — let alone an ambulance. It is not hard to see that this helicopter service will be used constantly for convenience of V.I.P.'s and seldom for the rare emergency case.

C.O.H. has brought our once quiet neighborhood many problems and ever increasing building and traffic + parking. We do not need a Helipad - nor do they

Catherine Nicholson

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JUN 16 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a guild member of the Christopher Funk Guild for Children's Hospital in Marysville, Washington.

I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Geraldine R Short

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RECEIVED

JUN 16 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

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I am a guild member of the Christopher Funk Guild for Children's Hospital in Marysville, Washington.

I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Michelle Hyatt

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RECEIVED
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JUL 16 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

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I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Cristy A Santeford

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RECEIVED
JUN 13 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

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I am a guild member of the Christopher Funk Guild for Children's Hospital in Marysville, Washington.

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Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Carol A. Weller

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JUN 13 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a guild member of the Christopher Funk Guild for Children's Hospital in Marysville, Washington.

I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Pamela David

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RECEIVED
JUN 27 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

15226 NE 195th
Woodinville, Washington 98072
June 25, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

As a mother of children that would use Children's Hospital and as a guild member of a guild in Woodinville, I feel that the use of a helicopter by the Hospital is of upmost importance. To be able to transport a critically ill child to the Hospital as quickly and a safely as possible is a vital requirement of a high technological Medical Center. I would hope that such as service would be available to all children that would need it.

I understand the concerns and worries of those who oppose such a service. However, I feel that the Hospital has recognized these concerns and has addressed them with options that would provide workable alternatives, that would alleviate some of the noise and safety questions. The benefit of having the helicopter land at the Hospital far outweights the dangers in my opinion.

Thank you very much for letting me state my opinions and would you please convey them to the rest of the Council.

Sincerely,

Joyce M. Hyde

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RECEIVED
JUN 13 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a guild member of the Christopher Funk Guild for Children's Hospital in Marysville, Washington.

I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Vicki L Evans

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RECEIVED
JUN 13 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

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I am a guild member of the Christopher Funk Guild for Children's Hospital in Marysville, Washington.

I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Connie Kukull

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RECEIVED
JUN 30 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

19304 183rd Ave. NE
Woodinville, Washington 98072
June 28, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

As a mother of children that would use Children's Hospital and as a guild member of a guild in Woodinville, I feel that the use of a helicopter by the Hospital is of upmost importance. To be able to transport a critically ill child to the Hospital as quickly and a safely as possible is a vital requirement of a high technological Medical Center. I would hope that such as service would be available to all children that would need it.

I understand the concerns and worries of those who oppose such a service. However, I feel that the Hospital has recognized these concerns and has addressed them with options that would provide workable alternatives, that would alleviate some of the noise and safety questions. The benefit of having the helicopter land at the Hospital far outweights the dangers in my opinion.

Thank you very much for letting me state my opinions and would you please convey them to the rest of the Council.

Sincerely,

Joyce Jackson

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RECEIVED
JUN 30 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

2020 E Howe St
Seattle WA 98112
Jun 27, 1986

Julia Gibb
Dept of Construction and Land Use
400 Municipal Building
Seattle WA 98104

Dear Ms Gibb:

I am writing in support of Children's Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room. I am a concerned parent and resident of Montlake, which is almost neighboring the hospital.

I understand the concerns of those who are objecting but I want to know that if my (or any other) children need to go to CHMC in a hurry, the helicopter can land directly at the hospital. The trauma involved in intermediate stops can be fatal. Furthermore as a resident of Montlake, which receives frequent helicopter flyovers associated with SR520 traffic reporting and proximity to Lake Union, I know that concerns about noise are trivial relative to the benefits to be realized.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,
Joanna S. Richey

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Janet and Vern Herren

June 26, 1986

RECEIVED
RECEIVED
JUN 27
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Dept. Construction and Land Use
400 Municipal Building
Seattle, Wa 98104

Dear Ms. Gibb:

This a letter of support for Childrens Hospital, Seattle for a conditional land use permit to build a helistop outside their emergency room.

I am a member of Amelia Humerford Orthopedic Guild on Bainbridge Island, and have known 2 cases recently of close personal friends' experiences where helicopters have been the saving grace in the life-death situation involved.

I am "draped" daily also by the Sea-Tac air traffic over my home and find it an objectionable, as I am sure those who oppose the Medical Center's request find the helicopters.

I hope there is a compromise possible, but I believe saving lives by helicopter emergency service will say more positive things

4750 Crystal Springs Drive NE Bainbridge Island, WA 98110

(over)

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about Seattle as a caring society, than to reject the service.

Thank you for reading this comment. Please convey this opinion to the proper authority in Seattle City Council deliberations.

Sincerely,

Janet Morse Heeren
Bainbridge Is. Wa
98110

NOTICE: IF T[illegible]OCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT [illegible]UE TO THE QUALITY OF THE DOCUMENT.

RECEIVED

JUN 23 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 23, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a nursing administration employee at Children's. I understand the concerns of the neighbors who are objecting however, feel strongly that this issue is a broad city-wide issue:

* The cost of supporting severely neurologically damaged children for a lifetime affects Seattle directly as the highest population dense area who pay state taxes. The most common outcome I have seen in 15 years of nursing following a resuscitation that is not supported in a sophisticated facility ASAP is brain damage. Can we afford $1,000+ a day in medical care costs in order to spare a small neighborhood the noise of a periodic helicopter landing.

* Seattle is considered the best place in the country to have a heart attack. The capability to land at Harborview via helicopter is part of the reason we can taut this honor. Are the children of Seattle second class citizens? They can't vote but their parents can!!!

* I would want to be in the hands of skilled practitioners immediately following a life threatening "ass ult" to my body. Parents and children are not any different.

* I spent one week in February recuperating from surgery at my mother's home which is one block from the hospital. There were 2 helicopter landings during that week and I vaguely heard one of them because I was attuned to listen for the sound. I hope the City Council will come 'hear' for themselves. I would be happy to have them sit in my mother's living room for a demonstration landing then vote on this issue.

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Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Cathe Clapp

Cathe Clapp, RN, MN
Assistant Administrator, Nursing

CC/jlp

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RECEIVED

JUN 25 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a guild member of the Christopher Funk Guild for Children's Hospital in Marysville, Washington.

I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Janette M. Hendrickson

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RECEIVED
JUN 25 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

18104 NE 196th
Woodinville, Washington 98072
June 23, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing to give my support to Children's Hospital and Medical Center's request for a conditional land use permit to build a landing port for a helicopter outside their emergency room.

I am a mother of small children and a member of a guild in Woodinville. It would ease my mind to know that my child, as well as any child, could be transported safely as well as quickly to Children's Hospital if such an emergency should arise.

I understand the concerns of those people who are objecting but feel that those concerns about noise and safety are far outweighted by the good that will be realized if the helicopter is used.

Thank you for the opportunity to state my opinion. Please let the rest of the Seattle City Council know of my concern.

Sincerely,

Debbie Adair

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JUNE 19, 1986

JULIA GIBB
DEPT. OF CONSTRUCTION & LAND USE
400 MUNICIPAL BLDG.
SEATTLE, WA 98104

RECEIVED
JUN 23 1986
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

DEAR MS. GIBB:

WE'VE read and heard a great deal about the controversy over the heliport at Children's Orthopedic Hospital. As parents and Seattle area residents we strongly support a permit for this heliport. It should be obvious that emergency care for children outweighs occaisional noise pollution of the neighborhood.

Please let the city council know of our opinion at the appropriate time.

SINCERELY,
Diane L Hucks Berger
Kurt O. Berger
649 - 12th Ave.
KIRKLAND, WA 98033

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RECEIVED

JUN 23 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 20, 1986

Dear Ms. Gibb

I am writing to support Children's Hospital and Medical Center's request for a conditional land use permit to build a helispot outside their emergency room.

I am a Seattle resident and "soon to be" grandparent. I understand the concerns of those who are objecting but I am also concerned for those children - infants and adolescents who may need the emergency care that helicopter service can provide at this care facility.

Please convey my opinion to the Council. I appreciate the opportunity to express my concerns.

Florence Osborne
134 N. 202nd
Seattle 98166
678-8943

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RECEIVED

JUN 18 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a guild member of the Christopher Funk Guild for Children's Hospital in Marysville, Washington.

I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Anita Demmer Johansen

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EDITH E THOMSON
14329 - 36th Ave. N.E.
Seattle, Washington 98125

June 18, 1986.

Julia Gibb
Dept. of Construction and Land Use
400 Municipal Bldg.
Seattle, Wa. 98104

RECEIVED
JUN 18 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room. I am a Seattle resident.

I understand the concerns of those who are objecting, but I do not believe that concerns about noise and safety outweigh the good that will be realized.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Edith E. Thomsen

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RECEIVED

JUN 17 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a guild member of the Christopher Funk Guild for Children's Hospital in Marysville, Washington.

I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Linda Hammer

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RECEIVED
JUN 18 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a guild member of the Christopher Funk Guild for Children's Hospital in Marysville, Washington.

I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Pamela J. Stewart

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Julia ✓

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

June 9, 1986

Martin C. Hansen
3843 120th Southeast
Bellevue, Washington 98006

Dear Mr. Hansen:

Thank you for your thoughtful letter about Children's Orthopedic Hospital's helistop proposal. We have received many letters expressing strong feelings about this application.

I wish it were easier to decide whether to allow this helistop, but the law requires us to make sure the helistop proposal conforms to the criteria set down in the Land Use Code. These include examination of alternative locations including sites outside the hospital boundaries.

You are right; we can all be proud of Seattle. We all have the opportunity to voice our opinions and cooperate in keeping our city, its institutions and neighborhoods as sources of pride. Striking a working balance among our community's numerous and various goals is an important responsibility of city government, and I am confident the decision made on this permit application will be one which acknowledges both the medical needs of our children and the concerns of residents.

You can keep track of the decision process on the helistop by calling Julia Gibb, Land Use Specialist, Department of Construction and Land Use, at 625-4509.

Sincerely,

Charles Royer

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DCLU MAYOR'S RESPONSE DUE 5/21 LOG P3853

3843 - 120th S.E.
Bellevue, WA 98006
April 23, 1986

RECEIVED
MAY - 7 1986
MAYOR'S OFFICE

Mayor Charles Royer
Seattle City Hall
600 - 4th Avenue
Seattle, WA

Dear Mayor Royer:

I read an article in the Seattle Times entitled, "No legitimate objection to sound of saving lives," which infuriated me. Judy Horner pointed out in her letter to the editor that concerned citizens located in the vicinity of Children's Orthopedic Hospital are opposed to the issuance of a permit for a helipad at the hospital. I join Ms. Horner in stating that I am appalled at the selfishness of these people. Supposedly, the helipad, if built, would be restricted to life and death cases. Now, I ask, how often would these heartless people be disturbed?

Seattle is a city that we can all be proud of. You, as Mayor, have worked very hard to help make it that way. However, have we become so caught up in cleaning up Puget Sound, saving the salmon, cleaning up oil slicks, clean air, and keeping the Mariners in the Kingdome, that we are willing to overlook the life of an innocent child to appease a few very vocal, self-centered people? I am hoping the answer is no! It is my hope that you can use some influence in order to insure that this permit is issued to Children's Orthopedic Hospital.

My guess is that these "concerned citizens" willingly attend noisey football games, baseball games, basketball games, and dance to loud music, but think nothing of that--because it is something that pleases them. But, when it comes to putting themselves out a bit for the life of a child--well, that is another thing! These people need to answer the following question: "Would the noise be less disturbing if the life of your own child was dependent upon the use of the helipad?" Please use your influence to help save the lives of dying children.

Sincerely,

Martin C. Hansen

Martin C. Hansen

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RECEIVED
JUN 4 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

11212 82nd PLACE
Kirkland, WA 98034
May 26, 1986

Ms Julie Stitt
Dept of construction & Land Use
400 Municipal Bldg
Seattle, WA 98104

Dear Ms Stitt

I heard about the possibility of a helicopter landing site at CHOC for sick or hurt children. Please add my name to those interested parents of children who would welcome such a wonderful act for our children.

I understand the concerns of those who may oppose the pad but our childrens health must come 1st.

Sincerely

Susan Henry

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6/4/86

Dear Ms Gibb,

I am writing to let you know I support the helistop at COHMC. As a patient, I feel valuable time is lost in the present transport method. It only makes sense to move the child once. These children are usually in a life or death situation, therefore, I don't feel the intermediate transportation aids the immediate attention these children need — and deserve. I would like to feel assured that if my children ever needed the Helicopters Services, that they would get the needed care in the shortest time.

The concern about noise should not prioritize the life of a child. After all, it hasn't been all that many years that Sandpoint was used. The Hospital is part of the community & I think the needs of a "chosen few" do not out weight the needs of the entire community.

Please convey my opinions to the Seattle City Council.

Sincerely,

Diane Magruder

RECEIVED
JUN 5 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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RECEIVED
JUN 4 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 3 '86

Dear Mr Gibb

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

The concerns of those objecting are understandable; however, as a neighbor myself I feel that the advantages of such a service to the community outweigh the potential risk and noise involved. Being on intensive care nurse for a few years and more importantly - being a mother of a very adventuresome & curious 2 year old boy prompts me to say a quick prayer for those being affected whenever a siren is heard. I place myself in their situation and give thanks for the advanced technology & care now available and also give thanks that it is not my family. It is though with deep assurance that

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if my turn ever comes for such a challenge & the life of a loved one as myself that I in no way can be held responsible for impeding any of their/my care. Consequently the Lelistad has my full support!

Thank you for the opportunity & comment. Please convey my opinions to the Seattle City Council.

Sincerely yours,
Sonia Berggquist
3662 42nd Ave NE
98105

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RECEIVED
JUN 2 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

13410 9th Ave. N.E.
Kirkland, WA 98034
May 30, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room. I understand the concerns of those who are objecting, but I personally feel that they have overstated the number of landings that would occur.

As a concerned parent, guild member, and citizen I would want to know that if my or anyone else's child needed to get to Children's in a life or death situation that required helicopter transport and where time was of great importance that the helicopter would be able to land at the hospital. I feel that the landings would be only when absolutely necessary and not on a routine basis.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Mrs. Jacqueline Pendergrass

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✓

2047 Bare Point Land
Kirkland, Wash
May 30, 1986

RECEIVED
JUN 2 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb
Dept of Construction and Land Use
400 Municipal Building
Seattle, Wash - 98104

Dear Ms. Gibb,

I am writing in support of Children Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a grandmother of five, and although I understand the concerns of those who are objecting, I feel the life of a single child is too great a price to pay for peace and quiet. Thank you for the opportunity to comment. Please convey my opinion to the Zoning Hearing Examiner - Seattle City Council -

Sincerely,

Mrs. Evelyn Hanham

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RECEIVED
JUN 10 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

9232 N.E. 134th St
Kirkland, Wa 98034

June 8, 1986

Dear Ms. Gibb:

I am writing to you to support the request by Children's Hospital and Medical Center for a conditional land use permit to build a helistop outside the emergency room.

I'm obviously not a Seattle resident, and, therefore, some would feel I have no right to comment. I did grow up in Seattle, and my mother still is a taxpayer there. What is more important, however, is that Children's is the only regional facility that specializes in treatment of children. If my

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Children need specialized emergency treatment they will need to go to Childrens, and I think it is reasonable to allow helicopters to land directly at the hospital.

As ~~such~~ we all know, minutes and seconds count in an emergency. My first child died as an infant in another hospital, but had she lived, she would have been transferred to Children's. I want to know that my two surviving children, ages 6 and 3, would be assured of expert medical care in the most timely way possible. I also would not want other parents to experience the death of their children because a helicopter could not land at Children's.

I can understand that no neighborhood wants its peace upset. I can identify with the helicopter

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noise concerns of the Laurelhurst neighborhood. We live in a quiet neighborhood. After we had been here about four years, the army started flying overhead to and from Paine Field. We have had to accept that noise as a price of aiding search and rescue operations (Lest you think otherwise, the copters do fly low — barely above the tops of our trees because we're on the crest of a tall hill.) The flights also come over for routine practice flights, something that would not happen in Laurelhurst.

Use of helicopters should be monitored to assure that the use is not excessive — that should be monitored by medical workers as well as others in the community. And "community" should mean the greater Seattle community, or at least the whole city of Seattle.

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As much as any area of a community might want to be isolated from the less pleasant aspects of the community as a whole, we all need to share in what makes our community desirable, and good medical care for our children certainly qualifies in that respect. I'm sure Laurelhurst residents do not object to the helicopters that take adults in extreme medical need to Harborview which is in a low-income area of the city. We want children to be treated as well as adults are.

I am able to write today because I was treated at CCH as a two-year old at the Queen Anne Hill facility when I had pneumonia. Children today are being saved from far more serious afflictions. I want time to be on their side. I worry

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about ambulances having to rush too fast (and, maybe, to no avail) if the helistop is not approved; my uncle was severely injured in an ambulance that was rushing him to a hospital.

Thank you for reading this letter. I would appreciate your sharing my comments with the Seattle City Council and any relevant committees, or with Liana Gale, Executive Director of Seattle City Council.

Sincerely,

Carolyn B. Edwards
(821-1223)

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RECEIVED
JUN 23 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a guild member of the Christopher Funk Guild for Children's Hospital in Marysville, Washington.

I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Vicky L. Wall

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RECEIVED
JUN 10 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 9, 1986
7245 N. E. West Port Mad. Rd.
Bainbridge Island, Wn. 98110

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a grandmother here on Bainbridge Island. We have had several accidents involving children who finally have to be transported to the hospital. Landing near the hospital would save valuable time in these cases where the life is in the balance.

I think I understand the concerns of those who are objecting to this port, but I want to be sure that if these children need to come to COHMC in a hurry, the helicopter can land directly at the hospital. Surely the noise of a landing can't outweigh the life of a child.

Thank you for listening. Please add my opinion when meeting with the Seattle City Council.

Sincerely,
Mrs. Leonard Strom
Albertina Strom

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Commodore girl dies

The halls of Commodore Middle School are quiet this week as students and staff mourn the death of 13-year-old Danielle Yates. Danielle died Monday after a five-day struggle for her life at Children's Orthopedic Hospital in Seattle. Danielle was the daughter of Dan and Linda Yates.

The Commodore Middle School eighth grader collapsed during a physical education class last Wednesday. Commodore teacher and volunteer firefighter Jim Dow immediately was called to the scene where he administered cardio-pulmonary resuscitation.

Danielle had a history of heart problems, according to firefighter Tim Dahl who appeared at the school after the emergency call came. The cardiac arrest may have been caused by a ring that doctors discovered in her mouth, Dahl said.

Also responding to the scene were two doctors from the Winslow Clinic, Dr. Tom Hagger and Dr. Bruce Nitschs. Firefighter/EMT Ron La France managed to resuscitate Danielle with use of a defibrillator. Once stabilized, she was transported to Children's Orthopedic by Airlift Northwest. Dahl said Danielle was at the hospital within an hour from the time the fire department was called.

Services for her will be held Friday. A complete obituary is on page A-10.

Bainbridge Review Wed. 5/28/97

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7:30 p.m.—BEE MOLENAAR ANTARCTIC PRESENTATION, [illegible]
Hall. Adults $3.00, Seniors $2.00, Youths $1.50.
7:30 p.m.—MEMORIAL DAY PROGRAM, American Legion, Post 172, at Post Hall near Bucklin Hill fire station.
SUNDAY, June 1
7 p.m.—ORGAN CONCERT, Rolling Bay Presbyterian Church. Music will include works by Antonio Soler, Dietrich Buxtehude, J.S. Bach, Felix Mendelssohn and many more. The public is cordially invited to attend.

BAINBRIDGE GOVERNMENTS

TUESDAY, May 29
5:30 p.m.—BAINBRIDGE SCHOOL BOARD OF DIRECTORS meeting at School Dist. Administration Office.
7:30 p.m.—BAINBRIDGE ISLAND PARK & RECREATION, special meeting at Strawberry Hill Alternative School to review bids received and to award the contract for the Ray Williamson Memorial Pool renovation project.
MONDAY, June 2
10 a.m.—KITSAP COUNTY COMMISSIONERS, at the Courthouse in Port Orchard.

[redacted]

Bainbridge Review

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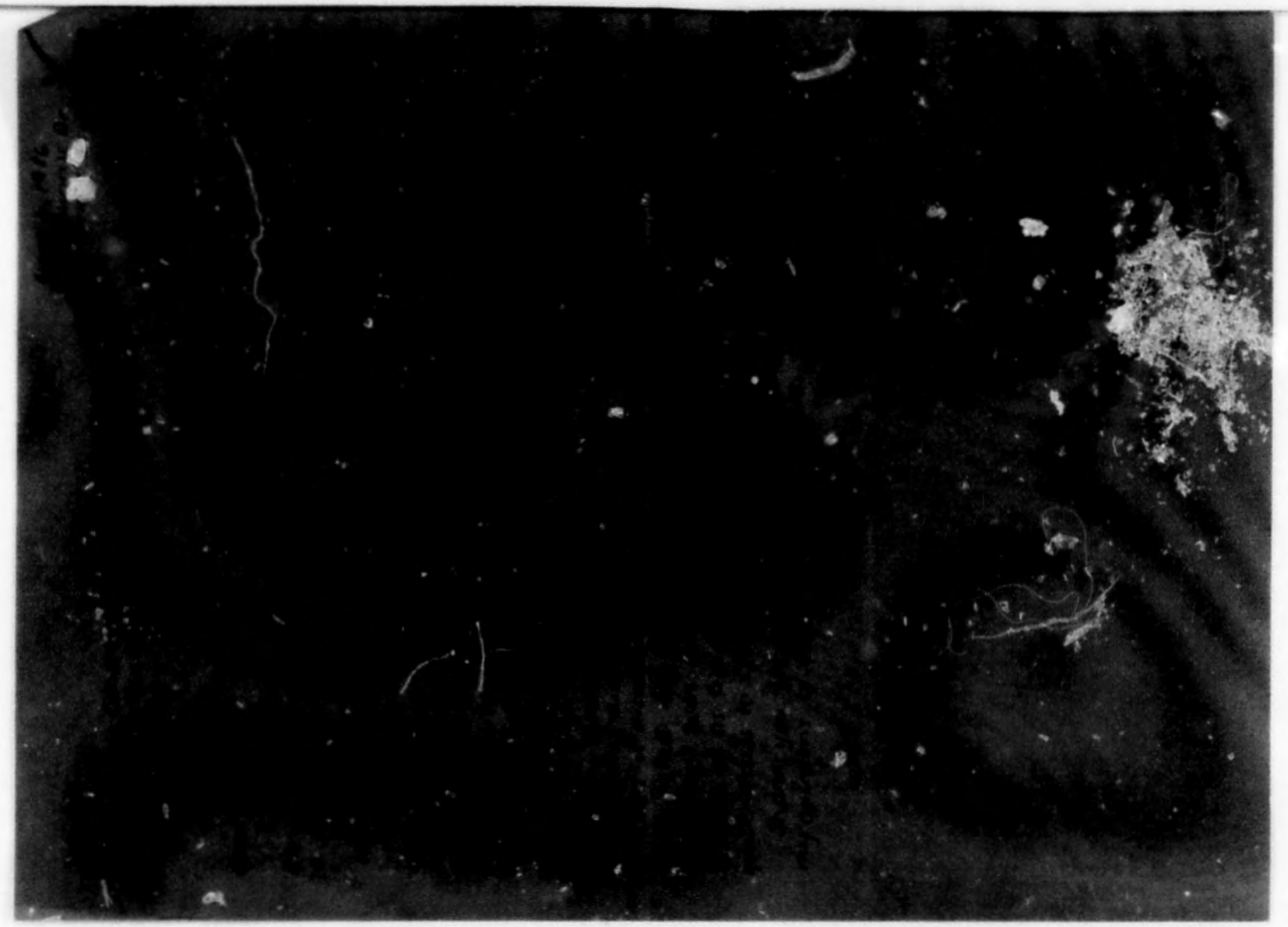

June 4, 1986

Leslie Lloyd
Dept of Construction + Land Use
400 Municipal Bldg
600 4th ave S
Seattle 98104

RECEIVED
JUN 5 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear M Lloyd:

It concerns me that occasional noise from helicopters would prevent use of a helipad at Childrens Orthopedic Hospital for critically ill children. Do the people who complain also keep fire engine and Medic teams from their neighborhood? Or increased traffic?

Minutes can make a difference in saving a life so I feel we can put up with a few minutes noise.

Sincerely
Virginia Rosenbaum

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BAINBRIDGE ISLAND PUBLIC SCHOOLS

DISTRICT 303

DR. DENNIS CARMICHAEL, Superintendent
Bainbridge Island, Washington 98110
Telephone 842-4714

June 5, 1986

RECEIVED
JUN 9 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

We are writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

We understand the concerns of those who are objecting, but we want to know that if our children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

On May 21, a young girl at our middle school had a cardiac arrest and was flown to COHMC. The attending physician made a decision while the helicopter was in flight to land directly at the hospital. It was his decision that any further delays would have risked this child's life.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Fred Grimm
President
BOARD OF DIRECTORS

jhn

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RECEIVED
JUN 9 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

1224 Olympia Ave. SE
Renton WA. 98058
June 5, 1986

Julia Gibb
Dept. of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms Gibb:

As a member of the Guild Advisory Counsil and a concerned parent, as wellas a potential grandparent, I would ask that you approve the request of Children's Hospital and Medical Center for a helistop outside their emergency room.

I understand the concerns of those who are objecting, but I want to know that any child who needs to be transported to the hospital in a hurry will have the advantage of the most efficient service by being taken directly to the emergency room, and not suffer being transfered from one conveyance to another to get treatment.

Thank-you for the ppportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely.

Norma M. Valberg

Norma M. Valberg

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MEADE EMORY
2400 COLUMBIA CENTER
SEATTLE 98104

RECEIVED
MAY 06 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 5, 1986

Ms. Julie Gibb
Department of Construction
and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I have a thought which is supplemental to my letter of April 28. Since I office in the Columbia Center I regularly see helicopters fly into, and leave from, Harborview Hospital. You may see them too. No one, certainly, would dare question this access by helicopter. Access to this important emergency medical facility by helicopter is simply not questioned. Why should the result be any different simply because COH happens to be out of the downtown urban area? The important, and indeed determining, aspect should be available and speedy access to the crucial medical center which, in the cases we are talking about, happens to be COH. As I said in my earlier letter, simply because COH is located in Laurelhurst should not result in denying medical care to those families desperately in need of that care.

Yours very truly,

Meade Emory

ME:tl

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RECEIVED

MAY 06 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

7215 26th N.E.
Seattle, WA 98115
April 30, 1986

Ms. Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

It is my understanding that you are the individual to whom one should express opinions with regard to Children's Orthopedic Hospital and Medical Centers request for a conditional land use permit to build a helistop. I live in the Wedgwood Community about five minutes from Children's Orthopedic Hospital and I am a parent of two small children. I have considered myself fortunate in not having to use emergency service for my children and even more fortunate to live just a few minutes away from such an excellent facility as Children's Orthopedic Hospital and Medical Center.

While I recognize that there is some level of inconvenience to our community when a helicopter needs to land at Children's Orthopedic Hospital I fully support this additional resource to our community. Each time I hear the helicopter come in it occurs to me that one more child has received a chance he or she did not otherwise have. I believe the children in the Northwest Region who don't live as close to Children's Orthopedic Hospital as I do also deserve every chance possible given an emergency for survival and a future healthy life.

Sincerely,

Ruth M. Benfield

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Caroline Evans
9046 East Shorewood Drive #282
Mercer Island, Washington 98040

RECEIVED
MAY 06 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 2, 1986

Ms. Julia Gibb
Department of Construction
and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing to support Children's Orthopedic Hospital's request for a conditional land use permit to build a helicopter landing pad outside their emergency room.

As the mother of an eight year old, who is my only child, I need to know that in an emergency, all would be done to save him. I wonder how some Laurelhurst residents dare to identify themselves as opponents of the helicopter landings at Children's. I would be ashamed to put myself in that position. I feel children are the future of society and precious.

Thank you for an opportunity to express my opinion, albeit bluntly.

Sincerely yours,

Caroline Evans

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RECEIVED
MAY 06 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 4, 1986

Dear Ms. Hibb:

We are writting in support of Children's Orthopedic Hospital and Medical Centers request for a conditional land use permit to build a helistop outside their emergency room.

We are parents that have had a child rushed to your hospital. In our case it was by ambulance. It was a long and emotional ride.

We understand the concerns of those who are objecting, but we want to know that if our children need to come to C.O.M.C. in a hurry, the helicopter can land directly at the hospital and save that few minutes that could save their lives

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,
Mr. & Mrs Wesley E. Murchison
of Kent, Washington

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RECEIVED

MAY 08 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

4230 - 51st Ave NE
Seattle, WA 98105

May 2, 1986

Julia Gibb
Dept of Construction
and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I understand that Children's Orthopedic Hospital and Medical Center has requested a conditional land use permit to build a helistop outside their emergency room. As a parent of a one and a half year old, I support the request. If I lived in an area of Puget Sound not accessible by ground transportation or regular plane, I would want to know that direct helicopter service is available if I ever needed it for my children.

I live in the Laurelhurst area and am, therefore, a neighbor of Children's. While I know that many in the area are concerned about the noise, I do not view the slight increase in neighborhood noise as a significant problem.

I would appreciate it if you also let the City Council know my views.

Sincerely,

Claudia Sanders

Claudia Sanders

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✓

4443 156th Pl SE
Bellevue, Washington 98006
May 8, 1986

Julia Gibb
Dept of Construction and Land Use
400 Municipal Building
Seattle, Wa. 98104

RECEIVED
MAY 09 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Gibb:

I am writing in support of Children's orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room. I am a parent and understand the concerns of those who object but I want to know that if my children need to come to COMMC in a hurry, the helicopter can land directly at the hospital.

Please convey my opinion to the Seattle City Council.

Sincerely,
Maxine Daye

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12645 SE 211th Street
Kent, WA 98031
May 7, 1986

RECEIVED
MAY 09 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing to support the request of COHMC for a permit to build a Helistop.
I am a former patient and soon to be parent that feels anything to better the already terrific services of COHMC should be supported. I am aware of the concerns of those opposing the project, but feel the life of a child is very precious at any cost. The noise and intermittant disturbances that local residents would experience is little compared to the grief and loss a parent would feel if they lost their child. Being a mother-to-be, I would like the satisfaction of knowing that is something happens to my child, it could reach COHMC in the fastest possible manner.
Please convey my opinions to the Seattle City Council.

Thank you,

Lori L Anderson

Lori L. Anderson

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MAY 09 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 8, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a Guild Adviser and Guild Member for South Snohomish County.

I understand the concerns of those who are objecting, but Iwant to know that if children I know and love need to come to CHHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Marnetta Stratford

Marnetta Stratford (Mrs. Hugh N.)
22307 52nd Avenue West
Mountlake Terrace, WA 98043
778 7588

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May 7 1986

Julia Gibb
Dept. of Const. + Land Use
Seattle WA 98104

Dear Ms. Gibb

I am an employee of COHMC and I really believe we need helicopter transport available for certain situations. I am also a part time employee of Harborview and I know the helicopter transport lands there frequently. The types of cases arriving at the two hospitals, in a way, aren't that much different.
Arguments could be made about the comparative urgency of saving an adult versus a frail newborn; that would make as little sense as the Not In My Backyard attitude of some people. Personally I would be happy to hear a helicopter cruise over my house if I knew a critical baby was on its way to intensive care.
Thanks.

Don Fenno
9714 3rd NW
Seattle WA 98117

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JEREMY MATTOX & ASSOCIATES, INC.
CONSULTING SERVICES
2591 Perkins Lane West
Seattle, Washington 98199
Telephone (206) 282-2591

RECEIVED
MAY 14 1986
DEPT. OF CONST. & LAND USE

May 11, 1986

Ms. Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of the Children's Hospital helistop outside the emergency room.

I am a Seattle resident and the father of two young children.

We must be able to respond as quickly and effectively as possible to medical emergencies. We are fortunate to have a hospital like Children's. We cannot deny its expertise to those not lucky enough to live in the immediate neighborhood.

I know that a few neighbors are upset, but I believe that the health of a child in desperate need of the most sophisticated health care available far outweighs their objections.

Sincerely,

Jeremy Mattox

JM/lam

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MAY 09 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

2416 North 43rd Street
Seattle, Washington 98103
May 7, 1986

Ms. Julia Gibb
Department of Construction & Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside its emergency room.

As a resident of Seattle and a mother-to-be, I believe a regional pediatric medical center needs to be able to land a helicopter as close as possible to its emergency and intensive care facilities. The lives of these critically ill children transported via helicopter depend upon how quickly they can be transported to Children's and immediate care administered.

I am fortunate to have a Children's Hospital in my community, but I would hope that a mother who lives farther away would be able to depend upon the fastest transportation to Children's for her child in need.

Please convey my opinions to the Seattle City Council.

Thank you.

Sincerely,

Stephanie S. Axelrod

Stephanie S. Axelrod

cc: Councilwoman Jane Noland

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MAY 12 1986

DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 8, 1986

Ms. Julie Gibb
Dept. of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a heli-stop outside their emergency room.

I am an employee of Seattle Central Community College and understand the concerns of parents who have children who need emergency care at the Children's Orthopedic Hospital.

I sympathize with those who are objecting to this permit due to the noise, but I feel that the good that will be realized outweights any objection that the residents may have.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Monique Cormier

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OCT 17 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

5003 45th N.E.
Seattle, WA 98105
October 15, 1986

Holly Miller, Director
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Miller,

Thank you for meeting with us October 7 and giving us the opportunity to present some of our concerns. We hope you will give serious consideration to our requiest that the University Hospital Environmental Impact Statement be integrated with the Children's Hospital EIS insofar as the DCLU process is concerned and that the regional planning study be completed before any helipad citing decisions are made by the city.

In relation to medical need, enclosed is a copy of a letter and editorial from Dr. Kenneth Mattox, Chief of Emergency Surgical Services at Ben Taub Hospital in Houston, Texas, and Professor at Baylor College, who states that the "use of helicopter transport for neonates is almost certainly a guarantee of intracerebral hemorrhage."

We hope that you will be successful in getting the University Hospital and Children's together to plan for a joint use helipad on the East Campus and hope you will require that this alternative is investigated in much more detail in the final EIS than it has been to date. In particular, we hope that you will require that the alternatives in the final EIS will be compared in a rigorous fashion and that the preferred alternative be derived from such a comparison and the reasons why it has been selected clearly explicated.

As Bart Baxter, the commercial airline pilot who spoke at our meeting with you pointed out, "The East Campus site is a safe, open landing area contrasted with the congested Children's Hospital site. The extra time required for the transfer must be weighed against the safety and other needs of the community. The site has been satisfactory for the past 11 years."

Thanks again for meeting with us.

Sincerely,

Anita Francis

Anita Francis

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BAYLOR
COLLEGE OF
MEDICINE

One Baylor Plaza
Texas Medical Center
Houston, Texas 77030

Kenneth L. Mattox, M.D.
Associate Professor
Department of Surgery
(713) 799-4557

September 17, 1986

Mr. Jerry B. Schneider
Ms. Liz Anderson
5003 45th N.E.
Seattle, Washington 98105

Dear Mr. Schneider and Ms. Anderson:

Thank you for your letter of August 28, 1986, concerning helicopter air ambulance services. As you requested, I have enclosed the editorial published EMERGENCY MEDICINE. I have also enclosed a copy of an article published in the AMA News, September 5, 1986.

While I feel that air ambulance operations are being massively overused and that by my own count perhaps 80% of the patients presently transported by air ambulance could have been conveyed just as expeditiously by ground ambulance, I do not wish these contentions to be interpreted that I am totally opposed to this form of transportation. My thesis is that is should be used only for those appropriate medical cases and should not be used merely as an expensive marketing ploy for a hospital.

In these days of cost containment when we are being asked to provide equal or better medical services at decreased costs, (i.e., an equally effective but less expensive antibiotic,) hospital administrators and regional planners should apply this same logic to prehospital transport.

As the American Medical News article points out, hospital based aeromedical helicopters have the worst accident rate in modern aviation history. The reasons for this are numerous. The double tragedy occurs when an unnecessary death secondary to the crash occurs and close analysis reveals that the mission was not required or the patient's conditions was such that air ambulance transport was either unnecessary or contraindicated.

Sincerely,

Kenneth L. Mattox, M.D.
Professor of Surgery

KLM/m

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Viewpoint

Kenneth L. Mattox, M.D.

Standards for EMS Helicopter Transport



Currently, over 100 hospital-based air ambulance services are in use in the United States and they represent a multimillion dollar industry. The cost of purchasing a helicopter ranges from $700,000 to $1.5 million and the annual operating budget is in excess of $1 million per helicopter. The cost of an air ambulance ride ranges from $200 to $1800, with the national average close to $1000; an ambulance ride on the ground averages $100 to $120.

Responsible spending of the health care dollar is now mandated by DRG regulations. The same logic that decrees the in-hospital use of less expensive but equally effective antibiotics should be applied to prehospital transport. One must question the percentage of helicopter-transported patients who have medical conditions that, on close scrutiny, do not even require the use of a basic life support ground ambulance. Urban time-distance studies have shown that a ground ambulance 35 miles from a hospital can deliver a patient just as fast as an air ambulance with comparable advanced life support personnel on board—and perhaps achieve greater patient stability. Therefore, from 50 to 80% of patients transported by air ambulance could be transported just as efficiently and at considerably less expense by ground ambulance.

Air ambulance flights may actually be detrimental to some patients. The tight cabin space prevents effective interventions during flight. According to some neonatologists, a helicopter flight for a premature infant almost guarantees an intracerebral hemorrhage.

In some cities, air wars just short of blazing guns are waged between helicopters from competing hospitals and the helicopter crew that wins will transport the patient to their hospital even if a quality medical center lies closer to the emergency center or site of accident. Investigation of some recent helicopter accidents revealed that in more than one incident, the patients being transported did not have conditions that warranted air ambulance transport, nor was the distance great enough to require such an expensive and risky vehicle.

The helicopter can be a valuable transport modality when used appropriately. To reduce the possibility of misuse, national standards for air ambulance transport are long overdue. I would like to propose four basic standards:

1. Air ambulances should be limited to patient care activities; they should not be regional multipurpose helicopters used for weather, traffic control, police, and other activities as well.
2. Air ambulances should be used only for patients who require advanced life support.
3. The use and dispatch of an air ambulance service, whether public or private, should be under the direction of the regional EMS director who supervises regional ground ambulance activities.
4. An advisory panel composed of individuals who have no financial interest in the hospital or hospitals that own a helicopter should regularly review the necessity, effectiveness, and regional economic impact of air ambulance operation.

Through implementation of such standards, the true value of air ambulance operations will be preserved and misuse for marketing or strictly competitive purposes will be eliminated.

A member of EM's Editorial Advisory Board, Dr. Mattox is professor of surgery at Baylor College of Medicine and director of emergency surgical services at Ben Taub General Hospital in Houston.

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Comments on Draft Environmental Impact Statement of Children's Hospital of Seattle. 10/16/86

Liz Anderson
4746 45th N.E.
Seattle, Washington 98105

RECEIVED
OCT 2, 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

i. Air quality and odor - were not reviewed because proposal would not have significant effect. Each time there has been a landing I have been aware of a terrible odor associated with the emissions of the helicopter. This will most likely affect those residents closest to the proposed site. Please include a discussion of what is causing the odor, how toxic this emission; is, what, if any, will be the long term and cumulative effect on adjacent residents, with particular attention to pregnant women.

iii. Climate - should have been included and not determined non-significant. While the construction of the helipad does not affect the climate, the climate will affect the operation of a helicopter service in this area. There is not an adequate discussion of weather in this document. Please include a <u>specific</u> discussion of what conditions allow Airlift Northwest to fly or <u>not</u> fly, how frequently (in days, not percentages) will there be winds from specific direction (i.e., out of northwest quadrant requiring the use of secondary flight path.)

1. How often can predict rain, fog, sun
2. How often is visibility less than 500 ft.
3. What will visibility have to be in order to fly?
4. How will pilot be appraised of area condition at COH?
5. How does climate at COH differ from Boeing field?

C. Water iv. page xi. No discussion is included. Thes people living adjacent to Laurelon Terrace are very aware of the underground springs that run through the hillside that includes COH Campus. With each phase of building on the campus comes disruption to the springs and consequent flooding in the Laurelon Terrace condominiums. Please address this issue in the next document by answering these questions:

1. What is the potential for flooding in Laurelon Terrace as a direct result of the disruption and paving over of the hillside?

2. Who will be responsible and liable party in the event of flooding or continued flooding and inevitable damage?

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3. What conditions might DCLU impose on permit to build helistop that may mitigate this potential impact on nearby residences?

2. Built Environment pg.xii.
iii Release of toxic or hazardous materials. This is not revieved and is deemed non-significant. There is a liquid oxygen tank (5000 gal. drum) located on COH campus. Please discuss the potential effects on residents in the event of a helicopter crash that ignites this highly combustible material.

b. Land and Shoreline Use.
iv. Aesthetics -- not reviewed, non-significant. This proposal will greatly change the aesthetics of the surrounding neighborhood. What is a quiet residential neighborhood is transformed to a "war zone" each time one of those helicopters land. Many people who have witnessed landings by Airlift Northwest and MAST (Military Assistance to Safety and Traffic) have remarked that they felt as if they were in the middle of Viet Nam. The sound of the incoming helicopter frequently "blankets" the entire neighborhood from some distance away as it is approaching the hospital. Please discuss the potential psychological effects on neighboring residents who must experience the anxiety and fear each time a landing occurs, and the anxiety of "anticipation" that is associated with this proposal. Please include in your discussion the potential effects on the patient population at COH--with specific attention; to the fact that this population is <u>obviously</u> physically debilitated to start with.

pg.iii. Light and Glare--not reviewed, not significant. How will the lighting on the helipad effect the nearby residences? Will there be lights only when the hospital is notified of incoming flights or will there be lights on 24 hours a day? How will light projected from the helipad effect the sleep patterns of neighboring residents?

pg.xii.ii.Vehicular Traffic. Not reviewed--not significant. Will an ambulance have to meet each patient transported directly to the ER door of COH as is done at Harborview currently? If not, please discuss why not. On Page 2, para. 1, DEIS it is stated that "upon arriving at the helistop, the engine would be shut down, <u>a ground crew</u> would assist the on-board medical team for transporting the patient to the emergency room." Please define what is meant by a "ground crew".

pg. xiii. d. Public Services --Fire. Please include in the next document, a detailed discussion of what would be done in

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the event of a crash and/or fire on or near the Campus of COH. What unit would respond to the site? What special training if any would be required of the personnel involved? How much time would it take to respond to the COH Campus? What emergency procedures would be followed in the event of a crash on the elementary school playground or the nearby park? What special program if any could the fire dept. conduct at the schools (Villa Academy as well as Laurelhurst Elementary School) so as to educate the population on how to respond in the event of an emergency landing or a crash.

Please include in this discussion the identification of any special fire fighting equipment that will be stored at the helipad and how CO personnel will be trained to respond.

iii. Schools - because there was no increase in population, a discussion of the impacts on the two elementary schools in the Laurelhurst neighborhood was deemed non-significant. I find this hard to believe in light of the fact that one of the major safety points that has been repeatedly raised as a result of this proposal was the close proximity of the proposed helipad to the school and the fear of a crash there. Include in the next document a complete discussion of the potential impacts on both elementary schools. Key points addressed should be:

1. Noise impact on classroom instruction
   A. How often will classes be disrupted?
   B. What will be the noise level experienced by the school?
   C. How can impacts be mitigated?

2. How often can the school expect direct overflights?

pg. xiii. Parks and Recreation

1. Please discuss how often the Laurelhurst Park will be overflown.

2. Who will respond in the event of a crash?

3. What will noise impact be on people using the park? How will that effect the u0se of the park?

pg. xv. Distribution List

Why were the community clubs surrounding COH not sent a DEIS? Not even the Laurelhurst Community Club was sent one. Please see to it that the next document is sent to the following community organizations:

Laurelhurst C.C. Bob Klug Pres.
View Ridge C.C. Bob Di Julio
Hawthorne Hills C.C. May Kemp

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Belvedere Terrace C.C.
Windermere C.C. Becky Weed
Montlake C.C. Doris Burns
City-University Citizens Advisory Committee (CUCAC)
University District C.C. Linda Doupe
Ravenna Bryant C.C. David Rigby
Central Seattle Community Council Federation Beth Means

Page 1, para 2. There is an inadequate discussion of what the objective of the COH proposal are. Please include a discussion of what role "marketing" plays in this proposal, as it is well documented that marketing plays as much of a role in the instigation of these services throughout the nation as does the delivery of medical care. It is not sufficient to say that the COH insignia is not painted on the side of the aircraft. What steps has COH taken or anticipates taking to market such a service? Brochures? Physician contact? Advertising in newspapers, magazines, T.V.? And in what states will they advertise?

Page 1, para 4. It is stated that 3 trees will be removed from the site. On FAA form 7480-1, COH submits that one 50 ft. cypress is an obstruction to the flight path. Please rectify this descrepancy. Please submit as part of the final document, a copy of the current FAA Form 7480-1 that COH has submitted.

Please explain why the original prediction of 3-4 landings per month has now jumped to 10 per month;. What is the basis from which either of these predictions are made? Airlift Northwest is described as "a Seattle vendor based at Boeing Field." Yet, on the aircraft operated by Airlift Northwest is clearly stated "operated by Hospital Air Transport, Inc.." Who is Hospital Air Transport, Inc.? What role do they play in this proposal? Do they have guidelines or standards to which pilots must adhere? Do they carry liability insurance? If so, how much? How has the liability insurance figure in the Airlift Northwest contract been determined and who is the provider/vendor? Who is their contract with Seattle Jet or the four hospitals involved in the proposal?

Dr. Nicola's report predicts that over time COH could expect 15-20 flights per mention. (Mentioned on Page 1, DEIS.) Yet, Airlift Northwest records will show that for the month of August, 1986, COH recieved 17 patients via Airlift Northwest. Three or four came directly to the door of the E.R. at COH and the remainder were delivered to Harborview, transferred to an ambulance and then transported to COH by ground ambulance. Why were these patients delivered to Harborview at all? Was the helicopter ride necessary? Where did the patients come from? What was their presenting condition? If this helipad is permitted will these patients who are obviously stabilized come directly to COH via Airlift Northwest in the future? If 15-20 flights per month was Dr.

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Nicola's predicted use for future then those figures need to be reassessed. If COH had 17 ANW transports in Aug '86 then 15-20 per month is a future prediction that is grossly underestimated. Please address this in FEIS.

Pg. 1. DEIS. "The majority of these flights would be performed by Airlift Northwest (ALNW), a Seattle vendor based at Boeing Field; although flights could occur by other ambulance services, U.S. Army MAST helicopters, or private helicopters." It is not sufficient to merely predict that landings will occur other than ALNW. The impacts on the neighborhood of these potential landings must be weighed just as those of ALNW. What other ambulance services in the area exist that might use this helipad? What types of aircraft do they fly? Will the helipad physically be capable of servicing these aircraft? What types of liability insurance do they carry? What will be the predicted frequency of MAST landings at COH as well as others providing this service?

Page 2 - sixth paragraph. "Impacts on patient outcome are expected to be more favorable under the proposed action....." This is an entirely subjective statement by the proponent. There is no scientific basis for this claim. All evidence to date supports the fact that in the eleven years of landings at the soccer field there were never any problems with patient transfer other than one occasion on which the ambulance became stuck in the mud. This is a problem which is easily remedied by improving the landing site or building the proper facilities at some point on the east campus of UW. The proponents further claim that anything "other than the proposed action could result in suffering, the need for prolonged treatment, or even death." Again there is no scientific basis for this claim, please remove from DEIS. Any of these could result from the patient manipulation that will be involved in landing on COH campus and pushing the patient 120 ft. on a gurney to the ER. There will be less patient manipulation involved and less exposure to the elements if the current landing situation (Graves field) remains status quo.

Page 3. 2nd para. It is stated that 3/4 of patient transports are expected to occur during daytime hourws. How was this prediction determined? This entire paragraph should be omitted from DEIS as it is based on an inadequate noise study. See remarks from noise consultant.

Page 3 (2nd para cont.)The concluding remarks of paragraph two are ridiculous. The ambulances that approach COH turn off their sirens and lights as traffic permits, but once they turn onto the COH Campus the sirens are always turned off (Shephard Ambulance, Oct.,1986) It is not sufficient to say that sirens are approximately as loud as a helicopter. Please provide specific comparisons.

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Page 3. The expected statistical frequency of a helicopter accident one in every 5,459 flights or 1 every 23 years is an estimate that is based on inappropriate figures. To determine the accident probability; the proponent should have used worst case scenario which Dr. Nicola predicts to be 40 cases per month. The accuracy of this prediction is supported by the fact that COH had seventeen patients transported by ANW Aug. '86. Further the average length of flight of 48 minutes which is used in this calculation is not representative of what is reported in the ALNW actual flight logs, according to the logs.

Page 4. 1st para. If the grassy area outside of ER door does pose public risks because the site is not secured etc. why is COH currently landing there? Since the City has not ordered them to cease and desist landing will the city of Seattle share in the liability in the event of an accident? Please discuss in final EIS what current landing proceedure on campus is--what are problems associated with this proceedure. Why this proceedure will not be adequate in future as well.

Page 4 paragraph 2.
In the event of a crash and fire on COH campus in vicinity: of natural gas meter, could there be an explosion? I find it hard to believe that the natural gas would <u>simply</u> flare until shut off. Please have remarks verified by local gas authority as well as fire department.

Page 4 para.2 --
It is mentioned that there is possibility of traffic accidents associated with ground ambulance. There is also the potential for traffic accidents caused by the helicopter flying overhead along Sand Point Way. Further, when people get in their cars and drive there is an associated risk that drivers accept. It is entirely different though to sit in your own home and have the risk of a helicopter crashing on your roof because the helipad is located too close to residences. One situation involves a voluntary participation in action that could result in an accident and the other situation involves a risk that is totally involuntary! These kinds ofl remarks should be eliminated from this draft, because argum ents such as these can be presented to the point of absurdity.

Page 4 Paragraph 2
I object to the three point rationale used in maintaining that there will be no proliferation of helicopter services in Seattle.

1. The point is made that the land-use criteria used by DCLU to evaluate helistop applications limit the use of helistops to those facilities that can demonstrate that it is needed to save lives. The argument is that COH is a tertiary care facility offering specialized services to the region, and thus demonstrates the need and offers unique medical

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capabilities that no other hospital offers in; this region. There are two problems with this logic. First the land use criteria states only that the hospital must need a helipad in order to save lives. Every hospital in the state of Washington faces life threatening emergencies probably every day. COH is not unique from that standpoint. There is no mention in the land use criteria about those hospitals having to be tertiary care facilities or having to offer unique medical services. They must only show that the helipad is needed to save lives. Secondly, Mary Bsridge Hospital in Tacoma offers the same medical services that COH does with the exception of cardiac surgery. Yet in many instances already ALNW has flown right over the roof of Mary Bridge in order to supposedly save someone's life at COH. If those people involved in transporting these patients feel that the pt. can afford the time involved to be selective about what hospital they are sent to then why is landing site at Graves Field or the East Campus not an adequate site for a helipad? Further, COH has no permit and no pad and is landing anyway, directly violating the land use code, why wouldn't other hospitals do the same?

The 2nd argument is that the PSHSA has written two proposals to develop guidelines for the siting of helistops and policies having to do with the integration of such services with the statewide EMS system. The claim is made in the DEIS that these guidelines along with those being written by the Wa. State Medical Association will deter proliferation & the improper use of such services.

The problem with this argument is again twofold: 1. Currently, there is nothing be done to promote the development of regional plan. So far many people have given lip service to the idea but there has been no financial backing of such a proposal. Accordin gto my conversations with Dr. Lothar Pinkers, there is not even consensus on what criteria should be evaluated in a regional plan. The last information that I received on this issue was that the "meat" of the plan had abeen gutted and as it stood now the plan called only for an inventory statewide to be taken of such services. By DCLU's own admission (a conversation with Katy Chaney) a regional plan would take years to develop.

According to a recent conversation with Dr. Lothar Pinkers the guidelines being developed will be thought of as "suggested buidelines." The Wa. State Medical Association does not have the authority to force compliance with such guidelines, and by COH's own admission in this document, they will also view these recommendations as suggestions, not standards with which to comply.

Why would these guidelines carry any more weight with any other hospital than COH?

Finally, COH cites the CON as being another protection against proliferation. One only has to review the history of events resulting in COH's exemption from this process to realize how ridiculous this statement is. DSHS asked COH 3

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different times to go through this process and their responses included filing a lawsuit against the State. Currently, the UW is in the process of preparing a DEIS on a similar proposal and they have not obtained a Certificate of Need either. St. Luke's Hospital in Bellingham recently (this spring) went through the C.O.N. process. The CON committee voten unanimously to deny the application but the ultimate action taken by DSHS was quite contrary. They recommended that St. Luke's make a few changes in their proposal and the Certificate would be granted. What kind of protection does a process like this offer the public? DCLU has only to contact legislator Ken Jacobsen orl any other for that matter to verify that there is a big push; by lobbyists in Olympia to get rid of the C.O.N. process altogether. Which leaves absolutely no protection for the public from the proliferation of helipads and helicopter services.

Please eliminate these arguments from the final EIS and state that there is no effective way to guard against proliferation and improper use of such services, and that DCLU wil,l be forced to deal with these permits on an application by application bsis, which does not allow for the development of a regional plan for such services that is so desperately needed.

Please include in final document a detailed description of what the actual problem is that generated this proposal for a helipad at COH Campus. Please document all statements regarding problems that have been experienced under the past landing situation (MAST, Graves Field.)

Page 7 para 3 --Please include in next document--a discussion ofwho has classified COH as a tertiary care facility? Was this through a self designation process?
They may be the largest pediatric facility; in the area but they are not the only pediatric facility. Because Blue Cross designated 64% of a summary of cases '84-85 as unique cases, does not mean that COH was the only hospital that could administer this care. Please include a detailed very specific discussion in next document of COH's particular medical capabilities that no other hospital has. Pleas include a comparison of the capabilities and services available at COH and Mary Bridge Hospital in Tacoma. What other children's facilities or pediatric services are available in Idaho, Alaska, & Montana?

On page 8 para 4. Statement is made that "Childrens is not a trauma center, as it does not meet all criteria necessary to be so designated." Yet all supportive data in Dr. Nicola's report examines the transport of trauma victims. If there is no data avilable that suggests that neonates or other nontrauma patients benefit from helicopter transport this document should state that clearly. Please include in next publication. I request that the medical need matter be remanded to Dr. Nicola for further scrutiny. Dr. Nicola's

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next report should focus solely on the type of patients that COH transports.

Please discuss whether COH has plans to upgrade their capabilities so as to self designate themselves a regional pediatric trauma facility? Does COH plan to administer care in the future to pediatric trauma or burn viction? Does COH have a written or verbal agreement with Harborview as to who receives this type of patient now or who will in the future? Please include in next document. What sort of agreement has been signed between the involved hospitals (UW, COH, Harborview and Providence) as to the division of patients transported by ALNW?

What would COH have to do to become classified (self or otherwise) a trauma center?

Is there any provision in ALNW proceedure for their medical team to stabilize patient at <u>community</u> hospital and then transport patient by ground? If so, how do they handle billing? Will patients always be transported to another hospital? And always by ALNW? Is there any provision for team to administer care at community or outlying hospital resulting in stabilization of patient and the option of leaving patient at referring hospital? Please discuss in next document. If answers are "no" please include explanation. Please refer to Dr. Nicola's report (Pg. 3) "Once stable, a baby can be transported much more safely; some pediatricians prefer ground transport to helicopter because it is possible to stop an ambulance by the side of the road and listen to baby's heart and lungs and check the stability of its condition."

Page 10--5th para.
There is a minimal description of the training required by paramedics. Please include in next document a complete discussion of training required for paramedics--This is pertinent to this proposal and important to include because it will be the paramedics that will be calling for ALNW in many instances. What training do they have that will enable them to decide when to call ANW? How will they be able to distinguish what patients can be transported by ground and which require air transport? How is dispatch handled--how is site determined for ALNW to land--at what risk to surrounding community?

Please expand this discussion to include the background, training and experience of flight physicians associated with ALNW. Some specifics to address:
1. Are they residents?
2. Are they intensivists?
3. Are they board certified?
4. What has been their experience in pediatric medicine?
5. Are they neonatologists?

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Dr. Nicola's report suggests (Pg. 3) that "One of the most important aspects in the case of the critically ill neonate is the transport of a specially trained medical team, the neonatologist/pediatrician and neonatal nurse to the community hospitals to stabilize a deteriorating baby."

Page 10. para 3. There is a reference to the guidelines being proposed by the Wa. State Medical Association. The proponent suggests that "It is the opinion of the Seattle King County Dept. of Public Health that any recommendations be used as guidelines and not standards." This is quite contrary to what is mentioned in Dr. Nicola's report; "I would also recommend that the emergency transport of patients by helicopter be a planned part of a complete EMS transportation system, with <u>specific criteria for use.</u>"(Pg. 4)

Please resolve this discrepancy, and include a discussion of how any guidelines proposed will be implemented by this program (ALNW). Who will monitor adherence to these guidelines? Please include in next document a copy of the patient Distribution Guide (pg.11--2nd para) that is used by hospital medical staff in determinin, appropriate medical center for treating patients. When was the last time this was updated?

It is mentioned that COH & UW only offer neonatal services (pg. 11. para 6) and that critically ill or injured pts. are generally referred to COH but HARBORVIEW is the only hospital with an operating room staffed twenty four hours a day. How long does it take for COH to become "operating room ready"? How is the ER staffed at COH? How is the ICU or NICU staffed at COH?

Page 12--1st para -- According to DEIS in 1985 there were 2 helicopter transports to COH out of 141 patients that were served by the County's EMS systems. How does this figure compare with the number of total transports thus far in 1986? How do you account for the difference?

Page 12 --2nd para. Discussion of guidelines that paramedics use for determining mode of transport. Under item #1.examples are listed of presenting medical problems that would MOST likely require helicopter transport. <u>What</u> specific areas of <u>South</u> King County would transport these patients by helicopter rather than ground?

Page 12--last para. "Under no circumstances shoul d there be a delay at the scene waiting for a ride from the helicopter." Please examine flight record of near drowning patient transported from Auburn. Did the paramedics in fact wait for ALNW to arrive at a Park and Ride lot that they had transported the patient to in order to be picked up? What was the reason for this action. What was the delay in time? What effect did this have on patient's condition?

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Page 13 --item #4 "Permission to use any helicopter by a paramedic must be obtained from the medic unit's base hospital physician." Please include a discussion which details the dispatch system of ALNW. What has been used to date, and what might be contracted in the future. Please verify that the paramedic must call into the unit's base hospital physician, who then must in turn call the dispatch person for ALNW who must in turn contact dispatch doctor on call, who must then return call to unit's base hospital physician, who must then return call to paramedic unit giving o.k. How much time on the average does this dispatch system require?

Page 13 --item #6--Please explain the rationale used in determining that paramedics should not call to get estimated arrival times for MAST and ALNW.

Page 13 - last para. COH describes "critically ill or injured patients as those patients who might die or become seriously damaged unless appropriate treatment is received immediately."(Neff,1986). Please explain in next document why some patients have been flown over the roofs of hospitals that could have provided the same treatment sooner that COH administered.

Page 14, 15 & 16. Please explain how these patients were selected for this list. Does this list represent all patients transported to COH for this time frame or have these patients been selected over others to be represented in this document. If so how have these patients been selected? Are these consecutive cases that were transported to COH? What is the relationship between this list and Attachment "A"?

Page 13 last para. Dr. Neff suggests that critically ill patients who have been brought to COH include (1) near drowning --shouldn't these go to nearest hospital?
(2)premature children --may go to UW as well
(3)severe injuries --is categorized as trauma and would go to Harborview
(4)overwhelming infection--COH or closest hospital?
(5)ingestion of toxic substance--Shouldn't this go to nearest hospital?
Please include more specific discussion of what type of patient will be transported to COH and provide explanation of how and why decision would be made? The explanation that is provided in this paragraph does not make sense. If patients (trauma) are transported to Harborview then that is where the surgery would be done.

Page 17 para 5. Dr. Neff suggests that if the patient is jostled in transfer there is a risk that a child will become hypothermic due to the opening of the isolette. Is it not true that the isolette would not be opened until it was placed in the ambulance?--which would consequently have little effect on the patient?

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Page 18 --Table 3.
This table should be eliminated from the draft. No one is suggesting that critical patients be transported by ambulance from Enumclaw -- only that the helicopter transporting them land at the soccer field, in which case the difference in travel time would be ten minutes or less. In addition, almost all patients from Enumclaw could be served at Mary Bridge Hospital Tacoma which is a lot closer to Enumclaw than COH/Seattle.

Please include a table that shows the difference in transport time when comparing the transport of a patient from Enumclaw to Mary Bridge and Enumclaw to COH!

Page 19 para 2 -- Please include a list of physicians that Dr. Nicola spoke with both in and out of the region in gathering information for his recommendation.

Page 19. Dr. Nicola's analysis and report are seriously flawed and should be re-examined. The data he uses to support his findings have to do with studies dealing with trauma patients. COH does not receive trauma patients. There is current data that has been released that relates to helicopter transports that should be included in an analysis, as some are now saying it may be detrimental to certain patient populations. From what bases does Dr. Nicola determine that COH may require three patient transports per month?

Pg. 20 para 2
Dr. Nicola suggests that some patients may be adversely affected by 3-5 min. delay in receiving treatment. Please have Dr. Nicola address in next medical need analysis, the issue of whether or not some of these patients are being adversely affected by the delay in treatment which is a direct result of patients not being sent to the nearest medical facility that can provide the appropriate care.

Page 20 para 5-- Please clarify and expand the statement about the phase-in of Blackhawks by MAST being altered. The reference is listed as Greenawalt, 1986. Please include in next document a detailed description which includes the physical characteristics of the Blackhawks (i.e. weight, dimensions, etc.) This is important information and pertinent to this proposal as these helicopters will land at COH once the helipad is built according to Nancy Greenawalt.

Page 21 para 4 --Proponents mention that from 1983 to date MAST transported 29 patients to COH.
--Please compare the use of MAST for transporting patients with the current use of ALNW (May '85 --present). Please explain why there has been dramatic change in number of transports.
--Please have MAST document whether or not there were ever any problems with transfer at soccer field.

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--Please explain in next document how MAST will continue to operate in region with ALNW when they are restricted from competing with private transport services.
--Please include a copy of any agreement which exists betweer MAST and ALNW for the division and transport of patients.

Page 22 para 2 --Please include in next document a copy of current contract or proposed contract under which ALNW is or will operate in future. This information is critical in terms of analyzing this proposal as it (contract) "characterizes the airlift program and organizational structure, the roles of support, distrribution of revenues, indemnification, record-keeping, services extended to non-participating hospitals, and provisions for amendment and termination of contract." It is well documented that in many locations across the nation, the improper use and abuse of such helicopter services have been the direct result of the contract signed for such services.
Further, since this consortium was formed in 1984, there have been at l east two different contracts, possibly three. I have been given conflicting information about who it is that contracts with Seattle Jet, what function or role Hospital Air T ransport, Inc. serves and who carries liability insurance related to a helicopter accident. The contract which defines this structure should be made public information.

PLage 22 --There is no mention of what type of helicopter is used for back-up in ALNW service. There are times when Agusta will be serviced or inspected by FAA which will preclude the aircraft from being used for transport. What type of aircraft will be flown in this situation? What are specific features of this aircraft (i.e., dimensions, weight, engines, fuel, range, speed, seating)? How is it maintained? How does it compare to Agusta in terms of noise gnerated and what is the standard medical equipment on board? Is this aircraft capable of carrying a 160 lb. isolette unit with ventilator?
What is 147 gallons equivalent to in terms of measured weight? This is important information to include in next document as the helicopter that was used in noise test did not carry an isolette (weighing 160 lbs.) nor did it carry a full crew (only a flight nurse and pilot). It is my understanding that the heavier the aircraft the more noise it generates. At the time of the test the pilot told me that the full tank of fuel made up for the weight that would be added with the isolette and full crew. Please verify in next document. If this is not accurate information then noise studies are not valid.

Page 24 para 4 --Table two describes ALNW helicopter transports through mid June 1986, yet ALNW began services in May '85--Please include total number of transports to COH May, June and July '85. If there were none during this time please specify. Does Table 2 repreeent consecutive transports

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to COH--were these all the transports to COH via ALNW during the time. What other patients did COH receive via other helicopter services during this time and what were the specifics of each case as listed in Table 2. If this is not a complete list of consecutive flights how were these selected?

Page 25--Table 5
Item #4 --What is basis for forecasted figures in Table 5? Please include in next document method used for these projections. The prediction is that COH's transports will grow steadily over ten year period but as a per cent of the total ALNW rotar transports, there is a steady decline. Please explain basis for this prediction in next document.
It should be noted that this table also does not reflect any "return flights" as represented in Attachment "A."
Please include in next document a table that does include numbers that are reflective of all flight segments involved in the transport of patients as proposed by COH in this DEIS. This would include the pickup of medical team at COH, the pickup and delivery of patient, and the return of the helicopter to the base. Please include predictions that allow for "return flights" as well since this is also being done and involves 2 flight segments over the community.

Accurate numbers and method for projecting these figures are critical to any analysis of this proposal, as the risk to the community must be properly assessed and weighed in relation to the benefit that patients might receive from this transport and the location of the landing site. A final EIS lacking this information would be inadequate.

Page 26 para 1. Please include an explanation in next document of why dimensions of helipad are less than what is suggested by NEMSPA. And please describe how dimensions of COH's proposed pad compares with those suggested in FAA guidelines for construction of helipad.

Page 26 para 2.
What is meant by "generally helicopters are given more latitude in their operations than fixed wing?" Please explain.

Page 26 para 3 --Please include in next document a copy of current FAA Form 7480-1 filed with FA in regard to COH's proposal for helipad.

Please note that because there is little or no monitoring of this type of flight activity once approved by FAA --the burden of dealing with pilot negligence and deviation from approved flight path rests with the citizen as FAA states quite clearly that unless complaintant can prove negligence or operation of aircraft in unsafe manner, the FAA will generally not take any action on complaints. Is the City ready to share in the responsibility of monitoring these

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flight paths? What role might the City play in enforcing adherence to these flight paths? What authority will City have over aeromedical pilots if this permit is granted?

Regulation:

While the Wa. State Medical Association is developing "user guidelines" that may be applicable to these services as proposed in the DEIS, the proponent makes it quite clear that these will be viewed as guidelines, not standards. If there are no specific criteria to which the operators of such services must adjere, only guidelines, from what basis will a peer review committee operate? The use of guidelines rather than standards diminishes the possibility of any group or agency having any authority over such services. WHat would characterize inappropriate use of such services if there are no standards with which to comply, and what legal support would exist for the revocation of a permit in the event of inappropriate usage? Who will assess the appropriateness of patient transfers, how often and who will empover this committee? How would this committee be selected? How can the community be assured that such a group would report inappropriate usage? How would this committee deal with the patient's right to privacy and how would committee view transports that were inappropriate but initiated by patient request? Dr. Copass has stated clearly that he is in the business of providing a service and will not deny this service to anyone. Will ALNW be held accountable for such flights if this permit is granted and conditioned with peer review? Who will be accountable COH, ALNW, Seattle Jet, Hospital Air T ransport, Harborview, the referring physician? WHat will be the consequences of violations of the permits issued?

Will there be any formal or informal public review of the guidelines proposed by Wa. St. Med. Assoc. subcommittee before they are adopted? What can the City do to insure some citizen input to the process?

Please disclose in next document whether ALNW, Sea. Jet or Hospital Air Transport, Inc. are members of ASHBEAMS. If not, please explain why. If they have enrolled please include in final EIS the criteria to which they have agreed to comply. Does the City have the authority to enforce compliance with such guidelines?
Are ALNW pilots members of the NEMSPA?

Please include in next publication of this document an interpretation of WAC 248.18.285 as proposed by the City Of Seattle legal department. Please state whether or not the City is in agreement with proponent's interpretation of ordinance. If the City is not in agreement with proponent in this regard how might the use of this helipad be regulated by COH and how would City persuade COH to do so. What consequences would COH face if they did not comply?

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If DCLU issued permit to COH for construction of helipad on their campus, what possible conditions could be placed on the permit? How would these conditions be enforced and such service monitored over time? Who would be responsible for determining such conditions? Please provide a detailed discussion of possible conditions and potential for enforcement. Please suggest who would be charged with responsibility of reporting violations other than the appropriateness of transport (i.e., noncompliance with noise abatement proceedures?) A complete discussion of this topic must be included so as to determine whether or not the adverse impacts of such a proposal on surrounding neighborhoods might be mitigated in the event of a permit being issued.

The conclusion that should be drawn and stated in next publication with regard to regulation of such services is that this proposed service as well as any other of like nature are and will be totally unregulated once flight paths are approved by FAA and that no agency, whether federal, state, or city has the authority to modify, revoke, or even condition such services. Please state so.
It would be irrational, irresponsible, and certainly worthy of challenge in a court of law for the city to grant a permit for this proposal cognizant of these facts.

Pg. 29 para. 5
Please include in next document a discussion of the role the Wa. State Dept. of Transportation might be encouraged to play in this issue. In other states (i.e., Louisiana) it was this department that orchestrated and carried out formal studies of aeromedical helicopters for such transport within their states and produced an overall plan. Does this Dept. have the capability of conducting such a statewide study and plan in this state?

Has this (Dept. of Transportation) been considered in a discussion of regional planning? Since the Div. of Aeronautics "deals specifically with air transportation by participating in statewide transportation planning, assisting in enforcement of FAA regulations, investigation of aircraft accidents, providing search and rescue support for aircraft, and providing funding for public aviation facilities--it seems a natural! Please research and report results in next publication.

Page 28 para 3
With regard to section on conditional uses permitted in Major Institutions zoning.

The proponent must show that

1a. The helistop is needed to save lives. This has not been shown by information provided in this document or any other forum. OF transported patients 50% died anyway. It is

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not clear or even addressed whether the other remaining patients lives were saved due to the helistop being located at COH. --Please discuss how COH plans to document that they are in compliance with this first criteria. Does the City believe that COH has provided adequate information from which they will be able to determine whether or not this proposal meets this criteria? Please discuss how City views report issued by Dr. Nicola as well.

b. The helistop is located so as to minimize impacts upon surrounding residential property. ---Have City personnel who will be responsible for making this decision visited the COH campus and witnessed a helicopter landing? Without doing so I don't believe that one can adequately assess whether proposed site location mitigates the impacts upon surrounding residences. The City should conduct an independent survey of residences within a 3 block area all directions from COH of helipad location to determine what their experiences have been to date with the helicopter landings. With particular attnetion to how it has changed their lives (i.e. some residents feel they must sell property and move, and our exp. loss in prop. value, some have experienced personal damage due to vibration, some have experienced physical changes and psychological changes (elevanted blood pressure, sleeplessness, anxiwty, fear, stress.) A final EIS lacking this information which is available and easily obtained due to the fact that COH has been landing only feet from the proposed site since May '85--would not provide sufficient information from which to determine whether or not item b. of COnditional Use--Helistops had been met. Please conduct survey and include results in final EIS.

(NB: What type of homeowners insurance will be required of residents closest to helipad and how will premiums be effected?)

Item c. Use of the helistop will be restricted to occurences involving life-threatening emergencies. --Since this service has been operating illegally at proposed site since May '85 it seems appropriate to review <u>all</u> flight records to determine whether or not COH has been using helistop for only life threatening emergencies. Please form a "<u>credible</u>" review panel that includes objective people, lay people as well as physician and community members to determine whether flights to date have been justified. Please include

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(18.)

Criteria for evaluation and results in final EIS. Please see Attachment "A" as this reflects that use of helistop is not being used for life threatening cases, i.e., return flights etc.

2. "The directors report shall examine alternative locations for the helistop, including sites outside the institutions boundaries which would accomplish the purpose of the helistop with a lesser impact upon residential areas."

The purpose of the helistop according to COH is two fold; critical time saved and decrease in patient manipulation. Locating the helipad at an alternate site located on the UW east campus saves the same amount of time in transport, less a few minutes. These few minutes that might elapse because of an additional transfer can be made up on some other leg of the transfer with minimal modifications. I'm sure ALNW can do something which would allow them to take off sooner. The COH pediatric team might respond quicker for pick up - a possible change in the flight path might make arrival at the destination sooner. Better preparations at referring hospitals may expedite the transfer. Improvement in the overall dispatching systems which Robb Child, administrator of ALNW describes as "archaic" could easily make up for the minutes lost doing a field transfer. Most peole involved in search and rescue and emergency transport will agree that it is a very small percentage of cases in which minutes are critical anyway (Dr. Nicola). In most cases transport of patients take <u>hours</u> (flight time, stabilization time, transfer time) In view of this, an alternate site at the UW campus would meet COH's first objective.

The second objective is to decrease patient manipulation. In talking to people involved in doing emergency transport, I have discovered that some people think one is really "splitting hairs" in discussing whether or not there is more patient manipulation due to an additional transfer at the east campus. The reason being is that if a site is permitted at the COH campus in the Kitchen Graden area the helicopter will land, unload a patient on to a gurney (same procedure as field) or stretcher and they will be pushed, <u>120 ft</u> (all the while exposed to the elements) into the Emergency room at COH. All the while exposed to the risk of tubes and I.V. becoming tangled, jostled, disconnected. At the field, the ambulance pulls up to the aircraft the patient is moved into the ambulance (is not exposed to elements anywhere near as long as in case of proposed action) and then is transported to emergency room directly and unloaded. He is not subjected to the jostling associated with a 120 ft ride on a gurney. The point is that neither procedure is perfect, they both have their disadvantages and one is <u>not inherently</u> better than the other.

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The alternate site offers better safeguards against hypothermia than the proposed COH site. When one weighs these facts with the ever present risks to community associated with landing at COH, the prudent site selection is an alternative at UW east campus, and this alternative meets COH's criteria for decrease in patient manipulation. (Windchill factor from blades ? and 120 ft trip)

Please keep in mind that the purpose of the Major Institution Policy is to balance the need for institutional growth and change with the need to protect the livability of neighborhoods.

Locating the helipad at the UW east campus area is not an idyllic situation. At best it is a compromise that the Laurelhurst and Montlake Communities are willing to live with. Much of our Communities will still suffer adverse imparts from the use of this alternative site. The noise will still be of concern although to a lesser degree. The flight paths may be modified but I doubt seriously altered and the number of flights COH receives via ALNW may even escalate as a result of the use of the east campus area. The burden of reporting violations will still be on the surrounding communities. What sort of compormise has COH offered to live with? They have dismissed the possibility of an alternate site saying that it does not meet their objectives. Please include in final EIS a serious consideration of alternate sites which included a realistic assessment of the proposed transfer at COH landing site.

(Please refer to testimony of Dr. Jerry Schneider from public hearing held September 23, with regard to Draft EIS.)

Page 33. para 2

1. The sponsors objectives are suspect due to the fact that ALNW is not attempting to deliver medical expertise available to critically ill patients in the least amount of time.

A. Please explain why many transported cases have flown over hospitals that could have administered medical treatment more quickly than COH?

B. What steps might be initiated by proponent and ALNW to insure that doesn't happen in future? How might geographic area be divided so as to delineate what patients are taken to what hospital?

2. They are not minimizing transport time from the place of patient pickup to ER at COH. Please describe in detail the system which dispatches ALNW. What are existing problems with ths system? How might it be changed in future to expedite transfers? How does total dispatch time compare to the time involved in transfer at soccer field?

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The proposal may not minimize or reduce additional transfer.
Please define what is meant by "ground crew" that will assist in transfer of patient to ER at COH site. Will an ambulance be used to transfer patient from COH helipad to ER door, as is the case of Harborview. If not, please explain why. The proponent has not discussed what potential problems exist for the patient landed at COH and then transfered 120 ft to the ER. Please include in final EIS. Consider in discussion jostling and movement of patient, exposure to elements (i.e., rain, cold temperature, snow, hail, wind) consider also the wind chill factor produced by aircraft, the risk involved in disconnection of life support lines etc, the potential problems associated with moving patient on gurney over slick surface. Please examine what potential effects these problems may have on patient stabilization as these must be weighed against the potential problems of a transfer at the soccer field.

The 4th objective,- to construct a helistop that minimizes potential environmental impacts in a manner that would not sacrifice proper patient medical treatment. The alternative locations in this section have not been adequately reviewed and discussed in order to determine that the proposed action is the action that most effectively meets this objective. Please include in next document a comprehensive discussion of alternative sites both on and off the campus of COH. Merely stating that an alternative has been judged unacceptable is not a sufficient discussion of alternatives. Who has determined that these sites are unacceptable? If discussion does not include how transfer of patient would be made and all the other information that is provided for in the proposed action section (i.e., flight path, transfer time, transfer methods, associated transfer problems), how might the reader of this document determine whether or not an alternative is even remotely feasible? One cannot, one has to rely solely on the biased opinion of the proponent in this situation. Please redo this entire section giving it as much consideration in your document as is done for the proposed action and is required by SEPA.

In addition, please address specifically

1. Why would a route through the medical center be less desirable? The patient would not be exposed to the elements which results in proposed action.

2. Changing floors is mentioned as being a disadvantage. Does the UW share this opinion? Their rooftop location will require a descent by elevator 5 floors to the emergency door. Please address.

3. Surrounding tall trees are not seen as a disadvantage in proposed action. They have been earmarked for removal. Would this not likewise be a solution to this problem with alternative location of pad?

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4. Please explain why flight path would change in administrative wing and surface parking lot alternative. How could landing site be any closer to residences than what it is for Laurelon Terrace? Please compare distance and report

5. Pg 39 para 2- "The significance of the safety distincitons are believed by the pilots to be negligible". The pilots referred to are ALNW pilots whose livelihood depends on the continuation of this service. Please provide an unbiased safety report that relates to the proposed action as well as the alternatives on and off campus.

Pg 39. Had all concerned parties been involved in the scoping process, there would have been an opportunity to discuss as an alternate site the possibility of sharing a helipad on the NOAA or Navy property (Sand Pt Way)

This site is already paved, lite,secured and marked with a big red H. It has adjacent parking as well. It is easily accessed from the lake without having to fly over the homes of surrounding residents. There is a paved road that leads from the site out onto Sand Point Way (short distance) and the distance to COH is minimal. (3 minutes by car). Please explore this situation as a possible alternative to a site at COH and discuss in final EIS. Since the pad is already built and would eliminate a major expense, and have minimal adverse impact on surronding heighborhoods, it should be considered.

Pg 40- Please address why the proposed helipad specifications are less than those proposed by NEMSPA for medium size helicopters. How do these dimensions compare with those suggested by the FAA?

Who would be responsible for turning on lights at helipad in event of emergency? Isn't this an additional risk to safety of community. Failure to turn on lights may result in a catastrophic accident. Please state that an added advantage to an off site pad is the option of leaving lights on 24 hours a day, and not being subject to human error.

Pg 40- Please state in next document that "future" in relation to this proposal equates to ten years, lest someone underestimate potential for growth of this proposed service. Please provide estimates for twenty year growth so that the cummulative impact over time might be properly assessed and weighed now when decision is being made.

Pg 40- Why haven't signs been posted warning people of current helicopter activity on campus as a safety precaution?

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Pg 41- The projection for expected flights in year 1990 is not any where near accurate. COH received in Aug '86, 17 flights via ALNW alone. 3 or 4 came to emergency room, the remainder were transferred at Harborview to ground ambulance and transported. The future (10 year) projection is representative of the number of flights COH is currently receiving. Please adjust figures and present more realistic predictions for future growth. Dr. Nicola estimates that the average number of flights that COH will receive once helipad is located on campus is 30-40. Since the proponents refer to Dr Nicola's report for support of their proposal many places throughout the draft, why are his figures ignored? Please provide realistic figures in terms of anticipated utilization, both current and projected. If COH does not agree with Dr. Nicola's figures then state so and provide argument for this position.

Pg 41 3rd para- How has proponent arrived at conclusion that COH shares 17% of ALNW total flights? Please include calculation in next document. In order to determine whether or not one can realistically predict that COH's transports will remain constant, one must have some conception of what changes in capabilities might occur. While I recognize that it is difficult to determine what physicians may leave COH in future, certainly COH has an institutional plan for growth which would reveal what additional services would be made available at COH in near future that would affect the total number of transports expected. What programs and /or specialists does COH plan to add to present staff that may affect this proposal.

It is stated that ALNW has capability of performing 80-90 flights per month. How does ALNW plan to meet demand for additional flights if requested? Would there be additional helicopters leased that might land at COH? How might an expansion of ALNW affect COH in terms of present flight #'s and expected flights?#'s What happens to flight #'s if a hospital drops out of consortium?

Page 42 para 1- Please include in next document any agreement reached with MAST in terms of landing and communication. If agreement has not been reached, please include a discussion of what is being considered by involved parties. What efforts will COH make to meet with other aeromedical transport companies in the region that may have reason to transport to COH?

Please define and describe a pre-arranged transport by ALNW.

How much time elapses on the average from the time the first call comes in to dispatch system until the time the helicopter lifts off?

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Pg 43 In reviewing history of ALNW helicopter service to date, in how many instances has the helicopter landed in front of ER door of referring hospital? In how many instances has there been an ambulance ride involved in the transfer at referral hospital?

How long must helicpter run after landing at COH before engine may be shut down? How long must engine run before actual lift off?

How does the number of flights transported by fixed wing to Boeing field that are met by ALNW compare with those initiated by a referring physician requiring pick up of medical team at COH? Please provide figures that are representative of service since acquisition of helicopter by ALNW.(Please review statement on pg. 43 in which proponent maintains that there would usually not be a need for pick up of medical crew at COH.)

Page 45 What patient condition might require deviation from flight path?

Please define "adverse" weather conditions during which ALNW would not fly.

Please provide comparison of FAA standards, NEMSPA and ALNW policies and/or standards for weather conditon.

How does the noise generated by the ALNW helicopter relate to the turn South over the parking garage in attempting to land at COH? What are specific dangers associated with this restricted turn.

Pg 45 para 4 - Please discuss the proximity of the helicopter to residences in relationship to the unusal winds which require deviation from normal flight path.

Please state clearly in final EIS that when winds are out of northwest quadrant and 17 knots or better, the secondary flight path will be used which puts the helicopter over the Villa Academy School, Laurelhurst Elementary, St. Bridget's Church. Many people do not look at maps and this information needs to be clear for those assessing this proposal.

Please check estimates for length of time elapsed from moment of touchdown until patient enters the emergency room. There will have to be time allowed to push patient on gurney 120 ft to the emergency room doors. This movement alone may require more than three minutes. Please adjust figures for final document to reflect this leg of the transfer.

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How long can one expect it to take for the pilot to retreive the isolette and take off. For people trying to sleep at night in neighboring residences and for patients being cared for at COH this time is critical as it is disruptive to normal sleep patterns. Please include in final document.

Conclusions drawn on page 46 (last two paragraphs) need to be supported by providing comparative figures for transporting patients by ALNW and Medic One or other responding gound transport systems. Please review all patients that have been transported via ALNW since May'85 and determine transport time for each and provide estimate for similar transport by ground. Please include origination of patient and specific time initial call came into ALNW. Also include how many actual transfers each patient experience before final delivery into ER at COH.

How might the risk of the patient destabilizing been decreased by transporting the patient to the nearest qualified hospital to administer the approppriate level of care, rather than flying to COH? Please review pateint transports May '85 to present and provide this information in final EIS. Please provide data to support claim that "time savings can reduce suffering, decrease hospital stay time and in the most severe cases, can mean the difference between life and death". If no data is available that pertains to specific nature of patients transported to COH (not trauma or burn data) please remove this statement from document. Unsubstantiated claims of this nature are inappropriate in this document.

What role will medical malpractice play in the decision to transfer patient via ALNW and/or the decision of where to land? Please include discussion relating to this topic in final EIS. Please use unbiased sources (those having no affiliations with proposed service (ALNW) or any affiliation with participating hospitals.)

Figure 7
What safety risks are associated with the noise abatement approach in figure 7.

Page 49- Please discuss "fire prevention system" that helistop will incorporate. Where has the oxygen tank been moved to? Please describe location in terms of distance from the proposed helipad site.

Please explain comment. "Childrens and Airlift have actively participated in the development of communications guidelines to ensure communication from air-to-ground is facilitated."

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Please include ALNW specific quidelines on acceptable weather conditions in next document as mentioned on pg. 49- paragraph 4. In addition provide ALNW pilot qualifications. Please document that ALNW requirements exceed those guidelines developed by NEMSPA and ASHBEAMS.

What provision might ALNW make for pilots to report safety concerns without fear of losing employment? How are pilots checked out before lifting off? What sort of aircraft maintenance program does ALNW employ? What safety checks are made on craft before lift-off? Where are windshield wipers for ALNW aircraft? How often does FAA inspect aircraft- what does inspection consist of? Please provide in next document the safety record for the Agusta A109 Mark II.

What is minimum distance allowed by FAA between helicopter landing site and surrounding buildings? How close to a building does the FAA allow a helicopter to land?

Is there a weather advisor that will be stationed at COH to report to ALNW? and incoming flights- please discuss.

How does COH see a review panel functioning? Please discuss possible participants, frequency of review, violation and enforcement, credibility.

Please include in next document copies of correspondence between Tullman Trask and Trueman Katz as mentioned on page 50 in the DEIS. Also include letter to Bob Klug, Laurelhurst Community Club President with regard to same topic (Trueman Katz was sent a copy.) As your comments on pg 49 and 50 are misleading and need to be clarified.

Page 52- The 15 minute transfer may not be accurate as described. I have been told that in most cases the ambulance pulls up very close to the helicopter. Consequently the eight to nine minute estimate of moving patient from chopper to ambulance is an exaggeration. Please verify that in most instances the patient is not moved across the field to the waiting ambulance. Also please clarify for readers that proposed helipad alternative area would be paved and have adjacent parking lot and allow for ambulance to back up to aircraft.

Please provide data to support Dr. Neff's statement (1986) on pgs 52 and 53. If no data is available please remove from this document.

Page 53- Please explain what specific liability reasons would preclude COH from using proposed UW rooftop helipad. Please include any documentation of this communication in final EIS (Goertzen, 1986; Shawcroft, 1986)

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Argument about traffic delaying the transfer of patient from UW to COH is ridiculous. There is a back road from stadium through east campus area that would eliminate any problems caused by congested traffic (See Public Hearing transcript, Dr. Jerry Schneider testimony) Please address this point in final EIS.

Page 56- In the limited landings section. Please address in the final EIS that the possiblity does exist for COH to remove tall trees so as to avoid deviation from proposed flight path in final approach to COH.

Page 57- In final EIS please clarify that potential mud problem may be eliminated by considering a landing site already paved as mentioned in Dr. Jerry Schneider's testimony, public hearing DEIS Sept 23, 1986.

Page 57 Para 5 - Please include in final EIS a copy of section 7.70.040 of the Revised Code of Washington and a discussion which reveals whether the city is in agreement with the interpretation made by the Hospital.

Pg 58 Please include in final EIS a report from Medic One which clearly reveals their policies on running their sirens. Also include a discussion of agreement COH has made with Laurelhurst Community and City of Seattle with regard to ambulance sirens approaching their hospital -- Please review past permits issued COH by City of Seattle.

Pg 58 Please remove statement about approval of proposed Action or Alternative not having an impact on the number of Emergency helistops constructed in this region. This is an opinion expressed by the proponent that is quite contrary to the trend across the United States that has been well-documented.

Pg 58 An added benefit as a result of reserving implementation of the proposed action for the future is that the area school populations (which have been sadly overlooked in this DEIS) will not be subjected to noise and vibration and resulting disruptions to classroom activity. In addition they will not be subjected to overflights in bad weather and possibility of crash on school play ground that most likely would involved <u>death</u> and destruction. Please address in final EIS.

<u>Helicopter Safety</u>

Pg 59 Please identify recognized authorities mentioned pg. 59 paragraph 3. For final EIS please use <u>un</u>biased sources rather than opinions of ALNW pilots. Please recognize that they may be experiencing a conflict of interest.

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This discusssion of "trends" in helicopter safety is not germaine to the issue. How many EMS programs were even in operation during the time frame 1975- 1981? How has that figure changed during the years '80-'85. Please focus on safety as it relates to the EMS helicopter industry from 1980 - '85. And include conclusion-recognized by authorities- that it has the worst aviation record in hsitory (Einhorn, AMA News, Sept 5, 1986). Please secure NTSB statistics for general aviation for the years 1982-85 and provide that information for final EIS.

On pg 60 the proponent maintains that the increase in helicopter safety is due to the increased use of turbine powered engines. But on pg. 65 Table II shows that in 1981 the single leading cause of accidents among turbine powered helicopters was engine failure or malfunction.

On pg. 65 proponent makes the argument that pilots are crashing due to striking wires or obstacles (single greatest cause of EMS accients 1977-1985) is because the pilots are unfamiliar with the landing area. I would like to submit that this has more to do with the inability to see wires and obstacles as a result of flying in restricted areas and flying at night. (See 67, 1st para). The second greatest cause of EMS accidents is power loss or mechanical failure (25%)- Thirty six percent of these accidents resulted in injury or death.

Helicopter Safety

Pg 67 It is stated that in December of 1985 ALNW refused to answer twenty calls over a two week period due to bad weather. Please investigate what happened to these patients and report findings in final EIS. Please indicate condition of patient at time of call to ALNW- subsequent treatment administered-- what hospital were patients transfered to-- geographic origin of call -- mode of transfer- time of transfer and patient outcome.

FAA standards for flying are written for and applicable to all aircraft. There is a big difference between what conditons are acceptable for commercial jets to fly in and what would be acceptable for helicopters-- Please indicate this in final EIS. Please specify what FAA standards are as well as ALNW. Who establishes the ALNW criteria for flying and how do they compare with the NEMSPA. Please include NEMSPA standards in final Document so that there is a means of comparison for the reader.

Pg 68 para 1- What is good visibility? Why doesn't ALNW fly with two pilots? (instead of 1)

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para 2- How many Agusta 109's are in operation around the country. How many are involved in EMS programs?

pg 68- Gene Hill's comments on the reliability of turbine powered aircraft is not supported by information provided in Table 11-- 42.3 % of all helicopter accidents (turbine powered) were due to engine failure or malfunction. Please ask G. Hill to comment on this and provide for final document. Engine malfunction is not the only factor that contributes to helicopter safety. Please have Gene Hill or preferably an unbiased pilot comment on potential outcome in the event of transmission failure or rotar problems.

Frank Benedict is not viewed as a reliable source in the discussion of EMS helicopter safety. In a conversation with Mr. Benedict on Sept 23, 1986, he told me that he was completely unaware of the current safety record held by the EMS helicopter industry. Please include in final EIS comments on the fact that in 1985, one out of 10 aeromedical helicopters suffered a reportable accident (Aviation Week and Space Tech., March 24, 1986). Please include this article as part of final EIS.

Pg. 68 +69- The comments made by Dr. Thomas Poulton in regard to improved EMS flight safety are not substantiated by the data represented in this document. What is meant by "early operators"? How does Dr. Poulton feel about accident rate of EMS helicopters in 1985?

If restrictive budgets play a role in EMS helicopter safety, please define. What is a restrictive budget? How does this compare with that of the ALNW budget. Please provide this budget information in final EIS. Please include all cost related information to the operation of ALNW (i.e., salaries of personnel, expenses, equipment etc.) Please explain how participating hospitals share in expenses, both fixed and variable. Please provide information on cost to patient of such services. Billing procedures, history of date of recovery of these charges. What has been experience (since inception of service) with regard to third party payors?

How does the budget of ALNW affect the judgements made in regard to which flights to take and which not?

Pg 69 para 2- Please provide specific information and data on safety record of "major vendors". It is not sufficient to say that it is someone's opinion that they have a better record. Please provide the data to support this point in final document.

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Pg 69 para 3- What are "insurance companies' standards"? How do they compare with FAA regulations? It is not sufficient to say they are more stringent. Please provide information . Please provide ALNW standards for pilots so that reader may make comparison. Please provide individual pilot accident record to date for pilots flying for ALNW in final document. Please specify definition of "small airport".

Pg 70 para 2- Dr. Nicola suggests COH will have 30-40 flights per month not 15-20. This document is supposed to represent worst case scenario. COH had 17 transports Aug '85-- your figures are not realistic. Please adjust for final EIS.

Pg 70, para 3- According to our review of flight logs, the average flight was not 48 minutes but 77. Please address in final EIS.

Please provide accident probabilities based on worst case (40 flights per month). Please project this probability over twenty year period allowing for growth of service. Include in final EIS.

Pg 72, para 5- Please include in final EIS Mr. Benedict's comments on which landing site would offer least safety risks to community in comparing proposed action with alternative sites reviewed in EIS and include Navy Site,Sand Point. In my conversation with Mr. Benedict (Sept 23, 1986), he was unaware that MAST had previously landed at UW soccer field and that this alternative was being considered in proposal. Has Mr. Benedict physically visited the COH campus and viewed proposed site or alternatives reviewed in this document? Please include in EIS. Comment in EIS suggest that Mr. Benedict compared the COH site only to landing areas in downtown Seattle.

Pg 72- There is no discussion of proposed medical office Bldg and its effect on landings at COH. Please include discussion in final EIS, include unbiased credible sources when determing effect. Please also include what other bldgs COH has planned to erect on its property (not just vicinity of proposed site). This development and proposed development should be considered in siting a helipad on campus.

Pg 72- Please address in final EIS- possibility of natural gas meter leaking undetected as a result of accident on site and possibility of subsequent explosion. Who is responsible for shut off of main valve across SandPoint Way? In the event of emergency-- how long does this procedure take?

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Pg 73- Please refer to Table 12 - Helicopter Accidents by Cause 1972-1985. 31.5% struck wires and obstacles. 22.2% flew into the ground. 16.7% loss of control. The flight path to landing site at COH includes more wires and obstacles, trees, light standards, buildings etc., than open area of alternative sites. The flight path is over homes and schools, the landing site is 240 feet from multi family housing. The landing site is located in a very restricted area -- loss of control could have devastating results. How can you possible conclude that the alternative sites would not be more safe from a helicopter accident frequency ? Please consider varying wind currents, the influence that buildings have on wind, etc.

The fact that you cannot produce any statistics on ambulance accidents involving a transfer of patient such as would be required in alternative action suggests that if a risk exists it must be very minimal-- please compare this risk to that which is experienced by locating helipad at COH.

Please have pilots comment on whether open, paved lite secured area of alternative (build helipad on East Campus) is preferred to restricted site at COH. Please have ALNW pilots comment as well as unbiased authority.

Pg 76- Please explain why exempt sound sources can not be considered a public nuisance, and what authority puts forth this information.

Pg 80- The discussion on health effects of Noise is inadequate. Please attempt to give serious consideration to this issue. As one source of infomation please refer to EPA pamphlet entitled "Noise: A Health Problem"(Enclosed). Please refer to letter sent to Hermia Ipp, DCLU, by Liz Anderson in reference to noise tests conducted at COH. Date: See file DCLU.

There is no discussion of impacts of Helicopter noise on elementary schools located in vicinity of landing site. Secondary approach departure path is over both elementaries. Please give serious consideration to this issue and present in FEIS. It is not sufficient to say that they are noise-sensitive.

Please verify that noise measurements were actually taken at only one spot designated to be measured. Other information was extrapolated from these findings.

Pg 81 There is not an adequate discussion of impacts of two bladed helicopters that will land at COH-- please address.

With what degree of accuracy can measurements taken at Harborview with regard to Helicopter noise be applied to COH site and vicinity? Different terrain, Bldgs, etc. Please respond FEIS.

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31.

Pg 81 para 6 Please verify that gross vehicular weight has negligible effect on helicopter noise. Gene Hill is not a noise expert. Provide comments by credible authority in final EIS.

Specific noise measurements should be taken at both elementary schools doing separate tests for primary and secondary flight paths. Include results in FEIS.

Pg 83- Noise information conclusions are invalid as presented in this document as the report assumed twenty patients transport or 40 round trip flights. Impacts of 40 transports per month or 160 round trip flights should be used as is supported by findings of Dr. Nicola, 1986. Please use <u>accurate worst case</u> predicions in FEIS.

Pg. 84 para 2 - The flight path that incorporates a sharp turn south over parking garage is still being used. Consequently there would <u>not</u> be a lowering of 7-9 dBA. Delete from test for FEIS.

There have been no measurements taken for backup aircraft used by ALNW which has landed several times at COH already. Please provide noise information for this aircraft in FEIS-- Please provide noise information on BlackHawk heliocpter, as military plans to replace the Huey. Provide for final EIS.

Please provide information on how hospital rooms at COH were determined noise-sensitive. If noise studies were done accurately, it would be shown that more than 30% of hospital would be awakened. Please discuss effects on patients when windows are open during summer, fall, spring of year.

How did proponent determine there were <u>no</u> known health effects associated with the predicted helicopter sound levels for the neighborhood surrouding COH? Please discuss FEIS.

The current helicopter noise awakens more than 15-20% of closest residents. Please poll the closest line of sight residences to determine.

Please address the potential impacts on residences of consecutive night flights that prevent residents from sleeping at all. This has already been experienced at least once since landings have been taking place at COH.

Why is it that in addressing noise impacts of intramural field helistop, the proponent mentions the potential disruption to class lectures at the UW--

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but does not even acknowledge this same impact with regard to the elementary schools located in vicinity of COH. This disruption occurs even when the school is not overflown.

Pg 89- The proposed flight path does not keep helicopters at "high" altitude over Sand Point Way. What does proponent consider high altitude?

The disturbance to residences as experienced in noise abatement approach is not minimal.

Residents to the south of hospital experience disruption to lives as a result of helicopter landing at COH. Many have complained about sleep interference.

Pg 90- When did the UW receive CON approval for their helistop? Helen Shawcroft (UW) was unaware that the institution had gone through process. See testimony Joanne Brekke hearing, September, 1985.

What do long range plans of Seattle area project in terms of helicopter service acquisition?

Please note: Six months prior to COH announcing its plans to acquire helicopter service and building pad, hospital representatives maintained in a public community meeting that they in fact had no plans to acquire such services nor did they intend to build a helistop on their campus-- so much for your survey of Seattle area hospitals. Why would these hospitals divulge their plans to COH anyway? COH certainly does not share its institutional plans with other hospitals. Please delete your survey of hospitals, it has no validity with regards to the precedent setting nature of the issuing of this permit.

Ludwell Lake, EMS helicopter program consultant, has remarked in the St. Luke CON hearing (helicopter proposal Spring '86) that a consortium is the worst way to set up an EMS helicopter program. Please address in final EIS and research his "Public Utility model".

How can ALNW do an adequate job of providing appropriate medical services to public if it is not integrated to total EMS system and part of regional plan?

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See references to CON process and helicopter service acquisition by hospitals.

Your conclusions on pg. 91 are contrary to realistic results expected and experienced to date, of CON, PSHSA study, Washington State Medical Association guidelines, the city's land use process -- see earlier discussion.

Pg 91- What Dr. Nicola suggested as referenced in para 6 is illegal.

Pg 92- Please refer to comments on 1st para in public hearing speech, Liz Andreson 9/23/86. Please reconsider concluding paragraph on noise and vibration when accurate noise study is complete.

Submitted DCLU 10/17/86

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MAY 19 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 8, 1986

Ms. Julie Gibb
Dept. of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a heli-stop outside their emergency room.

I am an employee of Seattle Central Community College and understand the concerns of parents who have children who need emergency care at the Children's Orthopedic Hospital.

I sympathize with those who are objecting to this permit due to the noise, but I feel that the good that will be realized outweights any objection that the residents may have.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Verbalee Dance

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RECEIVED

MAY 15 1986

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LAND USE DIVISION

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Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Nancy L. Day

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RECEIVED
JUN 18 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 13, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am a guild member of the Christopher Funk Guild for Children's Hospital in Marysville, Washington.

I understand the concerns of those who are objecting, but I want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Teresa Seibert

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June 13, 1986

RECEIVED
JUN 17 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

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Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Wendie Krangnes
Christopher Funk Guild - Marysville

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cc 84-022 Hermia File

Seattle
Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

November 4, 1985

Re: Helistop Proposal (cc 84-022)

Dorothy Teeter
Children's Orthopedic Hospital
Post Office Box C-5371
Seattle, Washington 98105

Dear Ms. Teeter:

We have outlined the permit processes for the helistop proposal for Children's Orthopedic Hospital (see attached). Under Process I, the Department of Construction and Land Use (DCLU) would complete the environmental review (SEPA) before moving to the Council Conditional Use (CCU) process. This option requires separate hearings conducted by the Hearing Examiner, and may take about 215 days. Under Process II, DCLU would issue a SEPA decision and CCU recommendation at the same time. The hearing examiner would conduct a consolidated hearing. This option would take about 113 days. It is obvious that the latter is more expeditious. We plan, therefore, to proceed with Process II.

Assuming Dr. Nicola's report on medical needs is completed by November, 1985, and assuming the environmental checklist information and noise study which we received last week is adequate, it is feasible that the Department would issue a threshold determination and recommendation on the conditional use in December, 1985. The hearing examiner may then conduct his hearing in late January, 1986.

If you have further questions, please do not hesitate to call me at 625-2781.

Sincerely,

BEATRICE FARRAR RYAN
Interim Director

/Hermia Ip

By
HERMIA IP
Land Use Specialist

HI:vg

cc: Tom Byers
Treuman Katz
Anita Francis
Liz Anderson

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Seattle
Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

Re: Scoping of Environmental Impact Statement
MUP 8405870

Nancy Greenawalt
Children's Orthopedic Hospital
P. O. Box C5371
4800 Sand Point Way N.E.
Seattle, Washington 98105

Dear Ms. Greenawalt:

Based upon the Department's analysis and upon letters received during the scoping comment period, our scoping determination for the Environmental Impact Statement for your application for a helistop permit is as follows:

AREAS OF IMPACT

Noise
Vibrations
Safety
Cumulative land use impacts of emergency medical transport by helicopter in the Seattle-King County region
Alternatives
- alternative sites off-campus, including UW Graves Field (soccer field)
- shared usage of sites
- no action alternative

MITIGATION MEASURES

Possible mitigation measures discussed in the EIS shall include the following:
- flight paths
- number of flights
- usage and location of U. S. Army (M.A.S.T.) or other agency helicopter landings
- off-campus pick-up of medical teams
- liability insurance
- criteria for use of helicopters
- plan for monitoring use

Comment letters should be carefully reviewed by the consultants preparing the EIS. The letters contain concerns regarding background data, impacts, study methodology and possible mitigation measures, within the scope of the EIS just outlined.

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If you have questions on this scoping determination, please call me at 625-4509.

Sincerely,

BEATRICE FARRAR RYAN
Interim Director

By
JULIA GIBB
Land Use Specialist

JG:vg

cc: Glen Bachman, Shapiro and Associates

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

To: Katy
JAG

City of Seattle
Charles Royer, *Mayor*

King County
Tim Hill, *Executive*

Seattle-King County Department of Public Health
Bud Nicola, M.D., M.H.S.A., *Director*

RECEIVED
NOV 21 1986
DEPT. OF CONST. & LAND USE

NOTICE OF PUBLIC HEARING

Notice is hereby given of a meeting of the King County Board of Health to be held December 2, 1986 at 2:00 p.m. in the King County Council Chambers, 402 King County Courthouse, Seattle, Washington.

Agenda items will include:

1) Discussion and public comment on air ambulances in King County

2) Consideration of proposed administrative rules and procedures to license and review annually four state-certified methadone treatment programs per RCW 69.54.030 and King County Ordinance 7738.

Interested persons wishing to attend or testify at this hearing are invited to do so. Written testimony will be accepted provided it is received prior to the meeting and should be addressed to: Board of Health, C/O Rita Hensley, Seattle-King County Department of Public Health, 7th Floor, 400 Yesler Building, Seattle, WA 98104. Copies of proposed regulations and licensing procedures for methadone treatment programs are available from the Division of Alcoholism and Substance Abuse Services Division, Room 1008 Smith Tower, Seattle, Washington.

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TESTIMONY:
MARV GRISMAN
(Presented Sept 23, 1985
Public HEARING DEIS/
COH HELIPAD

1985

In reviewing [redacted] ncerning federal, state,
local, and private agencies with jurisdiction over helipad construction and
air ambulance servies, it has become clear that the hospital's statement
that " there is no single agency with jurisdiction" is painfully true. While
a number of agencies advise and give suggestions concerning helipad
proposals, there is no agency that is responsible for enforcement,
regulation and supervision of air ambulance services. To illustrate, the
FAA, which many assume police and assure the safety of the skies, offers
only quidelines, not specifications for helistop construction. Further, as
quoted from the Draft, the FAA will investigate complaints but will
"generally not take action" on them (p.26). At the state level, the CON
office with the DSHS has been empowered to review helistop construction,
but was unable to enforce this regulation on COH. Another state agency,
the Emergency Medical Services, has no authority for COH's helistop, nor
does the Washington State Department of Transportation. In short, this
striking lack of jurisdiction was outlined in the Draft; it was not
identifed as a problem area nor one requiring resolution. We in the
community, however, feel that enforcement and regulatory provisions
should be a necessary part of this draft and therefore ask that these
concerns of regulation, enforcement and jursidiction be addressed in the
next DEIS.

OCT 17 1986
LAW OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Some of the enforcement questions which should be answered are:

1. Who ensures that pilots abide by FAA standards?
2. Who will monitor flight paths, for compliance with noise
abatement procedures as outlined in the DEIS?

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3. Who will ensure that ALNW functions to benefit the region, not just its sponsoring hospitals?

4. How will the appropriateness of patient transfers be assessed, with a consideration of retrospective review?

5.How will the military and civilian services be coordinated?

6. What will be the consequences of violations of the permits issued?

7. Who will monitor the safety of the flights?

While these are only a few of the questions which have occurred to us, they show our concerns with enforcement, regulation, and jurisdiction which need to be addressed in the DEIS.

We would also like to note that our concerns over regulation are neither idle nor naive; rather, they reflect a number of unfortunate experiences with COH which have impressed upon us the need to guarantee that safeguards are in place before the cat is out of the bag, the toothpaste is out of the tube. To illustrate, in 1979 and 1980, COH began a policy of charging for parking in their parking lots. This policy violated the City's Land Use Code but COH did not comply with the code until they received a number of citations(October, 1979; March, 1980). Further, the City's Land Use Code requires a permit for a helicopter to land; as far as we know, the Hospital still does not have a permit but continues to land anyway. Lastly, enforcement at the state level has been equally difficult. The State CON office did ask, on three separate occasions, that COH submit a CON application. COH refused and the State did not enforce their regulations. The failure of COH to complete a CON is of particular importance, as this regulation is one that is cited in the Draft as a

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safequard against helicopter proliferation and resulting escalating health care costs. If COH can avoid doing a CON, there is little hope that other hospitals will not do the same and the promise of a source of regulation is further undermined. (It should also be noted that there is currently a concerted lobbying effort designed to abolish CON requirements totally.)

In sum, we would like to see our concerns about regulation, enforcement, and jursidiction addressed in the EIS. The "who, what, and how" of enforcement should be an integral part of this proposal, not only so that COH can be encouraged to fulfill its obligations and agreements, but also so that the EMS system in this region can continue to be viable and effective. It is not enough to say the an agency does not exist that can oversee this proposal. What is needed is a plan for an agency, a proposal for regulation and supervision, which will ensure proper and fair compliance with provisions and standards.

Signed,
Mara Chrisman
(E.A.)

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City of Seattle
Charles Royer, *Mayor*

King County
Randy Revelle, *Executive*

Seattle-King County Department of Public Health
R.M. Nicola, M.D., M.H.S.A., *Director*

RECEIVED
DEC 5 - 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

December 4, 1985

Beatrice Ryan, Interim Director
Department of Construction and Land Use
400 Municipal Bldg.
Seattle, WA 98104

Dear Ms. Ryan:

This letter is in response to your request of August 30, 1985 for an opinion about the medical need for the Children's Orthopedic Hospital (COH) to establish a helipad on hospital grounds.

In order to review the complete facts of this issue, I have spoken with numerous physicians, administrators, community residents, and former patients. I have reviewed the medical literature on emergency medical services delivered by helicopter, viewed a simulated transport/helicopter landing at Graves Field and near the COH proposed helipad site, examined helicopter and transport equipment, held a public hearing October 24, 1985 in the City Council chambers from 6:00 to 9:00 p.m., (written testimony attached), toured the COH facility, reviewed Airlift Northwest logs and individual patient charts.

Existing Pediatric Emergency Medical Services System in Seattle

Pediatric and neonatal emergencies within Seattle which are hospitalized are generally admitted at one of the 19 neonatal intensive care (NICU) beds or 17 pediatric intensive care beds (PICU) at Children's Orthopedic Hospital or one of the 19 neonatal intensive care unit beds at the University of Washington Medical School Hospital. The only other NICU beds in the region are the 12 beds at Mary Bridge Children's Hospital in Tacoma; the only other pediatric or neonatal intensive care beds in the State are located in Spokane. All pediatric surgery in the region is currently done at Children's. Pediatricians and neonatologists from within the State and from surrounding states (Alaska, Montana, Idaho) generally use COH and the UW as referral centers for the most seriously ill children or neonates requiring tertiary specialty care.

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Personal health care can, in general, be subdivided into three functional levels: a primary level, where the health care system is entered and basic services received and where all health services are mobilized and coordinated; a secondary level, represented by ambulatory services of a specialist nature and inpatient services provided in a community hospital-type facility; and the tertiary level, which includes the highly complex and sophisticated services available only at a "medical center" (Alberta Parker, "The Dimensions of Primary Care" in Primary Care: Where Medicine Fails, 1974, New York, John Wiley and Sons).

The University of Washington has a program which admits high-risk mothers so that low birth weight babies do not have to be transported between hospitals. This method of delivering high-risk mothers has been found to substantially reduce the morbidity and mortality associated with the delivery of low birth weight babies (Hickok, D. et al., "Decreased Mortality of Very Low Birthweight Infants After Maternal Transport," Department of Obstetrics and Gynecology, University of Washington School of Medicine, unpublished paper.)

But even with an excellent maternal transport program, there will still be individual patients who deliver small birthweight babies at small community hospitals throughout the State, where the infant needs to be stabilized and transported to a tertiary care hospital. Even though the UW is the hospital generally designated for the care of premature low-birthweight infants, its beds are frequently full and patients are referred to COH. The same pediatric medical staff, including interns and residents, deliver services at both COH and UW. In addition to small birthweight babies who have undeveloped lungs and intestines and require intensive support for survival and growth, there are transfers from hospitals around the State to COH for pediatric surgery or acute infection. Trauma patients generally go first to the region's trauma center, Harborview Medical Center, but may be transferred to COH for follow-up after surgery and stabilization.

This referral pattern exists regardless of transportation mode.

Helicopter Transport

There are existing guidelines and standards for patient care while being transported (Guidelines for Perinatal Care, "Interhospital Care of the Perinatal Patient," American Academic of Pediatrics and American College of Obstetricians and Gynecologists, 1985) but there are no standard published guidelines for which mode of transportation to use on a given patient or, for example, which criteria a patient should have to be transported by helicopter versus ambulance. The State Medical Society's EMS Committee is working on the delineation of medical necessity or medical reasonableness for medical transport and under Dr. Lothar Pinker's direction are hoping to have guidelines published in six months (see attached letter). There are some generalities that all the experts agree on.

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Over 150 miles it is most timely, stable and economic to use fixed-wing aircraft, so most interstate transports occur in fixed wing. Between 100 and 150 miles, rotary-wing aircraft or helicopters appear most appropriate, so regional out-of-County transfers appear to be the general rule. Less than 70 miles, depending on geography, ground transport is the generally agreed preference.

The key to any transportation of sick people is the stabilization of the patient, making sure that vital signs are stable and that the general physical condition is not deteriorating. One of the most important aspects in the case of the critically ill neonate is the transport of a specially trained medical team, the neonatologist/pediatrician and neonatal nurse to the community hospital to stabilize a deteriorating baby. Once stable, a baby can be transported much more safely; some pediatricians prefer ground transport to helicopter because it is possible to stop an ambulance by the side of the road and listen to a baby's heart and lungs, and check the stability of its condition. There appears to be a balance between amount of transport time required and possibility of deterioration.

There are several studies in the literature that assess the severity of illness and injury in pediatric air transport. In one study, Mayer and Wallie prospectively evaluated 636 patients transported over 79 months of service to a regional children's center. Of these patients, 57.5% were transported by helicopter. Eighty-one percent of patients were taken to surgery or admitted to the intensive care unit immediately on arrival at the regional children's hospital. Overall mortality was 9%; a trauma score was used to classify patients (Ann. Emerg. Med. 1984 Feb.; 13(2):108-11). At Johns Hopkins, Dr. Columbani et al reviewed 267 children over a one-year period; 46% of patients arriving directly from the injury scene were delivered by helicopter. Fourteen of seventeen deaths resulted from head injury; a more aggressive approach to the management of brain trauma was advocated (J. Pediatric Surg. 1985 Feb.; 20(1):8-13). Other areas reviewed include a Hawaiian MAST system (Hawaii Med. J. 1984 Jun.; 43(6):200,202,204); a Kansas perinatal system (Respir. Ther., Mar.-Apr. 1985, 15(2):47-50, ISSN 0048-7392.

Another study evaluating air transport in a rural EMS system looked at 569 patients with multisystemic injuries. The emergency helicopter service was rated, utilizing strict specific guidelines as either essential, helpful, or not a factor in the preservation of life. The helicopter was essential to 16.5% and helpful to 10.9% of patients. In spite of rapid evaluation and maximal intervention, 102 (17.9%) of the patients died. The group for which air transport was judged "not a factor" (54.7%) consisted of patients whose injuries would not have proven fatal had their transportation to the tertiary care center been delayed. Retrospective analysis of the data available to the tertiary care center at the time of the decision to transfer the patients by air revealed that it was not possible to differentiate those patients who did not benefit from the service from those for whom the service was judged essential or helpful (Am. Surg. 1984 Apr.; 3-1348:183-8).

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Baxt et al. looked at a group of 1,273 blunt trauma patients who were treated and transported from the site by seven different hospital-based rotorcraft aeromedical emergency care services and saw a 21% reduction in expected mortality ($p<.05$) in five of the seven services. There is some debate about methodologic errors in the study. An editorial in the same journal issue (Annals Em. Med. 1985 Sept.; 14:9; 859-61) states that

> The effectiveness of aeromedical evacuation of battlefield casualties is well established; the transfer of this technology to the civilian setting is a logical event. Its effectiveness for civilian trauma care should be based on the following three principles: 1) early field resuscitation; 2) rapid transport; and 3) delivery to the hospital best suited to admit and treat the patient definitely and without delay. As Baxt and colleagues point out, helicopter emergency medical service (HEMS) patients may benefit from a highly integrated team effort at the receiving trauma center that is the direct or indirect result of a program but for which the helicopter (unless distance is a factor) is the least important component. This is a strong argument for the concept of regional trauma care that concentrates multiply injured patients in trauma centers organized to best care for them. The potential role of HEMS in making regional trauma care a reality should be explored by EMS systems.

My conclusions from the literature review are that there are medical conditions (especially trauma) where time of transport is critical regardless of mode of transportation, that specific clinical criteria may be helpful in selecting helicopter versus ground ambulance transport but do not help in predicting patient outcome, and that the experience of other tertiary centers, while helpful in describing the seriousness of injury seen in the usual patient populations transported, do not clearly shed any statistical light on your question at issue, the current Graves field site versus the hospital site 3-5 minutes away.

Current Data

COH admits approximately 1,000 patients per month in 200 regular beds and 36 intensive care beds (previously described) In August of 1985 82 patient admissions were ambulance transports to the emergency room, 34 were prearranged newborn ground transports, 30 were prearranged fixed-wing transports, and 6 were prearranged rotary transports. On an annual basis, there are 400-450 ground neonatal transports through the neonatal team; 80-85% of these transports go to COH, the rest to UW. During fiscal 1985 (a one-year period ending June 31) 279 patients were transported by air: 148 into intensive care units (see Attachment 1). Thirty-nine percent of these patients were under one month of age; 16% were greater than five years of age (see Attachment 2). Seventy-one percent (197) had peripheral intravenous lines, 27% (76) were intubated, and 2% (6) were undergoing CPR (see Attachment 2).

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I also reviewed the detailed flight logs of Airlift Northwest for August, 1985. There were 52 fixed-wing flights with 859 average miles per flight; 18 (54%) flights were out of State; all flights were out of County; 30 flights were to (or from) COH. There were 34 rotary-wing flights from Airlift Northwest averaging 110 miles: no flights were out of state; all but one of the flights were out of County (a motor vehicle accident to Harborview from South King County); 6 flights to COH.

Recommendations

It is my professional opinion that there are hospital transfers to COH where 3 to 5 minutes are critical to a severely ill infant or youngster, but the actual number of such cases is small. The criteria for helicopter transport in these cases would include the previous comments on distance, stable clinical condition during transport, severe injury or illness requiring tertiary center treatment (rather than secondary or community hospital level), and a strong possibility of decompensation (severe clinical deterioration) during transport. The most important part of the transport, in most cases, will be in getting a specially trained team out to community hospitals around the State.

In most cases, one single site near Graves Field would be adequate for both the University of Washington and COH; however, there will be a small number of cases at each hospital where the ability to land at the hospital may be life-saving. From the transport physicians I have talked to, about 5-10% of all transported children might fall into that category.

The number of children transported by air into COH for any given month may be 30 to 40 and based on the above criteria and clinical estimates, 3 to 4 of these patients may have a medical need for helicopter transport to the doors of the hospital.

The literature review indicated that there are no definitive predictive clinical indicators of prognosis; that is, any number would have to include an additional number of patients whose condition at time of referral was appropriate for air transport but who over time were determined not to have need of helicopter transport as essential. There also needs to be some flexibility for seasonal variation in disease.

Taking into account these factors, I would estimate ten expected helicopter transports for critically ill pediatric patients per month as an upward bound for COH.

I would also recommend that the emergency transport of patients by helicopter be a planned part of a complete EMS transportation system, with specific criteria for use, rather than a hospital-by-hospital provided service. A consortium of hospitals providing helicopter services such as the one in Airlift Northwest is

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certainly a most sensible approach and will make it easier to establish a systematic approach to provision of these services. We are, however, just beginning to integrate helicopter transport into our EMS system. Once a technology is made available to the medical community, it quickly becomes a standard of care for medico-legal reasons.

Until there is a defined systematic integration of these services on a County-wide (or regional or State-wide) basis, I would recommend that the permit granted be a conditional use permit pending a defined relationship to our existing State EMS system and final development of criteria by the Washington State Medical Association's EMS Committee, and that helistop use be reviewed for appropriate medical need in six months. Appropriate use could be monitored by review of individual patient records by an outside panel which includes recognized EMS/pediatric experts as well, perhaps, as out-of-County reviewers. The Health Department would offer our consultation services for that purpose, and I believe it might also be useful to ask the Department of Social and Health Services, Division of Health's Emergency Medical Services Program, and the Washington State Medical Society's EMS Committee for consultation assistance. If a helistop were being used for purposes outside those expressly permitted, I believe it would be appropriate to revoke the permit at the end of the six months.

I hope that these observations and recommendations will assist you in your permit procedure deliberations; please let me know if any comments need further clarification. My thanks to your staff, to a wide variety of health professionals involved in delivery care, to the staff and administration at COH, to the community residents of Laurelhurst, and to a number of other interested individuals who helped me to reach a better understanding of the emergency medical services delivered to infants and children in our community and the many factors which affect those services.

Sincerely,

Bud Nicola MD

Bud Nicola, M.D.
Director

BN:nr
Attachments

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Chapter 248-19 WAC

CERTIFICATE OF NEED--HOSPITALS AND NURSING HOMES

WAC

248-19-200 Purpose of chapter 248-19 WAC.
248-19-210 Purpose of certificate of need program.
248-19-220 Definitions.
248-19-230 Applicability of chapter 248-19 WAC.
248-19-240 Applicability determination.
248-19-250 Sanctions for violations.
248-19-260 Periodic reports on development of proposals.
248-19-270 Letter of intent.
248-19-280 Submission and withdrawal of applications.
248-19-290 Concurrent review of selected applications.
248-19-300 Categories of review.
248-19-310 Notification of beginning of review.
248-19-320 Public hearings.
248-19-325 Prohibition of ex parte contacts.
248-19-330 Regular review process.
248-19-340 Expedited review process.
248-19-350 Emergency review process.
248-19-360 Bases for findings and action on applications.
248-19-370 Determination of need.
248-19-375 Determination of nursing home bed needs.
248-19-380 Determination of financial feasibility.
248-19-390 Criteria for structure and process of care.
248-19-400 Determination of cost containment.
248-19-403 Major medical equipment not owned by or located in a health care facility.
248-19-405 Exemptions from requirements for a certificate of need.
248-19-410 Review and action on health maintenance organization projects.
248-19-415 Projects proposed for the correction of deficiencies.
248-19-420 Written findings and actions on certificate of need application.
248-19-430 Provision for reconsideration decision.
248-19-440 Issuance, suspension, denial, revocation and transfer of a certificate of need.
248-19-450 Circumstances for which an amended certificate of need is required.
248-19-460 Validity and extensions.
248-19-470 Monitoring of approved projects.
248-19-475 Withdrawal of a certificate of need.
248-19-480 Right and notice of appeal.
248-19-490 Certificate of need program reports.
248-19-500 Public access to records.

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DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

248-19-010 Purpose. [Order 126, § 248-19-010, filed 5/21/76; Order 64, § 248-19-010, filed 11/1/71.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-020 Definitions. [Order 126, § 248-19-020, filed 5/21/76; Order 64, § 248-19-020, filed 11/1/71.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-025 Applicability determinations. [Order 126, § 248-19-025, filed 5/21/76.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-030 Procedures for review of applications for certificates of need. [Order 126, § 248-19-030, filed 5/21/76; Order 64, § 248-19-030, filed 11/1/71.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-031 Amendments to applications. [Order 126, § 248-19-031, filed 5/21/76.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-033 Nonsubstantive review. [Order 126, § 248-19-033, filed 5/21/76.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-035 Public notice. [Order 126, § 248-19-035, filed 5/21/76.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-040 Issuance of certificate. [Order 126, § 248-19-040, filed 5/21/76; Order 64, § 248-19-040, filed 11/1/71.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-041 Basic criteria for applications. [Order 126, § 248-19-041, filed 5/21/76.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-042 Utilization criteria and methods. [Order 126, § 248-19-042, filed 5/21/76.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-043 Criteria for specialized services. [Order 126, § 248-19-043, filed 5/21/76.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-047 Amendments to certificates. [Order 126, § 248-19-047, filed 5/21/76.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-048 Conditional certificates of need. [Order 126, § 248-19-048, filed 5/21/76.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-050 Denial of certificate. [Order 126, § 248-19-050, filed 5/21/76; Order 64, § 248-19-050, filed 11/1/71.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-060 Suspension of certificates. [Order 126, § 248-19-060, filed 5/21/76; Order 64, § 248-19-060, filed 11/1/71.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

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248-19-070 Revocation of previously issued certificates. [Order 126, § 248-19-070, filed 5/21/76; Order 64, § 248-19-070, filed 11/1/71.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-075 Notice of appeal. [Order 126, § 248-19-075, filed 5/21/76.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-080 Separability of applications. [Order 126, § 248-19-080, filed 5/21/76; Order 64, § 248-19-080, filed 11/1/71.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-090 Information required. [Order 126, § 248-19-090, filed 5/21/76; Order 64, § 248-19-090, filed 11/1/71.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

248-19-100 Injunctions against violations. [Order 126, § 248-19-100, filed 5/21/76; Order 64, § 248-19-100, filed 11/1/71.] Repealed by 79-12-079 (Order 188), filed 11/30/79. Statutory Authority: Chapter 70.38 RCW.

WAC 248-19-200 PURPOSE OF CHAPTER 248-19 WAC. The following rules and regulations are adopted pursuant to chapter 70.38 RCW for the purpose of establishing a certificate of need program which is consistent with the provisions of Title XV of the Public Health Service Act as amended by the health planning and resources development amendments of 1979 (Public Law 96-79). [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-200, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-200, filed 11/30/79.]

WAC 248-19-210 PURPOSE OF CERTIFICATE OF NEED PROGRAM. The purpose of the certificate of need program is to ensure the obligation of capital expenditures, the development and offering of institutional health services, and the acquisition of major medical equipment are consistent with the public policy of the state of Washington, set forth in RCW 70.38.015.

"(1) That planning for promoting, maintaining, and assuring a high level of health for all citizens of the state, and for the provision of health services, health manpower, health facilities, and other resources is essential to the health, safety, and welfare of the people of the state. Such planning is necessary on both a state-wide and regional basis and must maintain responsiveness to changing health and social needs and conditions. The marshaling of all health resources to assure the quality and availability of health services to every person must be the goal of such planning, which must likewise assure optimum efficiency, effectiveness, equity, coordination, and economy in development and implementation to reach that goal _____;

(2) That the development and offering of new institutional health services should be accomplished in a manner which is orderly, timely, economical, and consistent with the effective development of necessary

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and adequate means of providing quality health care for persons to be served by such facilities without unnecessary duplication or fragmentation of such facilities;

(3) That the development of health resources, including the construction, modernization, and conversion of health facilities, should be accomplished in a planned, orderly fashion, consistent with identified priorities;

(4) That the development and maintenance of adequate health care information and statistics essential to effective health planning and resources development be accomplished; and

(5) That the strengthening of competitive forces in the health services industry, wherever competition and consumer choice can constructively serve to advance the purposes of quality assurance, cost effectiveness, and access, should be implemented." [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-210, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-210, filed 11/30/79.]

WAC 248-19-220 DEFINITIONS. For the purposes of chapter 248-19 WAC, the following words and phrases shall have the following meanings unless the context clearly indicates otherwise.

(1) "Acute care facilities" means hospitals and ambulatory surgical facilities.

(2) "Affected persons" means the applicant, the health systems agency for the health service area where the proposed project is to be located, health systems agencies serving contiguous health service areas, health care facilities and health maintenance organizations located in the health service area where the project is proposed to be located providing services similar to the services under review, health care facilities and health maintenance organizations, which, prior to receipt by the department of the proposal being reviewed, have formally indicated an intention to provide similar services in the future, third-party payers reimbursing health care facilities for services in the health service area where the project is proposed to be located, any agency establishing rates for health care facilities or health maintenance organizations located in the health service area where the project is proposed to be located, any person residing within the geographic area served or to be served by the applicant, and any person regularly using health care facilities within that geographic area.

(3) "Ambulatory care facility" means any place, building, institution, or distinct part thereof not a health care facility as defined in this section and operated for the purpose of providing health services to individuals without providing such services with board and room on a continuous twenty-four hour basis. The term "ambulatory care facility" includes the offices of private physicians, whether for individual or group practice.

(4) "Ambulatory surgical facility" means a facility, not a part of a hospital, providing surgical treatment to patients not requiring inpatient care in a hospital. This term does not include a facility in the offices of private physicians or dentists, whether for individual or group practice, if the privilege of using such facility is not extended to physicians or dentists outside the individual or group practice.

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(5) "Applicant," except as used in WAC 248-19-390, means any person proposing to engage in any undertaking subject to review under the provisions of chapter 70.38 RCW and Title XV of the Public Health Service Act as amended by P.L. 96-79.

"Applicant," as used in WAC 248-19-390, means any person or individual with a ten percent or greater financial interest in a partnership or corporation or other comparable legal entity engaging in any undertaking subject to review under the provisions of chapter 70.38 RCW and Title XV of the Public Health Service Act as amended by P.L. 96-79.

(6) "Annual implementation plan" means a description of objectives which will achieve goals of the health systems plan and specific priorities among the objectives. The annual implementation plan is for a one-year period and must be reviewed and amended as necessary on an annual basis.

(7) "Board" means the Washington state board of health.

(8) "Capital expenditure" means an expenditure, including a force account expenditure (i.e., an expenditure for a construction project undertaken by a facility as its own contractor), which, under generally accepted accounting principles, is not properly chargeable as an expense of operation or maintenance. Where a person makes an acquisition under lease or comparable arrangement, or through donation, which would have required certificate of need review if the acquisition had been made by purchase, such acquisition shall be deemed a capital expenditure. Capital expenditures include donations of equipment or facilities to a health care facility, which if acquired directly by such facility, would be subject to review under the provisions of this chapter and transfer of equipment or facilities for less than fair market value if a transfer of the equipment or facilities at fair market value would be subject to such review.

(9) "Certificate of need" means a written authorization by the secretary for a person to implement a proposal for one or more undertakings.

(10) "Certificate of need unit" means that organizational unit of the department responsible for the management of the certificate of need program.

(11) "Commencement of construction" means whichever of the following occurs first: Giving notice to proceed with construction to a contractor for a construction project; beginning site preparation or development; excavating or starting the foundation for a construction project; or beginning alterations, modification, improvement, extension, or expansion of an existing building.

(12) "Construction" means the erection, building, alteration, remodeling, modernization, improvement, extension, or expansion of a physical plant of a health care facility, or the conversion of a building or portion thereof to a health care facility.

(13) "Council" means the state health coordinating council established under the provisions of chapter 70.38 RCW and Title XV of the Public Health Service Act as amended by P.L. 96-79.

(14) "Days," except when called "working days," means calendar days counted by beginning with the day after the date of the act, event, or occurrence from which the designated period of time begins to run. If the last day of the period so counted should fall on a Saturday, Sunday, or legal holiday observed by the state of

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Washington, a designated period shall run until the end of the first working day following the Saturday, Sunday, or legal holiday.

"Working days" exclude all Saturdays and Sundays, January 1, February 12, the third Monday in February, the last Monday of May, July 4, the first Monday in September, November 11, the fourth Thursday in November, the day immediately following Thanksgiving day, and December 25. Working days are counted by beginning with the first working day after the date of the act, event, or occurrence from which a designated period of time begins to run.

(15) "Department" means the Washington state department of social and health services.

(16) "Expenditure minimum" means one hundred fifty thousand dollars for the twelve-month period beginning with October 1979, and for each twelve-month period thereafter the figure in effect for the preceding twelve-month period adjusted to reflect the change in the preceding twelve-month period, in an index established by rules and regulations by the department for the purpose of making such adjustment.

(17) "Health care facility" means hospitals, psychiatric hospitals, tuberculosis hospitals, nursing homes, both skilled nursing facilities and intermediate care facilities, kidney disease treatment centers including freestanding hemodialysis units, ambulatory surgical facilities, rehabilitation facilities, hospices and home health agencies, and includes such facilities when owned and operated by the state or a political subdivision or instrumentality of the state and such other facilities as required by Title XV of the Public Health Service Act as amended by P.L. 93-641 and implementing regulations, but does not include Christian Science sanatoriums operated or listed and certified by the First Church of Christ Scientist, Boston, Massachusetts.

(18) "Health maintenance organization" means a public or private organization, organized under the laws of the state, which:

(a) Is a qualified health maintenance organization under Title XIII, Section 1310(d) of the Public Health Service Act; or

(b)(i) Provides or otherwise makes available to enrolled participants health care services, including at least the following basic health care services: Usual physician services hospitalization, laboratory, x-ray, emergency and preventive services, and out-of-area coverage;

(ii) Is compensated (except for copayments) for the provision of the basic health care services listed in subsection (18)(b)(i) of this section to enrolled participants by a payment which is paid on a periodic basis without regard to the date the health care services are provided and which is fixed without regard to the frequency, extent, or kind of health service actually provided; and

(iii) Provides physicians' services primarily:

(A) Directly through physicians who are either employees or partners of such organization, or

(B) Through arrangements with individual physicians or one or more groups of physicians (organized on a group practice or individual practice basis).

(19) "Health services" means clinically related (i.e., preventive, diagnostic, curative, rehabilitative, or palliative) services and includes alcoholism, drug abuse, and mental health services.

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(20) "Health systems agency" means a public regional planning body or a private nonprofit corporation organized and operated in a manner consistent with the laws of the state of Washington and P.L. 93-641 and capable of performing each of the functions described in RCW 70.38.085, and is capable as determined by the secretary of the United States Department of Health and Human Services, upon recommendation of the governor or the council, of performing each of the functions described in the federal law, Title XV of the Public Health Service Act as amended by P.L. 96-79.

"Appropriate health systems agency" means the health systems agency for the health service area where a particular project is to be located.

(21) "Health systems plan" means a plan established by a health systems agency which is a detailed statement of goals and resources required to reach those goals as described in the federal law, Title XV of the Public Health Service Act as amended by P.L. 96-79.

(22) "Home health agency" means any entity which is or is to be certified as a provider of home health services in the Medicaid or Medicare program.

(23) "Hospice" means any public or private entity, center, institution, or distinct part or parts thereof certified or to be certified as a hospice provider in the Medicare program or licensed or certified by the state of Washington to provide hospice services or providing a coordinated program of home and inpatient services for the terminally ill. Services provided by a hospice are primarily palliative and supportive rather than curative in nature, including bereavement care to the family after the patient's death, and provided by an interdisciplinary team. The services are designed to meet the physiological, psychological, social, and spiritual needs of the patient and his or her family.

(24) "Hospital" means any institution, place, building or agency or distinct part thereof which qualifies or is required to qualify for a license under chapter 70.41 RCW, or any state-owned and operated institution primarily engaged in providing to inpatients, by or under the supervision of physicians, diagnostic services and therapeutic services for medical diagnosis, treatment and care of injured, disabled, or sick persons, or rehabilitation services of injured, disabled, or sick persons. Such term includes tuberculosis hospitals but does not include psychiatric hospitals.

(25) "Hospital commission" means the Washington state hospital commission established pursuant to chapter 70.39 RCW.

(26) "Inpatient" means a person receiving health care services with board and room in a health care facility on a continuous twenty-four-hour-a-day basis.

(27) "Institutional health services" means health services provided in or through health care facilities and entailing annual direct operating costs of at least seventy-five thousand dollars for the twelve-month period beginning with October 1979, and for each twelve-month period thereafter the figure in effect for the preceding twelve-month period adjusted to reflect the change in the preceding twelve-month period in an index established by rules and regulations by the department.

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(28) "Intermediate care facility" means any institution or distinct part thereof certified as an intermediate care facility for participation in the Medicaid (Title XIX of the Social Security Act) program.

(29) "Kidney disease treatment center" means any place, institution, building or agency or a distinct part thereof equipped and operated to provide services, including dialysis services, to persons who have end-stage renal disease.

(30) "Long-range health facility plan" means a document prepared by each hospital containing a description of the hospital's plans for substantial changes in the facilities and services for three years.

(31) "Major medical equipment" means a single unit of medical equipment or a single system of components used for the provision of medical and other health services and costing in excess of one hundred fifty thousand dollars, except that such term does not include dental equipment or medical equipment acquired by or on behalf of a clinical laboratory to provide clinical laboratory services if the clinical laboratory is independent of a physician's office and a hospital, and the clinical laboratory has been determined under Title XVIII of the Social Security Act to meet the requirements of paragraphs (10) and (11) of section 1861(s) of such act. If the equipment is acquired for less than fair market value, the term "cost" includes the fair market value.

(32) "May" means permissive or discretionary.

(33) "Nursing home" means any home, place, institution, building or agency or distinct part thereof operating or maintaining facilities providing convalescent or chronic care, or both, for a period in excess of twenty-four consecutive hours for three or more patients not related by blood or marriage to the operator, who, by reason of illness or infirmity, are unable properly to care for themselves. Convalescent and chronic care may include, but not be limited to, any or all procedures commonly employed in waiting on the sick, such as administration of medicines, preparation of special diets, giving of bedside nursing care, application of dressings and bandages, and carrying out of treatment prescribed by a duly licensed practitioner of the healing arts. The term "nursing home" includes any such entity owned and operated by the state or licensed or required to be licensed under the provisions of chapter 18.51 RCW and any other intermediate care facility or skilled nursing facility as these terms are defined in this section. The term "nursing home" does not include: General hospitals or other places providing care and treatment for the acutely ill and maintaining and operating facilities for major surgery or obstetrics or both; psychiatric hospitals as defined in this section; private establishments, other than private psychiatric hospitals, licensed or required to be licensed under the provisions of chapter 71.12 RCW; boarding homes licensed under the provisions of chapter 18.20 RCW; or any place or institution operated to provide only board, room, and laundry to persons not in need of medical or nursing treatment or supervision.

(34) "Obligation," when used in relation to a capital expenditure, means the following has been incurred by or on behalf of a health care facility:

(a) An enforceable contract has been entered into by a health care facility or by a person proposing such capital expenditure on behalf

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of the health care facility for the construction, acquisition, lease, or financing of a capital asset; or

(b) A formal internal commitment of funds by a health care facility for a force account expenditure constituting a capital expenditure; or

(c) In the case of donated property, the date on which the gift is completed in accordance with state law.

(35) "Offer," when used in connection with health services, means the health facility provides or holds itself out as capable of providing or as having the means for the provision of one or more specific health services.

(36) "Person" means an individual, a trust or estate, a partnership, a corporation (including associations, joint stock companies, and insurance companies), the state, or a political subdivision or instrumentality of the state, including a municipal corporation or a hospital district.

(37) "Predevelopment expenditures" means capital expenditures, the total of which exceeds the expenditure minimum, made for architectural designs, plans, drawings or specifications in preparation for the acquisition or construction of physical plant facilities. "Predevelopment expenditures" exclude any obligation of a capital expenditure for the acquisition or construction of physical plant facilities and any activity which may be considered the "commencement of construction" as this term is defined in this section.

(38) "Project" means any and all undertakings which may be or are proposed in a single certificate of need application or for which a single certificate of need is issued.

(39) "Psychiatric hospital" means any institution or distinct part thereof primarily engaged in providing to inpatients, by or under the supervision of a physician, psychiatric services for the diagnosis and treatment of mentally ill persons and licensed or required to be licensed under the provisions of chapter 71.12 RCW, or is owned and operated by the state or by a political subdivision or instrumentality of the state.

(40) "Rehabilitation facility" means an inpatient facility operated for the primary purpose of assisting in the rehabilitation of disabled persons through an integrated program of medical and other health services provided under competent professional supervision.

(41) "Secretary" means the secretary of the Washington state department of social and health services or his or her designee.

(42) "Shall" means compliance is mandatory.

(43) "Skilled nursing facility" means any institution or distinct part thereof certified as a skilled nursing facility for participation in the Medicare (Title XVIII) or Medicaid (Title XIX) program.

(44) "State health plan" means a document, described in Title XV of the Public Health Service Act, developed by the department and the council in accordance with RCW 70.38.065.

(45) "State Health Planning and Resources Development Act" means chapter 70.38 RCW.

(46) "Undertaking" means any action which, according to the provisions of chapter 248-19 WAC, is subject to the requirements for a certificate of need or an exemption from the requirements for a certificate of need. [Statutory Authority: RCW 70.38.135. 84-07-014 (Order 2082), § 248-19-220, filed 3/14/84; 81-09-012 (Order 210), § 248-19-220, filed 4/9/81, effective 5/20/81. Statutory Authority:

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Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-220, filed 11/30/79.]

WAC 248-19-230 APPLICABILITY OF CHAPTER 248-19 WAC. (1) The following undertakings shall be subject to the provisions of chapter 248-19 WAC, with the exceptions provided for in this section.#

(a) The construction, development, or other establishment of a new health care facility.

(b) Any capital expenditure by or on behalf of a health care facility substantially changing the health services of the facility. Substantial changes in services shall be limited to the following:

(i) The establishment of health services not offered on a regular basis within the twelve-month period prior to the time such services are offered or the termination of such services;

(ii) The introduction of a new technology for diagnosis or treatment;

(iii) A change in the level of service; or

(iv) The offering of any of the following health services at a new location not formerly part of the health care facility's campus. Specific substantial changes in services are as follows:

Alcoholism/substance abuse
Burn unit
Cardiac catheterization
Chronic renal dialysis
Kidney lithotripty
CT-computed tomography
NMR-nuclear magnetic resonance
PET-positron emission tomography
Emergency services including regular outpatient emergency services staffed by physicians at a health care facility, and the provision of ambulance services, including air ambulance, licensed under chapter 18.73 RCW.
Inpatient psychiatric services
Neonatal special care-level III
Obstetrics-level I
Obstetrics-level II
Obstetrics-level III
Organ transplants, including only heart, liver, kidney, bone marrow, brain, and lung transplants
Open heart surgery
Pediatrics-level I
Pediatrics-level II
Pediatrics-level III
Radiation therapy-megavoltage, orthovoltage
Rehabilitation-level I
Rehabilitation-level II
Rehabilitation-level III
Change in the number of dialysis stations in a health care facility, and
Change from mobile to fixed base CT scanning.

The department may, periodically and on an emergency basis, revise and update specific substantial changes in services.

(c) Any capital expenditure by or on behalf of a health care facility exceeding the expenditure minimum as defined by WAC 248-19-

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220(16). The costs of any studies, surveys, designs, plans, working drawings, specifications, and other activities (including staff effort and consulting and other services which under generally accepted accounting principles are not properly chargeable as an expense of operation and maintenance) essential to the acquisition, improvement, expansion, or replacement of any plant or equipment with respect to which such expenditure is made shall be included in determining the amount of the expenditure. Functional programming and general long-range planning activities, including marketing surveys and feasibility studies, are not to be included when determining whether an expenditure exceeds the expenditure minimum.

(d) A change in bed capacity of a licensed health care facility which increases the total number of licensed beds or redistributes beds among facility and service categories of acute care, skilled nursing, intermediate care, and boarding home care if the bed redistribution is to be effective for a period in excess of six months.

(e) The obligation of any capital expenditure by or on behalf of a health care facility not required to be licensed for a change in bed capacity which increases the total number of beds, or redistributes beds among various categories, by more than ten beds or more than ten percent of total bed capacity as defined by the department, whichever is less, over a two-year period.

(f) Acquisition of major medical equipment:

(i) If the equipment will be owned by or located in an inpatient health care facility; or

(ii) If the equipment is not to be owned by or located in a health care facility and the department finds, consistent with WAC 248-19-403, that:

(A) The equipment will be used to provide services for inpatients of a hospital on other than a temporary basis in the case of a natural disaster, a major accident, or equipment failure; or

(B) The person acquiring such equipment did not notify the department of the intent to acquire such equipment at least thirty days before entering into contractual arrangements# for such acquisition.

(g) The acquisition of an existing health care facility which the department has determined, in accordance with the provisions of subsection (2) of this section, is subject to review;

(h) Any new institutional health services which are offered by or on behalf of a health care facility and which were not offered on a regular basis by or on behalf of such health care facility within the twelve-month period prior to the time such services would be offered.

(i) Any expenditure by or on behalf of a health care facility in excess of the expenditure minimum made in preparation for any undertaking under this subsection and any arrangement or commitment made for financing such undertaking. Expenditures of preparation shall include expenditures for architectural designs, plans, working drawings and specifications.

(j) The obligation of any capital expenditure by or on behalf of a health care facility which decreases the total number of licensed beds or relocates beds from one physical facility or site to another by ten beds or ten percent, whichever is less, in any two-year period.

(k) Any acquisition by donation, lease, transfer, or comparable arrangement, by or on behalf of a health care facility, if the acquisition would otherwise be reviewable under chapter 248-19 WAC if made by purchase.

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(2) At least thirty days before any person acquires or enters into a contract# to acquire an existing health care facility, the person shall provide written notification to the department and the appropriate health systems agency, and in the case of a hospital, the hospital commission, of the person's intent to acquire the facility.

(a) Written notification of intent, to be considered valid, shall be made in a form and manner acceptable to the secretary and shall include:

(i) The name and address of the health care facility to be acquired;

(ii) The name and address of the person intending to acquire the health care facility;

(iii) A description of the means by which the health care facility would be acquired, including the total capital expenditures associated with the acquisition, and the intended date of incurring the contractual obligation to acquire the health care facility;

(iv) The name and address of the person from whom the facility is to be acquired; and

(v) A description of any changes in institutional health services or bed capacity proposed by the person acquiring the health care facility.

(b) A certificate of need shall be required for the obligation of a capital expenditure to acquire by purchase, or under lease or comparable arrangement, an existing health care facility if:

(i) A written notification of intent to acquire an existing health care facility is not provided in accordance with WAC 248-19-230(2), or

(ii) The department finds within fifteen working days after receipt of a written notification to acquire a health care facility that the services or bed capacity of the facility will be changed in being acquire

(c) Within fifteen working days after receipt of a written notification of intent, the department shall send written notice to the person intending to acquire the health care facility, indicating:

(i) Whether the written notification constitutes a valid notification, as prescribed in subsection (2)(a) of this section and, if such notification is valid,

(ii) Whether such acquisition is subject to certificate of need review.

(d) If the department fails to make a determination within thirty days after receipt of a valid notice, the health care facility may be acquired without a certificate of need.

(3) With respect to ambulatory care facilities and inpatient health care facilities controlled (directly or indirectly) by a health maintenance organization or combination of health maintenance organizations, the provisions of chapter 248-19 WAC shall apply only to the offering of inpatient institutional health services, the acquisition of major medical equipment, and the obligation of capital expenditures for the offering of inpatient institutional health services, and then only to the extent that such offering, acquisition, or obligation is not exempt under the provisions of WAC 248-19-405.

(4) The extension, on more than an infrequent basis, of the services of a home health agency or a hospice to a population residing in a county not previously regularly included in the service area of that home health agency or hospice during the preceding twelve months constitutes extension of home health services or hospice services beyond

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a defined geographic area and shall be considered the development or establishment of a new home health agency or hospice.

(5) No person shall engage in any undertaking subject to certificate of need review under the provisions of this chapter unless a certificate of need authorizing such undertaking has been issued and remains valid or an exemption has been granted in accordance with the provisions of this chapter.

(6) No person may divide a project in order to avoid review requirements under any of the thresholds specified in this section.

(7) The department may issue certificates of need permitting predevelopment expenditures only, without authorizing any subsequent undertaking with respect to which such predevelopment expenditures are made.

(8) A certificate of need application, the review of which had begun but upon which final action had not been taken prior to January 1, 1981, shall be reviewed and final action taken based on chapter 70.38 RCW and chapter 248-19 WAC as in effect prior to January 1, 1981.

(9) Certificates of need issued prior to January 1, 1981, shall not be terminated and the periods of validity of such certificates of need shall not be modified under the provisions of chapter 248-19 WAC which become effective January 1, 1981.

(10) A project for which certificate of need review was waived under the provisions of WAC 248-19-230(8) as in effect January 1, 1980, to January 1, 1981, shall have been completed by January 1, 1981, or, in the case of a construction project, commencement of construction shall have occurred by January 1982. If this requirement is not met, the project shall become subject to the requirements for a certificate of need.

(11) A proposed change in a project associated with a capital expenditure for which a certificate of need has been issued shall be subject to certificate of need review if the change is proposed within one year after the date the activity for which the capital expenditure was approved has been undertaken.

(a) Projects subject to review under this subsection include proposed changes in projects originally subject to review according to the provisions of subsection (1)(b), (c), (d), (e), or (j) of this section.

(b) No capital expenditure need be associated with a proposed change in a project subject to review under this subsection.

(c) A proposed change in a project shall include any change in the licensed bed capacity of a facility, and the addition or termination of an institutional health service.

(12) Administrative review.

(a) The secretary shall have the authority to review and take action, on the basis of information submitted on an abbreviated application form acceptable to the secretary, the following categories of expenditures:

(i) The acquisition of land;

(ii) Capital costs associated with the refinancing of existing debt;

(iii) The obligation of any capital expenditure by or on behalf of a health care facility which decreases the total number of licensed beds or relocates licensed beds from one physical facility or site to

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another by ten beds or ten percent, whichever is less, in any two-year period; and

(iv) A proposed change in a project reviewed in accordance with WAC 248-19-230(11).

(b) Such review shall be completed within ten working days after receipt of an application.

(13) The provision of hospice services by an entity providing the services described in the definition of "hospice" in WAC 248-19-220, when such an entity was providing services as of July 24, 1983, shall not be considered the establishment of a new health facility or service and shall not be subject to certificate of need review. Persons providing hospice services as of July 24, 1983, shall submit information prescribed by the department showing they were providing hospice services as of that date and showing the services provided and the county or counties comprising the service area.

NOTE:

#Where a hospital is part of a larger institution, such as a university, the components of the larger institution (e.g., a component conducting medical research) not related to the hospital will not be considered part of the hospital, whether or not the hospital is a distinct legal entity. Similarly, when there is a legal entity, the primary activity of which is operating a hospital, but which also operates a distinct research component, the research component will not be considered part of the hospital. In these cases, the component conducting medical research that is distinct from the hospital and that neither provides inpatient services nor uses revenues derived from patient charges at the hospital to finance its operations will not be considered part of the hospital.

Further, expenditures by a component of a larger institution, such as a university, which is distinct from a separate health care facility component, such as the university's hospital, will not be viewed as being "by a health care facility." Thus, a capital expenditure by a university medical school that is a distinct component of the university will not be considered to be "by" the hospital of the university. In finding that the medical school is distinct, the department must find at least that the revenues derived from patient charges at the hospital of the university are not used for operating expenses of the medical school.

If a capital expenditure exceeds the expenditure minimum, for it to be required to be subject to review, the department must find that it is "on behalf of" a health care facility. Such an expenditure is also required to be subject to review if it is for the acquisition of major medical equipment and meets the conditions set forth in WAC 248-19-230 (1)(f). The same analysis would apply to a distinct research component of a legal entity, the primary activity of which is operating a hospital.

#A person may enter into a contractual arrangement at an earlier date, provided such contractual arrangement is contingent upon a determination by the department that a certificate of need is not needed or upon issuance of a certificate of need.

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[Statutory Authority: RCW 70.38.135. 84-07-014 (Order 2082), § 248-19-230, filed 3/14/84; 81-09-012 (Order 210), § 248-19-230, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-230, filed 11/30/79.]

WAC 248-19-240 APPLICABILITY DETERMINATION. (1) Any person wanting to know whether an action the person is considering is subject to certificate of need requirements (chapter 248-19 WAC) should submit a written request to the certificate of need unit requesting a formal determination of applicability of the certificate of need requirements to the action.

(a) A copy of a written request for determination of applicability shall be sent simultaneously to the appropriate health systems agency and, in the case of a hospital project, to the hospital commission.

(b) The written request shall be in a form prescribed by the department and contain an explicit description of the action. The description shall include the nature and extent of any construction, changes in services and the estimated total costs of the action.

(2) The department may request such additional written information as is reasonably necessary to making an applicability determination on the action.

(3) The department shall respond in writing to a request for an applicability determination within thirty days of receipt of all the information needed for such determination. In the written response, the department shall state the reasons for its determination that the action is or is not subject to certificate of need requirements.

(4) Information or advice given by the department as to whether an action is subject to certificate of need requirements shall not be considered an applicability determination unless it is in written form in response to a written request submitted in accordance with provisions of this section.

(5) A written applicability determination on an action in response to a written request and based on written information shall be binding upon the department: PROVIDED, The nature, extent or cost of the action does not significantly change. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-240, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-240, filed 11/30/79.]

WAC 248-19-250 SANCTIONS FOR VIOLATIONS. The department may take or cause to be taken any action against a person who has failed to comply with certificate of need regulations which is provided for in RCW 70.38.125. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-250, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-250, filed 11/30/79.]

WAC 248-19-260 PERIODIC REPORTS ON DEVELOPMENT OF PROPOSALS. (1) During April of each year, each health care facility and any other person developing proposals subject to certificate of need review shall submit to the department a report which describes each such

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undertaking. Such report shall be submitted in a form prescribed by the department.

(2) If the appropriate health systems agency requires submission of reports, on at least an annual basis, regarding undertakings which are under consideration, the department shall accept a copy of each such report sent to the health systems agency in lieu of the report required under subsection (1) of this section.

(3) Submission to the department of a long-range plan which includes all undertakings which are under consideration by a health care facility or other person shall be accepted as meeting the requirement of this section for a periodic report. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-260, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-260, filed 11/30/79.]

WAC 248-19-270 LETTER OF INTENT. Any person planning to develop a construction project shall submit a letter of intent to the department at the earliest possible opportunity in the course of planning such construction project.

(1) The letter of intent shall inform the department of the nature and scope of the project, clearly describing the size and extent of any new or expanded services which will be included.

(2) A copy of the letter of intent shall be sent to the health systems agency for the health service area in which the project is to be located and, in the case of a hospital project, to the hospital commission.

(3) The letter of intent submitted in accordance with the provisions of this section does not constitute "notice of intent" with respect to the acquisition of existing health care facilities, as required by WAC 248-19-230(2) or to the acquisition of major medical equipment, as required by WAC 248-19-403. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-270, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-270, filed 11/30/79.]

WAC 248-19-280 SUBMISSION AND WITHDRAWAL OF APPLICATIONS. (1) General.

(a) A person proposing an undertaking which is subject to review shall, prior to the date on which the certificate of need review of such undertaking begins, submit a complete certificate of need application in such form and manner and containing such information as the department, after consultation with health systems agencies and the hospital commission, has prescribed and published as necessary to such a certificate of need application.

(i) The information, which the department prescribes and publishes as required for a certificate of need application, shall be limited to the information which is necessary for the department to perform a certificate of need review and, shall vary in accordance with and be appropriate to the category of review or the type of proposed project: PROVIDED, HOWEVER, That the required information shall include that which is necessary to determining whether the proposed project meets applicable criteria.

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(ii) Information regarding a certificate of need application which is submitted by an applicant after the department has given "notification of the beginning of review" in the manner prescribed by WAC 248-19-310 shall be submitted in writing to the department, the health systems agency, and for hospital projects, to the hospital commission.

(iii) Except as provided in WAC 248-19-325 no information regarding a certificate of need application, which is submitted by an applicant after the conclusion of a public hearing conducted under the provisions of WAC 248-19-320 or the date on which the appropriate health systems agency takes final action on the application, whichever occurs first, shall be considered by the department in reviewing and taking action on a certificate of need application. An exception to this rule shall be made when, during its final review period, the department finds an unresolved pivotal issue requires submission of further information by an applicant and the applicant agrees to an extension of the review period in order to resolve this issue as provided for in WAC 248-19-330 (2)(b), 248-19-340 (2)(c), and 248-19-350(4). The department shall furnish copies of its request to the applicant for such additional information to the appropriate health systems agency and, for a hospital project, to the hospital commission. The department shall give public notice of such request for additional information through the same newspaper in which the "notification of beginning of review" for the project was published. The notice shall identify the project, the nature of the unresolved issue and the information requested of the applicant and shall state the period of time allowed for receipt of written comments from interested persons.

(b) A person submitting a certificate of need application shall simultaneously submit copies of such application to the certificate of need unit of the department, the appropriate health systems agency and, in the case of a hospital project, to the hospital commission.

(i) The original and two copies of the application shall be submitted to the certificate of need unit of the department.

(ii) At least three and such additional copies of the application as may be required by the health systems agency shall be submitted to the appropriate health systems agency.

(iii) For a hospital project, one copy shall be submitted to the hospital commission.

(c) On or before the last day of the applicable screening period for a certificate of need application, as prescribed in subsections (2) and (3) of this section, the department shall send a written notice to the person who submitted the application stating whether or not the application has been declared complete. If an application has been found to be incomplete, the notice from the department shall specifically identify the portions of the application in which the information provided has been found to be insufficient or indefinite and request the supplemental information needed to complete the application. The notice from the department shall incorporate the findings as to insufficient or indefinite application information which have been transmitted to the department by the health systems agency and the hospital commission.

(d) The department shall not request any supplemental information of a type which has not been prescribed and published as being necessary to a certificate of need application for the type of project being proposed.

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(e) A response to the department's request for information to supplement an incomplete application shall be written and submitted to the same agencies and in the same numbers as required for an application under the provisions of subsection (1)(b) of this section.

(2) Emergency, expedited and regular reviews.

(a) The department, the appropriate health systems agency, and the hospital commission for a hospital project, shall within a fifteen-day period, screen the application to determine whether the information provided in the application is complete and as explicit as is necessary for a certificate of need review. This screening period shall begin on the first day after which the department, the health systems agency and, for hospital projects, the hospital commission, have each received copies of the application.

(b) The department shall return an incomplete certificate of need application to the person who submitted the application if the department has not received a response to a request for the supplemental information sent in accordance with subsection (1)(c) of this section within forty-five days after such request was sent.

(c) A person who submits a response to the department's request for supplemental information to complete a certificate of need application within forty-five days after the request was sent by the department, in accordance with subsection (1)(c) of this section, shall have the right to exercise one of the following options:

(i) Submission of written supplemental information and a written request that such information be screened and the applicant be given opportunity to submit further supplemental information if the application is still incomplete;

(ii) Submission of written supplemental information with a written request that review of the certificate of need application begin without the department notifying the applicant as to whether the supplemental information is adequate to complete the application; or

(iii) Submission of a written request that the incomplete application be reviewed without supplemental information.

(d) After receipt of a request for review of a certificate of need application, submitted in accordance with subsection (2)(c)(ii) or (iii) of this section, the department shall give notification of the beginning of review in the manner prescribed for a complete application in WAC 248-19-310.

(e) If a person requests the screening of supplemental information in accordance with subsection (2)(c)(i) of this section, such screening shall be carried out in the same number of days and in the same manner as required for an application in accordance with the provisions of subsection (1)(c) and (2)(a) of this section. The process of submitting and screening supplemental information may be repeated until the department declares the certificate of need application complete, the applicant requests that review of the incomplete application begin, or the one hundred twentieth day after the beginning of the first screening period for the application, whichever occurs first. The department shall return an application to the applicant if it is still incomplete on the one hundred twentieth day after the beginning of the first screening period and the applicant has not requested review of such incomplete application.

(3) Amendment of certificate of need applications.

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(a) Applications for emergency review. If an applicant amends an application during the screening period, the department, after consultation with the appropriate health systems agency and, in the case of a hospital project, the hospital commission shall determine whether the amended application constitutes a new application. An application which is amended during the review period shall be considered a new application.

(b) Application for expedited or regular review.

(i) If an applicant amends an application during the screening or review period, the department, after consultation with the appropriate health systems agency and, in the case of a hospital project, the hospital commission shall determine whether the amended application constitutes a new application.

(ii) To provide any affected person the opportunity for a public hearing on an amended application, the department may extend the expedited review period as necessary to conduct such public hearing and complete the review process.

(4) Submission of an amendment to an application. An amendment to an application shall be submitted to the same agencies and in the same numbers as required for an application under the provisions of subsection (1)(b) of this section.

(5) Withdrawal of applications. A certificate of need application shall be withdrawn from the certificate of need process if the department receives a written request for withdrawal of the application from the person who submitted the application at any time before final action on such application has been taken by the secretary.

(6) Resubmission of applications withdrawn or returned as incomplete. A submission of a new certificate of need application shall be required for a certificate of need review of any undertaking for which the department has returned an incomplete application in accordance with subsection (2)(b) of this section, or for which a certificate of need application has been withdrawn in accordance with subsection (5) of this section. The content of the application should be updated as necessary before resubmission. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-280, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-280, filed 11/30/79.]

WAC 248-19-290 CONCURRENT REVIEW OF SELECTED APPLICATIONS. (1) The department with the consent of a health systems agency and, for hospital projects, the hospital commission may prescribe particular time schedules for the submission and concurrent review of certificate of need applications for selected types of projects within a given health service area. Such time schedules shall be for the purpose of comparative analysis of competing or similar projects to ascertain which of such projects may best meet the needs of the service area and the defined population.

(2) The projects for which the department may prescribe particular time schedules for the submission and concurrent review of certificate of need applications include but are not limited to the following:

(a) Construction of a new hospital or a new nursing home;

(b) Alterations of or additions to a hospital or nursing home which will increase the inpatient bed capacity;

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(c) New home health agencies or kidney disease treatment centers, including free standing hemodialysis units;

(d) New or expanded radiation treatment facilities; and

(e) Computerized transaxial tomographic equipment.

(3) Notwithstanding any other provisions of this section, the following new institutional health services shall not be subject to prescribed time schedules for submission and concurrent review of certificate of need applications:

(a) Projects limited to new institutional health services the type, scope and location of which have been provided for in a current health systems plan, annual implementation plan or state health plan; and

(b) Projects which have been specifically included in a long-range health facility plan developed in accordance with the provisions of Section 14 of the State Health Planning and Resources Development Act.

(4) Before prescribing time schedules for concurrent review of selected categories of projects the department shall provide health care facilities and health maintenance organizations which would be affected by such schedules the opportunity to review and offer written comment on the schedules the department proposes to prescribe.

(5) Prescribed schedules shall be published and distributed to all health care facilities and health maintenance organizations which may be affected by them. Such publication and distribution of concurrent review schedules shall be at least six months prior to implementation of the prescribed schedules.

(6) Applications reviewed concurrently shall be reviewed according to the regular review process established under WAC 248-19-330.

(7) Review schedules for concurrent review shall provide for at least a semi-annual review for a given project type within each health service area. [Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-290, filed 11/30/79.]

WAC 248-19-300 CATEGORIES OF REVIEW. (1) In the review of any certificate of need application, one of the following review processes shall be used: Regular review, emergency review or expedited review.

(2) Determination of review process.

The department, after any necessary consultation with the appropriate health systems agency and, if a hospital project, the hospital commission, shall determine which review process will be used in the review of a given certificate of need application.

(a) Emergency review.

(i) Beginning January 1, 1981, an emergency review may, with the written consent of the appropriate health systems agency, be conducted when an immediate capital expenditure is required in order for a health care facility to maintain or restore basic and essential patient services.

(ii) The department may, after consulting with the appropriate health systems agency and, for a hospital project, the hospital commission, determine that an application submitted for emergency review does not qualify for such review. Such a determination and notification to the applicant shall be made within five days after receipt of the application. When the department makes a determination that an

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application is not subject to emergency review procedures, the application will be reviewed under another review process which is appropriate for the type of undertaking proposed. The department will notify the applicant of the other process under which the application will be reviewed.

(b) Expedited review.

(i) Beginning January 1, 1981, an expedited review shall be conducted on a certificate of need application for the following:

(A) All projects which do not involve health services or the addition, replacement, expansion or alteration of facilities for health services.

(B) Projects proposed for the correction of deficiencies as described in WAC 248-19-415.

(C) The replacement of equipment having similar functional capability and which does not result in the offering or development of any new health services.

(D) Installation, replacement, or improvement of energy conservation and mechanical and electrical systems.

(E) Demonstration or research projects related to new technology: PROVIDED, That such projects do not involve a change in bed capacity, or the provision of a new institutional health service.

(F) Acquisition of an existing health care facility.

(G) Projects which are limited to predevelopment expenditures.

(ii) An expedited review shall be conducted on a certificate of need application for a hospital's project when:

(A) The hospital has developed a long-range facility plan in accordance with the provisions of RCW 70.38.145;

(B) When an application has been found to be consistent with the applicant's long-range health facility plan and the applicable health systems plan, annual implementation plan and state health plan; and

(C) When there has not been a significant change, since the long-range health facility plan was approved, in existing health facilities of the same type or in the need for such health facilities and services.

(iii) That until January 1, 1983, or until such time as the department has developed a common form for hospital long range plans, whichever is earlier, an expedited review may, with the written consent of the appropriate health systems agency, be conducted for a project, the type, scope and location of which has been specifically described and provided for in a current health systems plan, annual implementation plan or state health plan, or when:

(A) The hospital has developed a long range plan whose form is acceptable to the appropriate health systems agency and the department.

(B) The appropriate health systems agency has reviewed the plan in conjunction with potentially competing plans and the health systems agency has approved the hospital's long range plans.

(C) The certificate of need application for the project has been found to be consistent with the hospital's health systems agency approved long range health facility plan and the applicable health systems plan, annual implementation plan and state health plan.

(D) There has not been a significant change, since the long range health facility plan was approved, in existing health facilities of the same type or in the need for such health facilities and services; and there has not been a significant change in financial feasibility.

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(E) The appropriate health systems agency has given the department a written consent to an expedited review of the project.

(c) Regular review process. The regular review process shall be used for any application unless the department has determined that the emergency or expedited review process will be used in the review of such application. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-300, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-300, filed 11/30/79.]

WAC 248-19-310 NOTIFICATION OF BEGINNING OF REVIEW. (1) Notice required. The department shall provide written notification of the beginning of the review of a certificate of need application and notification of the beginning of the review of a proposed withdrawal of a certificate of need to affected persons (other than persons residing within the geographic area served or to be served by the applicant, any persons who regularly use health care facilities within that geographic area, and third-party payers who reimburse health care facilities for services in the health service area in which the project is proposed to be located) and any other person who has submitted a written request that the person's name be on the mailing list for such notice. Notification of the beginning of the review of a certificate of need application shall be provided to persons residing within the geographic area served or to be served by the applicant, to any person who regularly uses health care facilities within that geographic area, and third-party payers who reimburse health care facilities for services in the health service area in which the project is proposed to be located, through a newspaper of general circulation in the health service area of the project.

(2) Specific notice requirements.

(a) The department shall give "notification of the beginning of review" of an application after the department, the appropriate health systems agency and, for a hospital project, the hospital commission have each received a complete application or the applicant's request, submitted in accordance with WAC 248-19-280 (2)(c) that review of the application begin. Such notice shall be given according to the following requirements.

(i) Emergency review. When an application is being reviewed under the emergency review process, required notices shall be given within five working days following the receipt of a complete application or the applicant's written request that review of the application begin.

(ii) Expedited and regular review. When an application is being reviewed under the expedited or regular review process, required notices shall be given within five working days of a declaration that the application is complete or the applicant's request that review of the application begin.

(b) The department shall give notification of the beginning of the review of a proposed withdrawal of a certificate of need when it determines that there may be good cause to withdraw a certificate of need.

(c) The notices shall include:

(i) A general description of the project;

(ii) In the case of a proposed withdrawal of a certificate of need, the reasons for the proposed withdrawal;

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(iii) The proposed review schedule;

(iv) The period within which one or more affected persons may request the conduct of a public hearing during the review;

(v) The name and address of the agency to which a request for a public hearing should be sent; and

(vi) The manner in which notification will be provided of the time and place of any hearing so requested.

(d) The notices to other affected persons shall be mailed on the same date the notice to the public is mailed to the newspaper for publication.

(3) Beginning of review.

(a) Review of a certificate of need application under the expedited, regular or concurrent review process shall begin on the day the department sends notification of the beginning of review to the general public and other affected persons.

(b) Review of a certificate of need application under emergency review shall begin on the first day after the date on which the department, the appropriate health systems agency and, for a hospital project, the hospital commission have determined the application is complete, or have each received a written request to begin review submitted by the applicant in accordance with WAC 248-19-280 (2)(c).

(c) Review of a proposed withdrawal of a certificate of need shall begin on the day the department sends notification of the beginning of review to the general public and to other affected persons. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-310, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-310, filed 11/30/79.]

WAC 248-19-320 PUBLIC HEARINGS. (1) "Opportunity for a public hearing," as used in this section, shall mean a public hearing will be conducted if a valid request for such a hearing has been submitted by one or more affected persons.

(2) The department shall provide opportunity to affected persons for a public hearing on:

(a) A certificate of need application which is under review, unless the application is being reviewed according to the emergency review process; and

(b) The proposed withdrawal of a certificate of need.

This requirement for a public hearing shall be deemed satisfied if the appropriate health systems agency has provided opportunity for such a public hearing to "affected persons" as this term is defined in WAC 248-19-220: PROVIDED, HOWEVER, That the department has delegated the responsibility for such hearing to the appropriate health systems agency, and such health systems agency has followed public hearing procedures required under the provisions of this section.

(3) To be valid, a request for a public hearing on a certificate of need application or on the proposed withdrawal of a certificate of need shall:

(a) Be submitted in writing;

(b) Be received by the agency identified in the "notification of beginning of review" within fifteen days after the date on which the department's "notification of beginning of review" for the particular certificate of need application or proposed withdrawal of a certificate of need was published in a newspaper of general circulation; and

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(c) Include identification of the particular certificate of need application or proposed certificate of need withdrawal for which the public hearing is requested and the full name, complete address and signature of the person making the request.

(4) The department or the health systems agency to which the department delegated responsibility for public hearings shall give written notice of a public hearing conducted pursuant to this section.

(a) Written notice shall be given to affected persons and the public at least fifteen days prior to the beginning of the public hearing.

(b) The notices shall include: Identification of the certificate of need application or certificate of need on which the public hearing is to be conducted and the date, time and place of the public hearing.

(c) Notice to the general public to be served by the proposed project to which the certificate of need application or certificate of need pertains shall be through a newspaper of general circulation in the health service area of the proposed project. The notices to other affected persons shall be mailed on the same date the notice to the public is mailed to the newspaper for publication.

(5) In a public hearing on a certificate of need application or on a proposed withdrawal of a certificate of need, any person shall have the right to be represented by counsel and to present oral or written arguments and evidence relevant to the matter which is the subject of the hearing. Any person affected by the matter may conduct reasonable questioning of persons who make relevant factual allegations.

(6) The department or health systems agency, whichever conducts the hearing, shall maintain a verbatim record of a public hearing and shall not impose fees for the hearing.

(7) The department shall not be required to conduct a public hearing on a certificate of need application which is being reviewed according to the emergency review procedure. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-320, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-320, filed 11/30/79.]

WAC 248-19-325 PROHIBITION OF EX PARTE CONTACTS. (1) There shall be no "ex parte contact" respecting an application for a certificate of need after whichever of the following occurs first: The commencement of a public hearing on an application for a certificate of need or proposed withdrawal of a certificate of need, or final action of the appropriate health systems agency and hospital commission.

(a) The term "ex parte contact" shall be interpreted to mean any oral or written communication respecting an application for a certificate of need or proposed withdrawal of a certificate of need between:

(i) An applicant for or holder of a certificate of need, any person acting on behalf of such an applicant or holder, or any person opposed to the issuance of or in favor of the withdrawal of a certificate of need, and

(ii) Any person in the department who exercises any responsibility respecting the application for or withdrawal of the certificate of need.

(b) Notwithstanding the provisions of subsection (1)(a) of this section, "ex parte contact" shall not be construed to include:

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(i) Communication limited to requesting and giving status reports on any matter or proceeding relating to the review of a certificate of need application or proposed withdrawal of a certificate of need application;

(ii) Information related to the application for or proposed withdrawal of a certificate of need which has been incorporated in the record of administrative proceedings prior to the beginning of a public hearing on such application or withdrawal held according to the provisions of WAC 248-19-320 or before final action on such application or proposed withdrawal has been taken by the appropriate health systems agency or hospital commission, or

(iii) Information incorporated in the record of a public hearing held in accordance with WAC 248-19-320 on such application or proposed withdrawal of a certificate of need.

(2) The department shall consider information regarding an application for or proposed withdrawal of a certificate of need, the submission of which is not consistent with subsection (1) of this section, only if the following conditions are met.

(a) The information shall be writing.

(b) The person submitting the information shall affirm that such information was not reasonably available prior to the commencement of the public hearing or final action by the health systems agency or hospital commission.

(c) Upon receipt of such information, the department shall make a determination as to whether the information is substantive and material to the department's final decision to issue, deny or withdraw the certificate of need.

(i) If such information is material to the department's decision, the department shall, within five working days of the receipt of such information, send notice to affected persons, other than persons residing within the geographic area served or to be served by the applicant, persons who regularly use health care facilities within that geographic area, and third-party payers who reimburse health care facilities for services in the health service area in which the project is proposed to be located. Notice to persons residing within the geographic area served or to be served by the applicant, persons who regularly use health care facilities within that geographic area, and third-party payers who reimburse health care facilities for services in the health service area in which the project is proposed to be located shall be through a newspaper of general circulation in the appropriate health service area. The notice shall

(A) Describe the general nature of the information received;

(B) Identify the project to which the information pertains; and

(C) Establish the date by which any request for a public hearing must be submitted to the department.

(ii) If such information is not material to the department's decision, the information shall be placed in the record of administrative proceedings; copies shall be furnished by the department to the appropriate health systems agency, the hospital commission in the case of a hospital project, and to the applicant or holder of the certificate of need if the information was submitted by a person other than the applicant or holder. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-525, filed 4/9/81, effective 5/20/81.]

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WAC 248-19-330 REGULAR REVIEW PROCESS. (1) The regular review process shall not exceed ninety days from the beginning of the review period and shall be conducted in accordance with the following subdivisions of this subsection unless the review period is extended in accordance with the provisions of subsection (2) of this section.

(a) Within sixty days from the first day of the review period the health systems agency and, in the case of a hospital project, the hospital commission, shall submit written findings and recommendations on a certificate of need application to the department unless the health systems agency or hospital commission has requested and received an extension of this review period from the department.

(b) The department shall complete its final review and the secretary shall make his decision on a certificate of need application within thirty days of the end of the review period or extended review period of the health systems agency and, in the case of a hospital project, the hospital commission.

(2) The review period for a regular review may be extended according to the following provisions.

(a) The review period for the health systems agency or, in the case of a hospital project, the hospital commission, may be extended for up to an additional thirty days upon the written request of either of these advisory review agencies when such additional time is needed to complete the review and submit written findings and recommendations to the department. The department may grant further extensions to this review period: PROVIDED, The person who submitted the certificate of need application gives written consent to such further extensions.

(b) If an issue, which is pivotal to the secretary's decision remains unresolved, the department may make one request for additional information from the person who submitted the application. The department may extend its final review period up to but not exceeding thirty days after receipt of the applicant's written response to the department's request for information. Such pivotal issues include but are not limited to pending action for medicare or medicaid decertification, license revocation or patient trust fund violation or termination of a provider agreement.

(c) The department may extend either the review period for the health systems agency and the hospital commission or the department's final review period upon receipt of a written request of the person who submitted the application: PROVIDED, HOWEVER, That such an extension shall not exceed sixty days. [Statutory Authority: RCW 70.38-.155. 82-19-055 (Order 244), § 248-19-330, filed 9/15/82; 81-09-012 (Order 210), § 248-19-330, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-330, filed 11/30/79.]

WAC 248-19-340 EXPEDITED REVIEW PROCESS. (1) The expedited review process shall not exceed fifty days from the beginning of the review period unless extended in accordance with the provisions of subsection (2) of this section: PROVIDED, HOWEVER, That the appropriate health systems agency consents in writing to a thirty-day review period and does not need to conduct a public hearing in accordance with WAC 248-19-320. If the health systems agency does not consent to

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a thirty-day review period, the expedited review process shall not exceed eighty days from the beginning of the review period.

(a) If the review period for the health systems agency is thirty days, the health systems agency and, in the case of a hospital project, the hospital commission, shall submit written findings and recommendations to the department within thirty days of the beginning of the review period. If the review period for the health systems agency is sixty days, the health systems agency and, in the case of a hospital project, the hospital commission, shall submit written findings and recommendations to the department within sixty days of the beginning of the review period.

(b) The department shall complete its final review and the secretary shall make his decision on a certificate of need application under an expedited review within twenty days of the end of the review period or extended review period of the health systems agency and, in the case of a hospital project, the hospital commission.

(2) The review period for an expedited review may be extended according to the following provisions.

(a) If the health systems agency has consented to a thirty-day review period, the review period may be extended for up to an additional thirty days when the health systems agency conducts a public hearing in accordance with the provisions of WAC 248-19-320 or when additional time is needed by the health systems agency or, in the case of a hospital project, the hospital commission, to complete the review and submit written findings and recommendations to the department. The department may grant further extensions to this review period: PROVIDED, The person who submitted the certificate of need application gives written consent to further extension.

(b) The department may extend its final review if a public hearing is requested in accordance with the provisions of WAC 248-19-320 and the hearing is conducted by the department. Such extension may be for an additional period of up to thirty days.

(c) If an issue, which is pivotal to the secretary's decision remains unresolved, the department may make one request for additional information from the person who submitted the application. The department may extend its final expedited review period up to but not exceeding thirty days after receipt of the applicant's written response to the department's request for information. Such pivotal issues include but are not limited to pending action for medicare or medicaid decertification, license revocation or patient trust fund violation or termination of a provider agreement.

(d) The department may extend either the expedited review period for the health systems agency and the hospital commission or the department's final review period upon receipt of a written request of the person who submitted the application: PROVIDED, HOWEVER, That such an extension shall not exceed sixty days.

(3) Projects reviewed under expedited review provisions in WAC 248-19-300 (2)(b)(ii) and (iii) shall not be subject to WAC 248-19-370. The evaluation of criteria in WAC 248-19-380, 248-19-390 and 248-19-400 shall be reviewed only to the extent applicable criteria were not considered in the plan approval process and a reasonable expectation exists that consideration of these criteria could materially alter the approval of projects. [Statutory Authority: RCW 70.38.135. 82-19-055 (Order 244), § 248-19-340, filed 9/15/82; 81-09-

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012 (Order 210), § 248-19-340, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-340, filed 11/30/79.]

WAC 248-19-350 EMERGENCY REVIEW PROCESS. (1) The emergency review process shall not exceed fifteen working days from the beginning of the review period.

(2) Written findings and written recommendations of the health systems agency, and in the case of hospital projects, the hospital commission, shall be submitted to the department within ten working days after the beginning of the emergency review period.

(3) The department shall complete its final review and the secretary shall make his decision on an emergency certificate of need application within fifteen working days after the beginning of the review period unless the department extends its final review period in accordance with the provisions of subsection (4) of this section.

(4) If an issue, which is pivotal to the secretary's decision remains unresolved, the department may make one request for additional information from the person who submitted the application. The department may extend its final emergency review period up to but not exceeding thirty days after receipt of the applicant's written response to the department's request for information. Such pivotal issues include but are not limited to pending action for medicare or medicaid decertification, license revocation or patient trust fund violation or termination of a provider agreement. [Statutory Authority: RCW 70.38.135. 82-19-055 (Order 246), § 248-19-350, filed 9/15/82; 81-09-012 (Order 210), § 248-19-350, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-350, filed 11/30/79.]

WAC 248-19-360 BASES FOR FINDINGS AND ACTION ON APPLICATIONS. (1) The findings of the department's review of certificate of need applications and the action of the secretary's designee on such applications shall, with the exceptions provided for in WAC 248-19-410 and 248-19-415 be based on determinations as to:

(a) Whether the proposed project is needed;

(b) Whether the proposed project will foster containment of the costs of health care;

(c) Whether the proposed project is financially feasible; and

(d) Whether the proposed project will meet the criteria for structure and process of care identified in WAC 248-19-390.

(2) The decision on a certificate of need application shall be consistent with the state health plan in effect at the time the secretary's designee made the original or reconsidered or remanded decision. A finding of inconsistency shall not be based solely on the fact a proposed project is not specifically referenced in the state health plan.

(3) Criteria contained in this section and in WAC 248-19-370, 248-19-380, 248-19-390, and 248-19-400 shall be used by the department in making the required determinations.

(a) In the use of criteria for making the required determinations, the department shall consider:

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(i) The consistency of the proposed project with the applicable regional health plan (RHP) and annual implementation plan (AIP), and the state health plan (SHP);

(ii) The standards in the state health plan identified to be used for certificate of need review purposes and applicable to the type of project under review;

(iii) In the event standards in the state health plan or regional health plan do not address in sufficient detail for a required determination the services or facilities for health services proposed, the department may consider standards not in conflict with the state health plan or regional health plan in accordance with subsection (3)(b) of this section;

(iv) The findings and recommendations of the regional health council and the hospital commission (in relation to the immediate and long-range financial feasibility of a hospital project as well as the probable impact of such project on the cost of and charges for providing health services by the hospital, including recommendations to approve, conditionally approve, partially approve, or deny an application); and

(v) The relationship of the proposed project to the long-range plan (if any) of the person proposing the project.

(b) The department may consider any of the following in its use of criteria for making the required determinations:

(i) Nationally recognized standards from professional organizations;

(ii) Standards developed by professional organizations in Washington state;

(iii) Federal Medicare and Medicaid certification requirements;

(iv) State licensing regulations;

(v) The hospital commission's policies, guidelines and regulations;

(vi) Applicable standards developed by other individuals, groups, or organizations with recognized expertise related to a proposed undertaking; and

(vii) The written findings and recommendations of individuals, groups, or organizations with recognized expertise related to a proposed undertaking, with whom the department consults during the review of an application.

(c) At the request of an applicant, the department shall identify the criteria and standards it will use prior to the submission and screening of a certificate of need application: PROVIDED HOWEVER, That when a person requests identification of criteria and standards prior to the submission of an application, the person shall submit such descriptive information on a project as is determined by the department to be reasonably necessary in order to identify the applicable criteria and standards. The department shall respond to such request within fifteen working days of its receipt. In the absence of an applicant's request under this subsection, the department shall identify the criteria and standards it will use during the screening of a certificate of need application. The department shall inform the applicant about any consultation services it will use in the review of a certificate of need application prior to the use of such consultation services.

(d) Representatives of the department or consultants whose services are engaged by the department may make an on-site visit to a

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health care facility, or other place for which a certificate of need application is under review, or for which a proposal to withdraw a certificate of need is under review when the department deems such an on-site visit is necessary and appropriate to the department's review of a proposed project. [Statutory Authority: RCW 70.38.135. 85-05-032 (Order 2208), § 248-19-360, filed 2/15/85; 81-09-012 (Order 210), § 248-19-360, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-360, filed 11/30/79.]

WAC 248-19-370 DETERMINATION OF NEED. The determination of need for any project shall be based on the following criteria, except these criteria will not justify exceeding the limitation on increases of nursing home beds provided in WAC 248-19-375.

(1) The population served or to be served has need for the project and other services and facilities of the type proposed are not or will not be sufficiently available or accessible to meet that need. The assessment of the conformance of a project with this criterion shall include, but need not be limited to, consideration of the following:

(a) In the case of a reduction, relocation, or elimination of a service, the need the population presently served has for the service, the extent to which the need will be met adequately by the proposed relocation or by alternative arrangements, and the effect of the reduction, elimination, or relocation of the service on the ability of low-income persons, racial and ethnic minorities, women, handicapped persons, and other underserved groups and the elderly to obtain needed health care;

(b) In the case of health services or facilities proposed to be provided, the efficiency and appropriateness of the use of existing services and facilities similar to those proposed;

(c) In the case of an application by an osteopathic or allopathic facility for a certificate of need to construct, expand, or modernize a health care facility, acquire major medical equipment, or add services, the need for that construction, expansion, modernization, acquisition of equipment, or addition of services on the basis of the need for and the availability in the community of services and facilities for osteopathic and allopathic physicians and their patients, and the impact on existing and proposed institutional training programs for doctors of osteopathy and medicine at the student, internship, and residency training levels; and

(d) In the case of a project not involving health services, the contribution of the project toward overall management and support of such services.

(2) All residents of the service area, including low-income persons, racial and ethnic minorities, women, handicapped persons, and other underserved groups and the elderly are likely to have adequate access to the proposed health service or services. The assessment of the conformance of a project with this criterion shall include, but not be limited to, consideration as to whether the proposed services makes a contribution toward meeting the health-related needs of members of medically underserved groups which have traditionally experienced difficulties in obtaining equal access to health services, particularly those needs identified in the applicable regional health plan, annual implementation plan, and state health plan as deserving

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of priority. Such consideration shall include an assessment of the following:

(a) The extent to which medically underserved populations currently use the applicant's services in comparison to the percentage of the population in the applicant's service area which is medically underserved, and the extent to which medically underserved populations are expected to use the proposed services if approved;

(b) The past performance of the applicant in meeting obligations, if any, under any applicable federal regulations requiring provision of uncompensated care, community service, or access by minorities and handicapped persons to programs receiving federal financial assistance (including the existence of any unresolved civil rights access complaints against the applicant);

(c) The extent to which Medicare, Medicaid, and medically indigent patients are served by the applicant; and

(d) The extent to which the applicant offers a range of means by which a person will have access to its services (e.g., outpatient services, admission by house staff, admission by personal physician).

(3) The resources for the proposed project are not needed for higher priority alternative uses identified in applicable health plans.

(4) The applicant has substantiated any of the following special needs and circumstances the proposed project is to serve.

(a) The special needs and circumstances of entities such as medical and other health professions schools, multidisciplinary clinics and specialty centers providing a substantial portion of their services or resources, or both, to individuals not residing in the health service areas in which the entities are located or in adjacent health service areas.

(b) The special needs and circumstances of biomedical and behavioral research projects designed to meet a national need and for which local conditions offer special advantages.

(c) The special needs and circumstances of osteopathic hospitals and nonallopathic services.

(5) The project will not have an adverse effect on health professional schools and training programs. The assessment of the conformance of a project with this criterion shall include consideration of:

(a) The effect of the means proposed for the delivery of health services on the clinical needs of health professional training programs in the area in which the services are to be provided; and

(b) If proposed health services are to be available in a limited number of facilities, the extent to which the health professions schools serving the area will have access to the services for training purposes.

(6) The project is needed to meet the special needs and circumstances of enrolled members or reasonably anticipated new members of a health maintenance organization or proposed health maintenance organization and the services proposed are not available from nonhealth maintenance organization providers or other health maintenance organizations in a reasonable and cost-effective manner consistent with the basic method of operation of the health maintenance organization or proposed health maintenance organization. In assessing the availability of health services from these providers, the department shall consider only whether the services from these providers:

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(a) Would be available under a contract of at least five years' duration;

(b) Would be available and conveniently accessible through physicians and other health professionals associated with the health maintenance organization or proposed health maintenance organization (for example - whether physicians associated with the health maintenance organization have or will have full staff privileges at a nonhealth maintenance organization hospital);

(c) Would cost no more than if the services were provided by the health maintenance organization or proposed health maintenance organization; and

(d) Would be available in a manner administratively feasible to the health maintenance organization or proposed health maintenance organization. [Statutory Authority: RCW 70.38.115. 85-05-032 (Order 2208), § 248-19-370, filed 2/15/85. 81-09-012 (Order 210), § 248-19-370, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-370, filed 11/30/79.]

WAC 248-19-373 DETERMINATION OF NURSING HOME BED NEEDS. (1) The following rules are adopted for use in making decisions on certificate of need applications involving nursing home beds submitted for review under the provisions of RCW 70.38.105.

(a) With the assistance of a work group, the state health coordinating council developed a method for determining future nursing home bed needs with the intention of incorporating that method as an amendment to the 1982 state health plan. The secretary of the department reviewed the method and submitted it to the governor for adoption as an amendment to the state health plan. The governor adopted the method as part of an amendment of the state health plan on March 27, 1984. See RCW 70.38.045 and RCW 70.38.065.

(b) The nursing home bed need projections in subsection (3)(a) of this section shall be used to interpret the certificate of need review criteria in RCW 70.38.115 (2)(b) and WAC 248-19-370.

(2) The secretary finds:

(a) That in developing the amendment to the 1982 state health plan the state health coordinating council sought and received the assistance of a work group consisting of representatives from a wide variety of groups interested in nursing home bed needs in this state.

(b) That the work group consisted of representatives from the following: State health coordinating council; Puget Sound health systems agency; Washington association of homes for the aging; Washington state health facilities association; united nursing home association; area agency on aging; nursing home ombudsman; state nursing home advisory council; senior citizens lobby; state council on aging; the department's bureau of aging and adult services, bureau of nursing home affairs, and regional offices; and the house committee on social and health services.

(c) That the following assumptions which were incorporated in the amendment regarding the bed need projection method are the appropriate policy considerations for projecting nursing home bed needs.

(i) Nursing home bed need projections should reflect variations in nursing home use by different age groups of the population.

(ii) Nursing home beds should ordinarily be located reasonably close to the people they serve.

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(iii) Equity and the availability in use of nursing home beds within the state should be increased by reducing the wide variation in nursing home use rates within age groups among areas of the state.

(iv) Areas of the state that are underbedded, adequately bedded, and overbedded should be identified and treated differently in the bed need projection process.

(v) The overall supply of beds in the state should represent a reasonable and appropriate state nursing home bed to elderly population ratio.

(vi) Most current nursing home use in the state reflects an appropriate need for formal services which should be met by nursing home beds or other services in long-term care continuum.

(vii) To be responsive to unique local circumstances, the nursing home bed need projection process should include local discretion in defining nursing home planning areas and bed allocations.

(d) That the amendment to the 1982 state health plan established a 1990 target state nursing home bed to elderly population ratio (see subsection (2)(c)(v) of this section) of 53.7 beds per one thousand persons aged sixty-five or older. Taken into account in establishing this ratio were the following:

(i) The national bed ratio and the bed ratios of other states judged to have reasonable and progressive long-term care policies, and

(ii) State policy goals for the allocation of scarce resources between nursing home beds and other institutional and community-based services in the long-term care continuum, and

(iii) The effects on nursing home bed needs of new health system developments, such as hospital diagnostic related group (DRG) reimbursement, and

(iv) Progress being made in developing other long-term care services for the population at risk of nursing home placement.

(e) That nursing home bed need projections derived from the state health plan bed need methodology should not be exceeded in decisions on applications for certificates of need.

(3) The following are the 1987 projections of total nursing home beds needed in each county as derived from the state health plan nursing home bed need projection methodology. These projections will remain in effect until updated. The next update is scheduled for the last half of 1986. The projections do not reflect necessary reductions for current licensed nursing home beds (excluding nursing home beds used for IMR), beds in hospitals used for long-term care, and the number of nursing home beds approved by certificate of need, but not yet licensed. The projections less these reductions equal additional beds needed.

(a)	Clallam	470
	Island	215
	Jefferson	129
	King	8,867
	Kitsap	1,151
	Pierce	3,105
	San Juan	73
	Skagit	505
	Snohomish	2,270
	Whatcom	1,081

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Clark	1,178
Cowlitz	585
Grays Harbor	667
Klickitat	100
Lewis	493
Mason	195
Pacific	196
Thurston	719
Wahkiakum	53
Benton	396
Chelan	439
Douglas	107
Franklin	138
Grant	231
Kittitas	227
Okanogan	275
Yakima	1,436
Adams	112
Asotin	233
Columbia	71
Ferry	27
Garfield	40
Lincoln	101
Pend Oreille	56
Spokane	2,667
Stevens	176
Walla Walla	497
Whitman	236

(b) These bed need projections include the allocation plans of the applicable regional health council, as provided for in the nursing home bed need projection method. Where there is no regional health council allocation plan, the nonallocated projection is shown.#

(c) Certificates of need issued by the department shall approve no more than the number of additional beds indicated as needed for a given county by the projection method as listed in subsection (3)(a) of this section.

NOTE:

#Step 5 of the state health plan nursing home bed need projection methodology concerns the determination of the appropriate number of nursing home beds in each county. The method states the regional health councils are responsible for the development of an allocation plan. The regional health councils may group counties into multiple county planning areas and allocate beds or reallocate beds among counties based on the planning areas. The allocation plan shall be developed separate from the review of individual certificate of need applications.

[Statutory Authority: RCW 70.38.115. 85-05-032 (Order 2208), § 248-19-373, filed 2/15/85.]

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WAC 248-19-380 DETERMINATION OF FINANCIAL FEASIBILITY. The determination of financial feasibility of a project shall be based on the following criteria.

(1) The immediate and long-range capital and operating costs of the project can be met.

(2) The costs of the project, including any construction costs, will probably not result in an unreasonable impact on the costs and charges for health services.

(3) The project can be appropriately financed. [Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-380, filed 11/30/79.]

WAC 248-19-390 CRITERIA FOR STRUCTURE AND PROCESS OF CARE. A determination that a project fosters an acceptable or improved quality of health care shall be based on the following criteria.

(1) A sufficient supply of qualified staff for the project, including both health manpower and management personnel, are available or can be recruited.

(2) The proposed service(s) will have an appropriate relationship, including organizational relationship, to ancillary and support services, and ancillary and support services will be sufficient to support any health services included in the proposed project.

(3) There is reasonable assurance that the project will be in conformance with applicable state licensing requirements and, if the applicant is or plans to be certified under the Medicaid or Medicare program, with the applicable conditions of participation related to those programs.

(4) The proposed project will promote continuity in the provision of health care, not result in an unwarranted fragmentation of services, and have an appropriate relationship to the service area's existing health care system.

(5) There is reasonable assurance that the services to be provided through the proposed project will be provided in a manner that ensures safe and adequate care to the public to be served and in accord with applicable federal and state laws, rules, and regulations. The assessment of the conformance of a project to this criterion shall include but not be limited to consideration as to whether:

(a) The applicant has no history, in this state or elsewhere, of a criminal conviction which is reasonably related to the applicant's competency to exercise responsibility for the ownership or operation of a health care facility, a denial or revocation of a license to operate a health care facility, a revocation of a license to practice a health profession, or a decertification as a provider of services in the Medicare or Medicaid program because of failure to comply with applicable federal conditions of participation; or

(b) If the applicant has such a history, whether the applicant has affirmatively established to the department's satisfaction by clear, cogent and convincing evidence that the applicant can and will operate the proposed project for which the certificate of need is sought in a manner that ensures safe and adequate care to the public to be served and conforms to applicable federal and state requirements. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-390, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-390, filed 11/30/79.]

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WAC 248-19-400 DETERMINATION OF COST CONTAINMENT. A determination that a proposed project will foster cost containment shall be based on the following criteria.

(1) Superior alternatives, in terms of cost or effectiveness, are not available or practicable.

(2) In the case of a project involving construction:

(a) The costs and methods of construction and energy provision are reasonable; and

(b) The project will probably not have an unreasonable impact on the costs and charges to the public of providing health services by other persons.

(3) The project takes into consideration the special needs and circumstances of health care facilities with respect to the need for energy conservation.

(4) The project will promote efficiency or productivity. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-400, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-400, filed 11/30/79.]

WAC 248-19-405 MAJOR MEDICAL EQUIPMENT NOT OWNED BY OR LOCATED IN A HEALTH CARE FACILITY. (1) For purposes of this section, purchases, donations and leases of major medical equipment shall be considered acquisitions of such equipment. An acquisition of major medical equipment through a transfer of such equipment for less than fair market value shall be considered an acquisition of major medical equipment if its fair market value is at least one hundred fifty thousand dollars.

(2) Before any person enters into a contractual arrangement# to acquire major medical equipment which is not to be owned by or located in a health care facility, such person shall submit a valid notice to the department and the appropriate health systems agency of the intent to acquire the equipment.

(a) The notices to the department and the appropriate health systems agency shall be submitted in writing at least thirty days before entering into contractual arrangements to acquire the equipment with respect to which the notice is given.

(b) To be valid, a notice shall include:

(i) A complete description of the major medical equipment to be acquired and the health services to be provided with such equipment;

(ii) The name, address, and general description of the facility in which the equipment is to be located;

(iii) The date on which any contractual arrangement for acquisition of the equipment was or is to be entered into;

(iv) A statement as to whether the equipment is to be used for any hospital's inpatients and, if so, whether such use will be only on a temporary basis in the case of a natural disaster, a major accident or equipment failure.

(3) The acquisition of major medical equipment which is not to be owned by or located in a health care facility shall be subject to review if the department finds that:

(a) The written notice of intent to acquire the equipment was not submitted in accordance with the provisions of subsection (2) of this section; or

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(b) The equipment will be used to provide services to a hospital's inpatients on other than a temporary basis in the case of a natural disaster, a major accident, or equipment failure.

(4) Within fifteen working days after receipt of a valid notice of intent to acquire the major medical equipment, the department shall respond to the person who submitted the notice of intent, informing such person as to whether the acquisition of the equipment is subject to certificate of need review. A copy of the response shall be sent to the appropriate health systems agency. If the department fails to make a determination within thirty days after the receipt of a valid notice, the major medical equipment may be acquired without a certificate of need.

(5) If a person has acquired major medical equipment not located in a health care facility which the department has determined was not subject to review under the provisions of subsections (2), (3) and (4) of this section and subsequently proposes to use such equipment to serve inpatients of a hospital on other than a temporary basis in the case of a natural disaster, a major accident, or equipment failure, the proposed new use of the major medical equipment shall be subject to certificate of need review.

NOTE:

#A person may enter into a contractual arrangement at an earlier date, provided such contractual arrangement is contingent upon a determination by the department that a certificate of need is not needed, or upon issuance of a certificate of need.

[Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-405, filed 4/9/81, effective 5/20/81.]

WAC 248-19-405 EXEMPTIONS FROM REQUIREMENTS FOR A CERTIFICATE OF NEED. (1) Provisions for exemptions. The secretary shall grant an exemption from the requirements for a certificate of need for the offering of an inpatient institutional health service, the acquisition of major medical equipment for the provision of an institutional health service or the obligation of a capital expenditure in excess of one hundred fifty thousand dollars for the provision of an inpatient institutional health service to any entity which meets the eligibility requirements set forth in subdivision (a) of this subsection for such an exemption and submits an application for an exemption which meets the requirements of subdivision (b) of this subsection.

(a) Eligibility requirements. To be eligible for an exemption from the requirements for a certificate of need for the offering of an inpatient institutional health service, the acquisition of major medical equipment for the provision of an inpatient institutional health service, or the obligation of a capital expenditure in excess of one hundred fifty thousand dollars for the provision of an institutional health service, an applicant entity shall be one of the following:

(i) A health maintenance organization or a combination of health maintenance organizations if:

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(A) The organization or combination of organizations has, in the service area of the organization or the service areas of the organizations in the combination, an enrollment of at least fifty thousand individuals;

(B) The facility in which the service will be provided is or will be geographically located so that the service will be reasonably accessible to such enrolled individuals; and

(C) At least seventy-five percent of the patients who can reasonably be expected to receive the institutional health service will be individuals enrolled in such organization or organizations in the combination;

(ii) A health care facility if:

(A) The facility primarily provides or will provide inpatient health services;

(B) The facility is or will be controlled, directly or indirectly, by a health maintenance organization or a combination of health maintenance organizations which has, in the service area of the organization or service areas of the organizations in the combination, an enrollment of at least fifty thousand individuals;

(C) The facility is or will be geographically located so that the service will be reasonably accessible to such enrolled individuals; and

(D) At least seventy-five percent of the patients who can reasonably be expected to receive the institutional health service will be individuals enrolled with such organization or organizations in the combination; or

(iii) A health care facility (or portion thereof) if:

(A) The facility is or will be leased by a health maintenance organization or combination of health maintenance organizations which has, in the service area of the organization or the service areas of the organizations in the combination, an enrollment of at least fifty thousand individuals and, on the date the application for an exemption is submitted, at least fifteen years remain in the term of the lease;

(B) The facility is or will be geographically located so that the service will be reasonably accessible to such enrolled individuals; and

(C) At least seventy-five percent of the patients who can reasonably be expected to receive the institutional health service will be individuals enrolled with such organization;

(b) Requirements for an application for exemption. An application for an exemption from a certificate of need shall meet the following requirements.

(i) The application for an exemption shall have been submitted at least thirty days prior to the offering of the institutional health service, acquisition of major medical equipment, or obligation of the capital expenditure to which the application pertains. A copy of the application for the exemption shall be sent simultaneously to the appropriate health systems agency and, in the case of a hospital, to the hospital commission.

(ii) A complete application shall be submitted in such form and manner as has been prescribed by the department. The information which the department prescribes shall include:

(A) All of the information required to make a determination that the applicant entity qualifies in accordance with subdivision (a) of this subsection; and

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(B) A complete description of the offering, acquisition, or obligation to which the application pertains.

(2) Action on an application for exemption.

(a) Within thirty days after receipt of a complete application for exemption from certificate of need requirements, the department shall send the applicant a written notice that the exemption has been granted or denied. A copy of such written notice shall be sent simultaneously to the appropriate health systems agency and, in the case of a hospital, to the hospital commission.

(b) The secretary shall deny an exemption if he finds the applicant has not met the requirements of subsections (1) (a) and (b) of this section. Written notice of the denial shall include the specific reasons for the denial.

(c) In the case of an application for a proposed health care facility (or portion thereof) which has not begun to provide institutional health services on the date the application for an exemption is submitted, the secretary shall grant the exemption if he determines the facility (or portion thereof) will meet the applicable requirements of subsection (1)(a) of this section when the facility first provides health services.

(d) If the secretary fails to grant or deny an exemption in accordance with the provisions of this section within thirty days after receipt of a complete application for such exemption, the applicant for the exemption may seek a writ of mandamus from superior court pursuant to chapter 7.16 RCW.

(3) Subsequent sale, lease or acquisition of exempt facilities or equipment. Subsequent sale, lease, or acquisition of exempt health care facilities (or portions thereof) or medical equipment for which an exemption was granted under the provisions of subsection (2) of this section, any acquisition of a controlling interest in such facility or equipment, and any use of such facility or equipment by a person other than the one to whom the exemption was granted, shall meet one of the following conditions:

(a) A certificate of need for the purchase, lease, acquisition of controlling interest in, or use of such facility or equipment, shall have been applied for and issued by the department; or

(b) The department shall have determined, after receipt of an application for an exemption, submitted in accordance with subsection (1) of this section, that the requirements of either subsection (1)(a)(i) or subsection (1)(a)(ii)(A) and (B) are met.

(4) The method of payment for services (i.e., prepaid or fee for service) shall not be considered relevant in determining whether an undertaking of a health maintenance organization qualifies for an exemption under this section. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-405, filed 4/9/81, effective 5/20/81.]

WAC 248-19-410 REVIEW AND ACTION ON HEALTH MAINTENANCE ORGANIZATION PROJECTS. (1) Undertakings requiring a certificate of need. A certificate of need shall be required for any undertaking which, in accordance with WAC 248-19-230, is subject to the provisions of chapter 248-19 WAC, unless an exemption has been granted for such undertaking under the provisions of WAC 248-19-405.

(2) Required approval. The secretary shall issue a certificate of need for a proposed project if the certificate of need applicant for

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the proposed project is a health maintenance organization or a health care facility controlled (directly or indirectly) by a health maintenance organization and the department finds the proposed project meets the criteria set forth in WAC 248-19-370(7).

(3) Limitation on denials. The secretary shall not deny a certificate of need to a health maintenance organization or a health care facility controlled (directly or indirectly) by a health maintenance organization solely because a proposed project is not discussed in the applicable health systems plan, annual implementation plan or state health plan.

(4) Sale, acquisition or lease of facilities or equipment for which a certificate of need has been issued. A health care facility (or portion thereof) or medical equipment for which a certificate of need has been issued under the provisions of this section shall not be sold or leased and a controlling interest in such facility or equipment or in a lease of the facility or equipment shall not be acquired unless an exemption or a certificate of need for such sale, lease or acquisition has been granted by the secretary. [Statutory Authority: RCW 70.38.155. 81-09-012 (Order 210), § 248-19-410, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-410, filed 11/30/79.]

WAC 248-19-415 PROJECTS PROPOSED FOR THE CORRECTION OF DEFICIENCIES. (1) For the purposes of this section, "correction of deficiencies" shall mean one or more of the following:

(a) Eliminating or preventing imminent safety hazards as defined by federal, state or local fire, building, or life safety codes or regulations; or

(b) Complying with state licensing standards; or

(c) Complying with accreditation or certification standards which must be met to receive reimbursement under Titles XVIII or XIX of the Social Security Act.

(2) An application which is submitted for a project which is limited to the correction of deficiencies, as defined in subsection (1) of this section, shall be approved unless the department finds, after consultation with the appropriate health systems agency, that:

(a) The facility or service with respect to which such capital expenditure is proposed is not needed; or

(b) The obligation of such capital expenditure is not consistent with the state health plan in effect.

(3) A determination that a facility or service is not needed shall be made only if the department finds that the facility or service has been identified in the state health plan as not being needed.

(4) An application, which is submitted for the correction of deficiencies, shall be reviewed under the expedited review process, in accordance with WAC 248-19-340, unless it qualifies for emergency review in accordance with WAC 248-19-350.

(5) An application reviewed under the provisions of this section shall be approved only to the extent that the capital expenditure is needed for the correction of the deficiency.

(6) If the department finds that any portion of the project or the project as a whole is not needed for the correction of deficiencies, such portion or entire project shall be reviewed in accordance with WAC 248-19-360, 248-19-370, 248-19-380, 248-19-390, and 248-19-400.

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(7) If the department finds that a proposed capital expenditure is needed to correct deficiencies, as defined in subsection (1) of this section, the criteria in WAC 248-19-370 shall not be applied to the consideration of the project. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-415, filed 4/9/81, effective 5/20/81.]

WAC 248-19-420 WRITTEN FINDINGS AND ACTIONS ON CERTIFICATE OF NEED APPLICATION. (1) Written findings.

(a) The findings of the department's review of a certificate of need application shall be stated in writing and include the basis for the secretary's decision as to whether a certificate of need is to be issued or denied for the proposed project.

(b) In making its findings and taking action on a certificate of need application, the department shall use all criteria contained in chapter 248-19 WAC which are applicable to the proposed project.

(i) The written findings shall identify any criterion which the department has decided is not applicable to the particular project and give the reason for such decision.

(ii) The secretary may deny a certificate of need if the applicant has not provided the information which is necessary to a determination that the project meets all applicable criteria and which the department has prescribed and published as necessary to a certificate of need review of the type proposed: PROVIDED, HOWEVER, That the department has requested such information in a screening letter sent in accordance with WAC 248-19-280 (1)(c).

(c) The department shall make written findings on the extent to which the project meets the criteria set forth in WAC 248-19-370 (1) and (2) when the secretary issues a certificate of need directly related to the provision of health services, beds, or major medical equipment: PROVIDED, HOWEVER, That no such written finding shall be necessary for projects for the correction of deficiencies of the types described in WAC 248-19-415 and for projects proposed by or on behalf of a health maintenance organization or a health care facility which is controlled, directly or indirectly, by a health maintenance organization.

(d) When, as a part of concurrent review proceedings, the secretary makes a decision to approve an application or applications and to disapprove other competing applications, he shall provide a specific written statement of reasons for determining the approved application or applications to be superior.

(2) Separability of application and action. When a certificate of need application is for multiple services or multiple components or the proposed project is to be multiphased, the secretary may take individual and different action on separable portions of the proposed project.

(3) Conditional certificate of need.

(a) The secretary in making his decision on a certificate of need application may decide to issue a conditional certificate of need if the department finds that the project is justified only under specific circumstances: PROVIDED, HOWEVER, That conditions shall relate directly to the project being reviewed and to review criteria.

(b) When the department finds that a project for which a certificate of need is to be issued does not satisfy the review criteria set

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forth in WAC 248-19-370 (1) and (2), the secretary may impose a condition or conditions that the applicant take affirmative steps so as to satisfy those review criteria. In evaluating the accessibility of the project, the current accessibility of the facility as a whole shall be taken into consideration.

(c) The conditions attached to a certificate of need may be released by the secretary upon the request of the health care facility or health maintenance organization for which the certificate of need was issued: PROVIDED, It can be substantiated that the conditions are no longer valid and the release of such conditions would be consistent with the purposes of chapter 70.38 RCW.

(4) Distribution of written findings and statement of decision.

(a) A copy of the department's written findings and statement of the secretary's decision on a certificate of need application shall be sent to:

(i) The person who submitted the certificate of need application;

(ii) The health systems agency for the health service area in which the proposed project is to be located;

(iii) The hospital commission, if the proposed project is for a hospital;

(iv) In the case of a project proposed by a health maintenance organization, the appropriate regional office of the United States department of health and human services; and

(v) When the secretary issues a certificate of need for a project which does not satisfy the review criteria set forth in WAC 248-19-370 (1) and (2), the appropriate regional office of the department of health and human services.

(b) The written findings and statement of the secretary's decision on a certificate of need application shall be available to others who request the certificate of need unit to provide access to a copy of such findings and statement.

(5) Explanation of inconsistency with the health systems agency recommendation or plan. The department shall send to the applicant and to the appropriate health systems agency a detailed, written statement as to the reasons why a decision which the secretary has made on a certificate of need application is inconsistent with any of the following:

(a) The health systems agency's recommendation as to the action to be taken on the certificate of need application;

(b) The goals of the applicable health systems plan; or

(c) The priorities of the applicable annual implementation plan. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-420, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-420, filed 11/30/79.]

WAC 248-19-430 PROVISION FOR RECONSIDERATION DECISION. (1) Any person may, for good cause shown, request a public hearing for the purpose of reconsideration of the secretary's decision on a certificate of need application or withdrawal of a certificate of need.#

(2) The department shall conduct a reconsideration hearing if it finds the request is in accord with the following requirements.

(a) The request for a reconsideration hearing shall be written, be received by the department within thirty days of the department's decision on the certificate of need application or withdrawal of the

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certificate of need, state in detail the grounds which the person requesting the hearing believes to show good cause, and be signed by the person making the request.

(b) Grounds which the department may deem to show good cause for a reconsideration hearing shall be limited to the following:

(i) Significant relevant information not previously considered by the department which, with reasonable diligence, could not have been presented before the department made its decision;

(ii) Information on significant changes in factors or circumstances relied upon by the department in making its findings and decision; or

(iii) Evidence the department materially failed to follow adopted procedures in reaching a decision.

(3) A reconsideration hearing shall commence within thirty days after receipt of the request for the hearing.

(4) Notification of a public reconsideration hearing on a certificate of need application or withdrawal of a certificate of need shall be sent prior to the date of such hearing by the department to the following:

(a) The person who requested the reconsideration hearing;

(b) The person who submitted the certificate of need application which is under reconsideration or the holder of the certificate of need;

(c) The health systems agency for the health service area in which the proposed project is to be offered or developed;

(d) The hospital commission, if the proposed project is a hospital project; and to

(e) Other persons who request the department to send them such notification.

(5) The department shall, within forty-five days after the conclusion of a reconsideration hearing, make written findings which state the basis of the decision made after such hearing.

(6) The secretary may, upon the basis of the department's findings on a reconsideration hearing, issue or reissue, amend, revoke, or withdraw a certificate of need or impose or modify conditions on a certificate of need for the project about which the reconsideration hearing was conducted.

NOTE:

#No fee will be charged for a reconsideration hearing.

[Statutory Authority: RCW 70.38.155. 81-09-012 (Order 210), § 248-19-450, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-430, filed 11/30/79.]

WAC 248-19-440 ISSUANCE, SUSPENSION, DENIAL, REVOCATION AND TRANSFER OF A CERTIFICATE OF NEED. (1) Issuance of a certificate of need.

(a) The secretary shall issue a certificate of need to the person who submitted the certificate of need application for the proposed project or a separable portion of the proposed project only if the department's findings and decision are that the project or the separable portion of the proposed project is consistent with the applicable

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criteria contained in chapter 248-19 WAC. In issuing a certificate of need, the secretary shall specify the maximum capital expenditure which may be obligated under the certificate and prescribe the cost components to be included in determining the capital expenditure which may be obligated under such certificate.

(b) The secretary may issue a conditional certificate of need for a proposed project if it is justified only under specific circumstances. The conditions specified in a conditional certificate of need must directly relate to the project being reviewed and to criteria contained in chapter 248-19 WAC.

(2) Suspension of a certificate of need.

(a) Grounds for which the secretary may suspend a certificate of need shall include, but not be limited to, suspicion of fraud, misrepresentation, false statements, misleading statements, evasion or suppression of material fact in the application for a certificate of need or any of its supporting materials.

(b) The secretary shall issue an order for any suspension of a certificate of need to the person to whom the certificate of need had been issued.

(i) Such order shall state the reason for the suspension.

(ii) A copy of such order of suspension shall be sent to the appropriate health systems agency and, if for a hospital project, the hospital commission.

(c) A suspension of a certificate of need shall not exceed one hundred twenty calendar days.

(i) The department shall review the facts and circumstances relevant to the suspension and the secretary shall reinstate, amend or revoke a certificate of need within the one hundred twenty calendar days.

(ii) The secretary shall send written notice of its decision on a suspended certificate of need to the person to whom the certificate of need had been issued. A copy of such notice shall be sent to the appropriate health systems agency and, if a hospital project, to the hospital commission.

(3) Denial of a certificate of need.

The secretary shall send written notification of denial of a certificate of need for a proposed project or a separable portion of a proposed project to the person who submitted the certificate of need application for the proposed project for which the certificate of need is not issued.

(a) Such notification shall state the reasons for the denial of a certificate of need.

(b) Copies of such notification shall be sent to the appropriate health systems agency and, if for a hospital project, to the hospital commission.

(4) Continuing effect of a denial.

In any case in which a proposed project or separable portion of the proposed project has been denied a certificate of need, another certificate of need application for such proposed project or separable portion thereof shall not be accepted by the department or reviewed under the provisions of chapter 248-19 WAC following the denial unless the department determines:

(a) There is a substantial change in existing or proposed health facilities or services in the area to be served by the project; or

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(b) There is a substantial change in the need for the facilities or services of the type proposed in the area to be served by the project; or

(c) Three years have lapsed since the submission of the application for the certificate of need which was denied.

(5) Revocation of a certificate of need.

(a) The secretary may revoke a certificate of need for fraud, misrepresentation, false statements, misleading statements, evasion or suppression of material facts in the application of a certificate of need, or in any of its supporting materials.

(b) The secretary shall send written notification of a revocation of a certificate of need to the person to whom the certificate of need had been issued.

(i) The notice of revocation shall include a statement of the reasons for such revocation.

(ii) A copy of a notice of revocation shall be sent to the appropriate health systems agency and, if a hospital project, to the hospital commission.

(6) Transfer or assignment of a certificate of need. A certificate of need which has been issued to one person shall not be transferred or assigned to another person without the written approval of the secretary.

(a) The person to whom the certificate of need was originally issued shall submit to the department a written request that the certificate of need be transferred to another person and give the full name and complete address of the other person.

(b) The person to whom the current holder of the certificate of need wishes to transfer the certificate shall send a written request for such transfer on a form and in such a manner as prescribed and published by the department.

(c) The secretary, after the department's consultation with the appropriate health systems agency and, for a hospital project, the hospital commission shall:

(i) Transfer the certificate of need;

(ii) Deny the transfer of the certificate of need and send written notice of the denial and the reasons for such denial to the persons who requested the transfer; or

(iii) If the person, who wishes to receive the certificate of need, plans to modify the project for which the certificate was issued, notify such person that an application for a new or amended certificate of need is necessary.

(7) Secretary's failure to act. If the secretary fails to issue or deny a certificate of need in accordance with the provisions of chapter 248-19 WAC, the applicant for the certificate of need may seek a writ of mandamus from superior court pursuant to chapter 7.16 RCW. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-440, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-440, filed 11/30/79.]

WAC 248-19-450 CIRCUMSTANCES FOR WHICH AN AMENDED CERTIFICATE OF NEED IS REQUIRED. (1) An amended certificate of need shall be required for any of the following modifications of a project for which a certificate of need was issued:

(a) An addition of a new service;

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(b) An expansion of a service beyond that which was included in the certificate of need application on which the issuance of the certificate of need was based;

(c) An increase in the inpatient bed capacity; or

(d) A significant reduction in the scope of a project for which a certificate of need has been issued without a commensurate reduction in the cost of the project, or the project cost increases (as represented in bids on a construction project or final cost estimate(s) acceptable to the person to whom the certificate of need was issued) when the total of such increases exceeds twelve percent or fifty thousand dollars, whichever is greater, over the maximum capital expenditure specified by the secretary in issuing the certificate of need: PROVIDED, HOWEVER, That the review of such reductions or cost increases shall be restricted to the continued conformance of the project with the criteria contained in WAC 248-19-380 and 248-19-400.

(2) An application for an amended certificate of need shall be submitted in accordance with the provisions of WAC 248-19-280.

(3) An application for an amended certificate of need may be reviewed under the expedited review process set forth in WAC 248-19-340.

(4) The department shall provide a written determination as to the requirement for an amended certificate of need within twenty-one days after receipt of a request for such determination. [Statutory Authority: RCW 70.38.155. 81-09-012 (Order 210), § 248-19-450, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-450, filed 11/30/79.]

WAC 248-19-460 VALIDITY AND EXTENSIONS. (1) A certificate of need shall be valid for two years: PROVIDED, That one six month extension may be made if it can be substantiated that substantial and continuing progress toward commencement of the project has been made.

(2) A project for which a certificate of need has been issued shall be commenced during the validity period for the certificate of need.

(3) Applications for extensions of the validity period of certificates of need shall be submitted simultaneously to the department, the appropriate health systems agency and, if a hospital project, the hospital commission, at least one hundred and twenty calendar days before the expiration of the certificate of need, and shall contain such information as may be required by the department to determine the extent of progress toward commencement of construction or other action necessary to a project.

(4) An application for an extension of a certificate of need which is submitted less than one hundred and twenty calendar days before the expiration of the certificate of need shall not be reviewed, unless the applicant can demonstrate to the satisfaction of the department that unforeseen occurrences during the last one hundred and twenty days of the validity period of the certificate of need prevented commencement of construction as previously anticipated by the applicant.

(5) Commencement of the project shall not be undertaken after the expiration of the certificate of need unless a new certificate of need application has been reviewed and a new certificate of need has been issued by the secretary. [Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-460, filed 11/30/79.]

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WAC 248-19-470 MONITORING OF APPROVED PROJECTS. (1) The department in cooperation with the health systems agencies, and the hospital commission in the case of hospital projects, shall monitor the costs and components of approved projects so as to assure conformance with certificates of need that have been issued.

(2) The department shall require periodic progress reports from those applicants to whom certificates of need have been issued.

(a) Progress reports shall be required at least annually and at no greater frequency than quarterly.

(b) Progress reports shall be submitted in the form and manner prescribed and published by the department.

(3) Information required on approved projects may include:

(a) Actual project costs;

(b) Changes in the project;

(c) Financing arrangements, different than approved under the certificate of need;

(d) Project commencement date;

(e) Progress toward completion of construction; and

(f) Project completion date.

(4) The information required on approved projects may vary according to the nature of the projects.

(5) Progress reports on a project for which a particular certificate of need has been issued shall terminate when the project has been completed and the department finds that it has received all the information necessary to determine that the project has been completed in accordance with the certificate of need which had been issued and the provisions of chapter 248-19 WAC. [Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-470, filed 11/30/79.]

WAC 248-19-475 WITHDRAWAL OF A CERTIFICATE OF NEED. (1) The secretary may withdraw a certificate of need if the department determines, after consultation with the appropriate health systems agency and, in the case of a hospital project, the hospital commission, that the holder of a certificate is not meeting the timetable specified in the certificate of need application for making services or equipment available or completing the project and is not making a good faith effort to meet such timetable.

(2) In reviewing a proposed withdrawal of a certificate of need, the department shall adhere to the provisions of WAC 248-19-310, 248-19-320, 248-19-325 and 248-19-430.

(3) The review period for a proposed withdrawal of a certificate of need shall not exceed ninety days unless extended by the department to allow sufficient time for the conduct of a public hearing pursuant to the provisions of WAC 248-19-320. The review period of the appropriate health systems agency and, in the case of a hospital project, the hospital commission shall not exceed sixty days unless extended by the department at the written request of the health systems agency to allow sufficient time for the conduct of a public hearing pursuant to the provisions of WAC 248-19-320. Such extension shall not exceed thirty days.

(4) The findings of the department's review of a proposed withdrawal of a certificate of need shall be stated in writing and include the basis for the secretary's decision as to whether the certificate of need is to be withdrawn for a proposed project. A copy of the

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department's written findings and statement of the secretary's decision on the proposed withdrawal of a certificate of need shall be sent to:

(a) The holder of the certificate of need;

(b) The health systems agency for the health service area in which the proposed project is to be located;

(c) The hospital commission, if the proposed project is for a hospital; and

(d) In the case of a project proposed by a health maintenance organization, the appropriate regional office of the United States Department of Health and Human Services.

(5) The written findings and statement of the secretary's decision on the proposed withdrawal of a certificate of need shall be available to others who request the certificate of need unit to provide access to a copy of such findings and statement.

(6) The department shall send to the appropriate health systems agency a detailed, written statement as to the reasons why a decision which the secretary has made is inconsistent with any of the following:

(a) The health systems agency's recommendation as to the action to be taken;

(b) The goals of the applicable health systems plan; or

(c) The priorities of the applicable annual implementation plan.

(7) When a certificate of need is for multiple services or multiple components or the proposed project is to be multiphased, the secretary may take individual and different action regarding withdrawal of the certificate of need on separable portions of the certificate of need. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-475, filed 4/9/81, effective 5/20/81.]

WAC 248-19-480 RIGHT AND NOTICE OF APPEAL. (1) Any affected person may request and shall be afforded the opportunity for an administrative hearing on the secretary's decision to issue or deny a certificate of need for a project or a separable portion of a project, to grant or deny an exemption requested under WAC 248-19-405, to suspend or revoke a certificate of need, or to withdraw or not withdraw a certificate of need.

(2) To be effective, a request for an administrative hearing shall be in writing and received by the department within thirty days after the person requesting the hearing received the particular decision of the department which is being appealed or, if a reconsideration hearing was requested and denied, thirty days after the denial of the request for the reconsideration hearing.

(3) An administrative hearing shall be conducted in accordance with the provisions of chapter 34.04 RCW.

(4) The decision of the secretary shall be subject to review in an administrative hearing to establish a record of the decision of the secretary. The determination of the official who conducts such an administrative hearing shall be made in writing within forty-five days after the conclusion of the hearing. The official who conducts such an administrative hearing may make a proposed decision, findings of fact and conclusions of law, pursuant to RCW 34.04.110, or the official may remand the matter to the secretary for further action or

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consideration.# The written determination shall be sent to the applicant, the appropriate health systems agency, the hospital commission in the case of a hospital project, and the department. The department shall make any written determination available to others upon request.

NOTE:

#Chapter 34.04 RCW provides entitlement to judicial review to any person aggrieved by a final decision in a contested case, whether such decision is affirmative or negative in form.

[Statutory Authority: RCW 70.38.135. 82-19-055 (Order 244), § 248-19-480, filed 9/15/82; 81-09-012 (Order 210), § 248-19-480, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-480, filed 11/30/79.]

WAC 248-19-490 CERTIFICATE OF NEED PROGRAM REPORTS. (1) The department shall prepare and publish annual reports containing information on certificate of need reviews in progress, reviews completed in the preceding twelve month period, and a general statement of the findings and decisions made in the course of those reviews.

(2) Upon request, the department shall provide notification to health care facilities and to other persons of the status of the department's review of projects subject to review and the findings made in the course of such review. [Statutory Authority: RCW 70.38-.135. 81-09-012 (Order 210), § 248-19-490, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-490, filed 11/30/79.]

WAC 248-19-500 PUBLIC ACCESS TO RECORDS. The general public shall have access in accordance with the provisions of chapter 42.17 RCW to all applications reviewed by the department and to all other written materials essential to any review by the department pursuant to the provisions of chapter 248-19 WAC. [Statutory Authority: RCW 70.38.135. 81-09-012 (Order 210), § 248-19-500, filed 4/9/81, effective 5/20/81. Statutory Authority: Chapter 70.38 RCW. 79-12-079 (Order 188), § 248-19-500, filed 11/30/79.]

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AD/CP/LHI
COH

KAREN RAHM
Secretary

STATE OF WASHINGTON

DEPARTMENT OF SOCIAL AND HEALTH SERVICES

Olympia, Washington 98504

July 18, 1985

RECEIVED
JUL 22 1985
Dept. of Construction & Land Use

Katy Chaney, Director
Land Use Division
Seattle Department of Construction
and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Chaney:

This is to inform you, as a person who expressed an interest in Certificate of Need review requirements for helipad construction at Children's Orthopedic Hospital, that the department has reversed an earlier decision and has determined that the project is not subject to Certificate of Need review. Enclosed are copies of correspondence setting forth the change in our determination.

Sincerely,

Frank Chestnut

Frank Chestnut, Director
Certificate of Need Program HB-31

FC:kg

Enclosures

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KAREN R. GIM
Secretary

STATE OF WASHINGTON
DEPARTMENT OF SOCIAL AND HEALTH SERVICES
Olympia, Washington 98504

July 12, 1985

The Honorable Ken Jacobsen
Washington State Representative
7307 40th NE
Seattle, Washington 98115

Dear Representative Jacobsen:

I am writing to advise you of further developments regarding the helicopter pad at Children's Orthopedic Hospital (COH).

The Department had advised COH that the project was reviewable under the Certificate of Need (CoN) program. This was based more on a concern regarding an apparent rapid escalation in the number of air ambulance projects under consideration than on a clear interpretation of the rules and regulations surrounding the CoN program.

COH has sued the Department, contending that the project is not reviewable under existing rules. Our Assistant Attorney General agrees with their position, pointing out that the project is not a new service or a substantial change in service, and does not exceed the capital or operating cost thresholds established by the CoN program.

We are going to reverse our initial position and declare the project not subject to review, rather than consume unnecessary time and money in litigation.

Please call me at 753-3327 if you would like to discuss this matter further.

Sincerely,

Bruce Ferguson

Bruce Ferguson
Assistant Secretary

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KAREN RAHM
Secretary

STATE OF WASHINGTON
DEPARTMENT OF SOCIAL AND HEALTH SERVICES
Olympia, Washington 98504

July 18, 1985

Dorothy Teeter
Director of Planning
Children's Orthopedic Hospital
4800 Sand Point Way N.E.
Seattle, Washington 98105

Dear Ms. Teeter:

In response to your legal appeal of our determination of June 10, 1985 that the construction of a helipad was subject to Certificate of Need review, we have reconsidered that determination. After reconsideration, we have concluded the project is not subject to Certificate of Need review under current program rules.

Sincerely,

Frank Chestnut
Director
Certificate of Need Program
HB 31

FC:bb

cc: Puget Sound Health Systems Agency
Washington State Hospital Commission

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A. N. SHINPOCH
Secretary

STATE OF WASHINGTON

DEPARTMENT OF SOCIAL AND HEALTH SERVICES

Olympia, Washington 98504-0095

Staff Member
File 84-022
File #2
RECEIVED
OCT 9 1985
Dept. of Construction & Land Use

October 7, 1985

Beatrice Farrar Ryan, Interim Director
Seattle Department of Construction and Land Use
400 Municipal Building
Seattle, Washington 98104

Dear Ms. Ryan:

This is in response to your letter of October 2 concerning Certificate of Need review requirements related to the construction of a helipad at Children's Orthopedic Hospital. As I advised you by telephone last week, at this time we are not reconsidering our determination of non-reviewability for that project and do not have any plans to reconsider it. We are gathering information to determine whether the acquisition of a helicopter by or on behalf of Airlift Northwest is properly subject to review, but that determination is separate from that of the helipad construction.

Sincerely,

Frank Chestnut

Frank Chestnut, Director
Certificate of Need Program
HB-31

FC:wgs

cc: Puget Sound Health Systems Agency
Hospital Commission
Dr. Bud Nicola, Seattle-King County Health Department
Tom Byers, Mayor's Office

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Dear Hermia,

Enclosed is a letter to Sparks, in which we provide some important information relevant to the certificate of need for Children's Ortho. Hosp.

also, the Laurelhurst Comm. Club Board has taken a stance strongly supporting our anti-hellport efforts — including partial funding for hiring a lawyer to investigate COH's certif. of need issue.

cordially,
Anita Francis

5003 45th N.E.
Seattle, Washington 98105
February 8, 1985

Kristina M. Sparks, Supervisor
Project Review Unit
Certificate of Need Program ET-33
Department of Social and Health Services
Olympia, Washington 98504

Dear Ms. Sparks:

Thank you very much for your letter of December 28. I understand that Children's Orthopedic Hospital has responded to your request for information and I am eager to see a copy of that response.

In the meantime, I want to ask you about the procedure used for developing a certificate of need application. Specifically, who determines the scope of the application? The plan, as publicly stated (in The Weekly article by Nick Gallo enclosed and marked "Note A") is for COH to be part of a consortium of five hospitals that would all be served by Airlift Northwest. Although the cost for COH may be under the certificate of need minimum, for the consortium as a whole the cost will be well over that minimum. Can Airlift Northwest be required to file a certificate of need application?

The Swedish Hospital proposal for a Level III neonatal intensive care unit (NICU) was recently withdrawn because of opposition from COH and University Hospital. The certificate of need process served a useful purpose in forcing Swedish to consider the views of other hospitals and to withdraw their plan which would have led to a duplication of facilities. The two enclosed documents were part of that Swedish NICU application and show clearly that physicians at both Swedish Hosp. and the University Hosp. consider the present system of transport for neonates to be quite adequate (See note B, from a research study conducted in this area, and note C, a letter by Dr. French of Swedish). The certificate of need process is the only means available to review need for facilities on both a regional and a medical need basis. Since the present transport system has been stated to be adequate by professionals working in this area, a certificate of need review is clearly needed to avoid additional unnecessary and costly helicopter services.

Enclosed also is a copy of a page from the 1984-85 budget of COH. They indicate that COH does not currently provide (1) an emergency helicopter service, (2) ambulance services, (3) a 24-hour emergency room coverage by a paid physician, nor (4) an emergency communications system. This is clear evidence (provided by COH in their budget document) that their proposed helicopter service is a NEW SERVICE. It is ample justification for your requiring a certificate of need regarding their proposed helicopter service and the associated medical service changes that will give them a trauma center status. We know that emergency cases are not now referred to COH—they go instead to Harborview and University Hospital. Sometimes, children are transferred by ambulance to COH later from these trauma centers. COH cannot argue that it currently provides emergency helicopter services, nor even a very high level of emergency services (since it is not staffed by a paid physician on a 24-hour basis). If COH wishes to undertake a broad expansion of its emergency service capabilities, it should go through the certificate of need process and state its case in ways that can be carefully reviewed and considered

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by all concerned.

Thank you for your consideration of this air ambulance service issue, which has potentially profound impacts on this area and the cost of care.

Sincerely,

Anita M. Francis

Anita M. Francis
Jerry B. Schneider

cc:

Hermia Ip, DCLU,City of Seattle
Larry Thompson, Puget Sound Health Systems Agency
Nita Rinehart,Senator
Ken Jacobsen, Representative
Marlin Appelwick, Representative

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Note B

The following quote is from a pre-published manuscript which was submitted as part of the Swedish Medical Center CN Application #85-03 for a Level III Intensive Care Nursery (Supplement, 11-30-84)

> "The results of this study may not be generalizable to other geographic areas. The tertiary care center in King County was in close proximity to the community hospitals and readily accessible by ground transportation. The mothers and infants could be transferred in a relatively short period of time."

Hickok, Durlin E.; Shy, Kirkwood; Inui, Thomas S.; Weiss, Noel; Troug, William; Hinterberg, Katheryn A., "Decreased mortality of very low birth-weight infants after maternal transport," From the Dept. of Obstetrics and Gynecology, University of Washington School of Medicine and The Children's Orthopedic Hospital Medical Center, Seattle. Address reprint requests to Dr. Durlin Hickok at the Swedish Hospital Medical Center. undated.

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Note C

SWEDISH HOSPITAL MEDICAL CENTER

747 Summit Avenue Seattle, WA 98104

NB: This letter was submitted as part of The Swedish Medical Center CN Application #85-03 for a Level III Intensive Care Nursery (Supplement, 11-30-84).

July 23, 1984

William Alan Hodson, M.D.
Professor and Head
Neonatal and Respiratory Diseases
Department of Pediatrics RD-20
University of Washington
Seattle, WA 98195

Dear Al:

As you are aware, our Level II special care nursery at SHMC is planning to become a ventilatory-capable unit, i.e. Level III. As such, I feel it would be beneficial from a regional resource point of view to have written interhospita guidelines of care. Currently, in our Level II capacity we have seven distinct categories of patients that require transportation to either University Hospital's NICU or COHMC's IICU, as shown on the policy sheet (enclosed).

Once ventilator capability is established at SHMC, we shall continue to transfer categories 2, 4, and 6. I anticipate that in addition, until we are definitely established, pregnancies of less than 30 weeks gestation will continue to be referred to University Hospital. We shall however be willing to handle the 1-2/month that University Hospital currently cannot accommodate.

One other point of regional resource use is the question of transportation of sick babies. I am certain all of us concur with the concept of in utero transpor being the ideal mode of infant transfer. However, if a neonate becomes ill post-delivery and needs transportation for ventilator care, I feel the current transpo team system should continue to be the only way to move that infant. If an outsid physician calls SHMC to have a baby transferred for more intensive care, I would like to utilize the current transport team to have them bring the infant to us. I do not feel forming a competing transport system is the ideal way to use commur resources. SHMC would be willing to consider a form of compensation for the use of the transport team.

I would appreciate any comments or concerns you might have regarding the above-mentioned guidelines.

Sincerely,

Charles E. French, M.D.
Director of Neonatology

CEF:rc

Enclosure

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FROM COH BUDGET

WSHC A2

HOSPITAL THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

BUDGET PERIOD 10/01/84 TO 09/30/85

Line No	SERVICE	CODE
	MED/SURG INTENSIVE CARE	
1	MED/SURG INTENSIVE CARE	1
2	CORONARY INTENSIVE CARE	2
3	BURN INTENSIVE CARE	1
4	PEDIATRIC INTENSIVE CARE	1
5	NEWBORN INTENSIVE CARE	1
6	PULMONARY INTENSIVE CARE	2
7	ISOLATION INTENSIVE CARE	2
8	SEMI-INTENSIVE CARE	1
9	MEDICAL ACUTE CARE	1
10	SURGICAL ACUTE CARE	1
11	PEDIATRIC ACUTE CARE	1
12	POST PARTUM CARE	6
13	GERIATRIC ACUTE CARE	6
14	INPATIENT CARE UNDER CUSTODY (JAIL)	6
15	DRUG ABUSE CARE	6
16	ALCOHOLISM CARE	6
17	METABOLIC CARE	6
18	STROKE CARE	6
19	COMMUNICABLE DISEASE ISOLATION CARE	2
20	PROTECTIVE ISOLATION CARE	2
21	NEONATAL ACUTE CARE	2
22	NEWBORN NURSERY CARE	6
23	MENTAL RETARDED NURSERY CARE	2
24	PREMATURE NURSERY CARE	6
25	PSYCHIATRIC ISOLATION INTENSIVE	6
26	PSYCHIATRIC ACUTE CARE	1
27	PSYCHIATRIC LONG-TERM CARE	6
28	SKILLED NURSING/EXTENDED CARE	6
29	TUBERCULOSIS LONG-TERM CARE	6
30	REHABILITATION CARE	1
31	INTERMEDIATE CARE	2
32	RESIDENTIAL/CONGREGATE CARE	6
33	MENTAL RETARDATION CARE	2
34	SELF CARE	2
100	HOSPICE CARE (INPATIENT)	6
	PARTIAL DAY CARE	
35	PSYCHIATRIC NIGHT CARE	1
36	PSYCHIATRIC DAY CARE	2
37	GERIATRIC DAY CARE	6
	EMERGENCY SERVICES	
38	EMERGENCY ROOM SERVICE	1
39	AMBULANCE SERVICE	6
40	MOBILE CARDIAC CARE SERVICE	6
41	CARDIAC ARREST TEAM WITH PHYSICIAN	2
42	PSYCHIATRIC EMERGENCY SERVICE	2
43	EMERGENCY OBSERVATION SERVICE	2
44	TRAUMA TREATMENT ER	1
45	EMERGENCY COMMUNICATIONS SYSTEM	6
46	RADIOISOTOPE DECONTAMINATION ROOM	6
47	EMERGENCY HELICOPTER SERVICE	6
48	24-HR ER COVERAGE BY PAID PHYSICIAN	6

Line No	SERVICE	CODE
	HOME CARE SERVICES	
49	HOME NURSING CARE	6
50	HOME HEALTH AIDE CARE	6
51	HOME PHYSICAL MEDICINE CARE	6
52	HOME SOCIAL SERVICE CARE	6
53	HOME PROGRAM DIALYSIS	6
54	JAIL CARE	6
55	PSYCHIATRIC FOSTER HOME CARE	6
56	HOSPICE HOME CARE	6
	OTHER ANCILLARY SERVICES	
57	LABOR AND DELIVERY SERVICES	6
58	ALTERNATE BIRTH CENTER	6
59	ABORTION SERVICES	6
60	RECOVERY ROOM	1
61	DENTAL SURGERY	2
62	PODIATRY SURGERY	2
63	UROLOGIC SURGERY	2
64	OTOLARYNGOLOGIC SURGERY	2
65	PLASTIC SURGERY	2
66	GYNECOLOGIC SURGERY	6
67	KIDNEY TRANSPLANT SERVICES	2
68	OPEN HEART SURGERY SERVICES	1
69	CARDIAC CATHETERIZATION	2
70	CYSTOSCOPY SERVICE	2
71	NEUROLOGICAL SURGERY	2
72	OPTHALMOLOGIC SURGERY	2
73	ORTHOPEDIC SURGERY	1
74	SURGICAL DAY CARE (ONE DAY)	1
75	ANESTHESIA SERVICES—SURGICAL	6
76	ANESTHESIA SERVICES—OBSTETRICS	1
77	ANATOMIC PATHOLOGIC SERVICES	1
78	HEMATOLOGIC SERVICES	1
79	CLINICAL CHEMISTRY SERVICES	2
80	SEROLOGIC SERVICES	1
81	URINALYSIS SERVICES	1
82	MICROBIOLOGIC SERVICES	1
83	AUTOPSY SERVICES	1
84	PULMONARY FUNCTION TESTING	6
85	ORGAN BANK	6
86	BLOOD BANK	1
87	ELECTROENCEPHALOGRAPHY	1
88	ELECTROCARDIOGRAPHY	1
89	ELECTROMYOGRAPHY	1
90	X-RAY EXAMINATION	1
91	X-RAY THERAPY	5
92	COBALT THERAPY	1
93	RADIUM THERAPY	1
94	COMPUTED TOMOGRAPHIC SCANNING	5
95	DIAGNOSTIC RADIOISOTOPE	1
96	THERAPEUTIC RADIOISOTOPE	1
97	PHARMACY W/FT REG. PHARMACIST	1

CODE NO. 1 SEPARATELY ORGANIZED, STAFFED, AND EQUIPPED UNIT OF HOSPITAL
2 SERVICE MAINTAINED IN HOSPITAL BUT NOT IN SEPARATE UNIT
3 SERVICE CONTRACTED BUT HOSPITAL BASED
4 SERVICE PURCHASED FROM OUTSIDE CONTRACTOR AND NOT HOSPITAL BASED
5 SERVICE NOT PROVIDED IN HOSPITAL BUT SHARED WITH OTHER HOSPITALS UNDER AGREEMENT

7/1/81

A2 —345—

WSHC A2

SERVICES INVENTORY

Line No	SERVICE	CODE
98	PHARMACY W/PT REG. PHARMACIST	1
99	CLINICAL PHARMACOLOGIC SERVICES	6
100	PSYCHOPHARMACOLOGICAL THERAPY	6
101	PHARMACY UNIT DOSE SYSTEM	1
102	PHARMACY IV ADDITIVE PROGRAM	1
103	IV THERAPY	2
104	SHOCK THERAPY	6
105	RESPIRATORY THERAPY	2
106	INPATIENT RENAL DIALYSIS	1
107	OUTPATIENT RENAL DIALYSIS	1
108	PHYSICAL THERAPY	1
109	OCCUPATIONAL THERAPY	1
110	SPEECH—LANGUAGE PATHOLOGY	1
111	RECREATIONAL THERAPY	1
112	REHABILITATION THERAPY	1
113	PSYCHIATRIC THERAPY	2
114	CLINICAL PSYCHOLOGIST SERVICES	2
115	SOCIAL SERVICE	2
116	HYPERBARIC CHAMBER SERVICES	6
117	BLOOD COLLECTION AND PROCESSING	
181	AUDIOLOGY SERVICES	2
	CLINIC SERVICES	
118	CARDIOLOGY	2
119	CHEST MEDICAL	2
120	COMMUNICABLE DISEASE	2
121	DERMATOLOGY	2
122	DIABETIC	2
123	ALLERGY	2
124	METABOLIC	2
125	NEUROLOGY	2
126	PEDIATRIC	2
127	NEONATAL	6
128	PSYCHIATRIC	2
129	OBSTETRICS	6
130	HYPERTENSION	2
131	RHEUMATIC	2
132	RENAL	2
133	ORTHOPEDIC	2
134	TRAUMA ORTHO	2
135	OPHTHALMOLOGY	2
136	OTOLARYNGOLOGY	2
137	PODIATRY	2
138	DENTAL	1
139	ALCOHOLISM	6
140	CHILD DIAGNOSIS	2
141	CHILD TREATMENT	2
142	DRUG ABUSE	2
143	FAMILY THERAPY	2
144	GROUP THERAPY	2
182	UROLOGY	2
183	PHYSICAL MEDICINE	2
184	FREE STANDING CLINIC(S)	2

Line No	SERVICE	CODE
	OTHER SERVICES	
145	TOXICOLOGY/ANTIDOTE INFORMATION	3
146	DRUG REACTION INFORMATION	2
147	CANCER/TUMOR REGISTRY	1
148	FAMILY PLANNING	2
149	GENETIC COUNSELING	2
150	DIETETIC COUNSELING	2
151	PARENT TRAINING CLASS	2
152	DIABETIC TRAINING CLASS	2
153	PUBLIC HEALTH CLASS	6
154	MEDICAL RESEARCH	2
155	VOCATIONAL SERVICES	6
156	SHELTERED WORKSHOP	6
157	HOSPITAL AUXILIARY	2
158	CHAPLAINCY SERVICES	1
159	CHAPEL MAINTAINED	1
160	FULL TIME CHIEF OF STAFF	1

MEDICAL EDUCATIONAL PROGRAMS

CODE NUMBERS BELOW DO NOT APPLY HERE

HOSPITAL PROVIDES CLINICAL SETTING FOR COLLEGE/UNIVERSITY BASED PROGRAMS

IF THE HOSPITAL HAS THIS EDUCATIONAL PROGRAM, AS DEFINED BY MEDICARE, ENTER THE NUMBER OF PARTICIPANTS

IF THE HOSPITAL'S PROGRAM IS AN ACCREDITED PROGRAM, ENTER AN "X"

161	CLINICAL RESIDENCY	X		300
162	CLINICAL & RESEARCH FELLOWS	X		23
163	EMERGENCY MEDICAL TECHNICIAN			
164	PHYSICIANS ASSISTANT			
165	RN (BACCALAUREAT)	X		195
166	RN—OTHER GRADUATE & ASSOCIATE	X		79
167	LPN			
168	NURSE ANESTHETIST			
169	MEDICAL TECHNOLOGIST	X		8
170	RESPIRATORY THERAPIST	X		27
171	OCCUPATIONAL THERAPIST	X		2
172	PHARMACY INTERN	X		13
173	PHYSICAL THERAPIST	X		6
174	RADIOLOGIC TECHNOLOGIST	X		7
175	DIETETIC INTERN	X		2
176	ADMINISTRATION RESIDENCY	X		2
177	MEDICAL RECORDS TECHNOLOGIST	X		2
178	SOCIAL WORKER	X		6
179				

6 SERVICE NOT AVAILABLE
7 SPECIAL CODE FOR CLINIC SERVICES WHICH ARE NUMBERED ON LINES 118-144 AND 182-184. THIS CLINICAL SERVICES SECTION IS FOR HOSPITALS WITH OUTPATIENT CLINIC SERVICES IF THESE SERVICES ARE COMMONLY PROVIDED IN THE EMERGENCY SUITE TO NON-EMERGENCY OUTPATIENTS BY HOSPITAL BASED PHYSICIANS OR RESIDENTS, ENTER CODE 7
9 UNKNOWN

7/1/81

A2 —345—

THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

February 9, 1985

Kristina Sparks
Certificate of Need Unit
Office of State Health
Planning & Development
MS ET-33
Olympia, WA 98504

Dear Ms. Sparks,

This correspondence is in response to your request for information regarding Certificate of Need review for our helistop.

As I mentioned to you this week in our phone conversation, much of the information you requested is currently unavailable since helicopter services, as a part of our long standing air ambulance service, are currently being negotiated.

I can tell you that the cost of constructing a helistop is less than $50,000, and that our existing air ambulance service has been in existence since the early 1970's.

Please feel free to call me at (206) 526-2004 if you have further questions.

Sincerely,

Dorothy F. Teeter

Dorothy F. Teeter
Director of Planning

DT:js

RECEIVED
DSHS DIV. OF HEALTH
FEB 1 5 1985
CERTIF. NEED UNIT

P.O. BOX C5371 • 4800 SAND POINT WAY N.E. • SEATTLE, WASHINGTON 98105 • (206) 526-2000

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

AH CP ✓ AO ✓
Then file cc 84.022

KAREN RAHM
Secretary

STATE OF WASHINGTON
DEPARTMENT OF SOCIAL AND HEALTH SERVICES
Olympia, Washington 98504

RECEIVED
FEB 22 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

February 20, 1985

Anita M. Francis
Jerry B. Schneider
5003 Forty-Fifth NE
Seattle, Washington 98105

Dear Ms. Francis and Mr. Schneider:

Thank you for your February 8, 1985 letter regarding Children's Othopedic Hospital and Medical Centers' (COH&MC) pending construction of a landing facility to receive incoming helicopter air ambulances. In Kristina M. Sparks' absence, this matter has been referred to me. Per your request a copy of the COH&MC February 9, 1985 response to our request for additional information is enclosed.

We have requested additional information regarding Airlift Northwest, its nature, its historic involvement in the provision of air ambulance services to consortium member and non-member hospitals, and its costs of acquiring the proposed helicopter air ambulance.

Upon receipt of the aforementioned requested information, we will determine whether or not the expenditure to acquire the helicopter air ambulance by, or on behalf of, one or all of the consortium hospitals, and/or whether or not this project constitutes either a new institutional health service or a substantial change in service by, or on behalf of, one or all of the consortium hospitals. At the time the department makes its determination of reviewability, we would be pleased to inform you of our decision.

Sincerely,

Charles H. Pugh
Program Development and Data
Acting Supervisor
Project Review Unit
Certificate of Need Program, ET-33

CHP:mg

Enclosure

cc: Hermia Ip, DCLU, City of Seattle
Larry Thompsom, PSHSA
Nita Rinehart, Senator
Ken Jacobsen, Representative
Marlin Appelwick, Representative

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A. N. SHINPOCH
Secretary

STATE OF WASHINGTON

DEPARTMENT OF SOCIAL AND HEALTH SERVICES

Olympia, Washington 98504-0095

October 30, 1985

NOV - 4 1985

Rob Childs
Air Lift Northwest
325 9th Avenue
Seattle, Washington 98104

Dear Mr. Childs:

The department has recently received information concerning the capital costs of the Agusta 109A MKII helicopter air ambulance vehicle operated since July 15, 1985, by Air Lift Northwest (ALNW). The information was supplied directly by Agusta Avaiation Corporation (ACC), the manufacturer, and Hospital Air Transport (HAT), the Oregon firm which completed the conversion of the helicopter to air ambulance standards. This new information indicates that ACC's selling price of the air craft to General Electric Credit Corporation was $1,595,000 in February 1985 and that HAT added $44,000 to the capital asset valuation by their adding of "a stretcher platform, plumbed oxygen, and suction, medical radios and logs..." for a total asset valuation of $1,639,000. Based on the total value of the air ambulance, the department determines that Air Lift Northwest has made a capital expenditure in excess of the expenditure minimum. This expenditure is subject to Certificate of Need review under RCW 70.38.105(4)(d) and WAC 248-19-230(1)(c), as a capital expenditure by or on behalf of a health care facility in excess of the expenditure minimum.

The department has come to this conclusion because the definition of a capital expenditure, WAC 248-19-220(8), states, in part "...where a person makes an acquisition under lease or comparable arrangement,...which would have required Certificate of Need review if the acquisition had been made by purchase, such acquisition shall be deemed a capital expenditure." The department, therefore, concludes that the service contract with HAT, which results in your having the helicopter available for your use, constitutes a "comparable arrangement" under the rules of the Certificate of Need program.

Furthermore, the department also concludes that ALNW is the applicant. Since the Air Lift Northwest interhospital agreement establishing ALNW states "whereas COHMC, HMC, PMC, and UH wish to jointly share the risk of founding and providing a patient air transportation program...". ALNW, therefore, acts for and as the hospitals involved in the matter of the patient air transportation program.

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It also appears that the department may have erred in its determination as to whether or not the development of this helicopter air ambulance service constituted a new institutional health service. RCW 70.38.025(11) and WAC 248-19-220(27), define a new institutional health service, and describe it as the annual operating costs of the service for a twelve-month period. Therefore, all expenses, including lease expenses, should properly be considered in the annual operating costs.

Enclosed are application guidelines and other materials to assist in the development of a Certificate of Need application. If a preapplication conference is desired, please contact Mr. George Haase of my staff at (206) 753-0905. Based on the information available to the department at this time, the applicable review criteria would be WAC 248-19-370(1), (2), (3); WAC 248-19-380(1), (2), (3); WAC 248-19-390(1) (2), (3), (4), (5); and WAC 248-19-400(1), (4).

If you have any questions, please do not hesitate to contact me at (206) 753-5857.

Sincerely,

Kristina M. Sparks, Supervisor
Project Review Unit
Certificate of Need Program HB-31

KMS:GEH:kg

Enclosure

cc: Maurice Click, WSHC
Larry Thompson, PSHSA
Anita Francis, CCAHT
Jerry Schneider
Beatrice Farrar Ryan, S,DCLU

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Seattle
Department of Construction and Land Use

Phone 625-5200

NOTICE OF PUBLIC HEARING
File No. CC 84-022
(Master Use Permit No. 8402935)

The following public hearing will be held by Dr. Bud Nicola, Health Officer of the City of Seattle, to consider the medical need for the proposed helipad facility of the Children's Orthopedic Hospital at 4800 Sand Point Way N. E. in Seattle.

Hearing Date: October 24, 1985 (Thursday)
Time: 6:00 p.m. to 9:00 p.m.
Place: City Council Chambers
11th Floor, Municipal Building
600 4th Avenue, Seattle, WA 98104
(Use 5th Avenue entry after 6:00 p.m.)

This hearing will only address the question of medical justification for the helipad. Dr. Nicola will conduct a fact-finding study, including public input through a public hearing. Dr. Nicola's findings and report will form the basis of DCLU's recommendation regarding medical needs for the proposed facility.

Written representations on the medical need issues (either in support or protest) should be addressed to Dr. Nicola, Health Officer, 700 Yesler Building, Seattle, WA 98104, no later than the hearing date. For further details, please call 625-5200.

The Department of Construction and Land Use (DCLU) is responsible for the review of the Master Use Permit application for the helipad facility. The Land Use Code classifies the hospital as a Major Institution, and Major Institutions are permitted to establish helistops as a Council Conditional Use, if the Council finds that:

a. The helistop is needed to save lives;
b. The helistop is located so as to minimize impacts upon surrounding residential property; and,
c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

Based on these criteria, the Department of Construction and Land Use will make a recommendation to the Hearing Examiner, who will in turn make his recommendation to City Council. Again, the hearing on October 24 will only address item (a) above. All three items will be the subject of a public hearing before the Hearing Examiner at a later date.

Date of Notice: October 3, 1985.

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COH PROPOSED HELIPAD

Medical and related Agencies for
Public Hearing Notification

Representative Joanne Brekke
State House Committee on Social and Health Services
House Office Building, 2nd Floor
Olympia, WA 98504

Larry Thompson, Executive Director
Puget Sound Health Systems Agency
601 Valley Street
Seattle, WA 98109

Frank Chestnut, Director
Certificate of Need Program HB-31
State Department of Social and Health Services
Olympia, WA 98504

King County Medical Society
200 Broadway
Seattle, WA 98122

Washington State Medical Association
2033 6th Avenue
Seattle, WA 98101

Seattle-King County Hospital Society
2161 E. Hamlin
Seattle, WA 98102

Seattle Area Hospital Council
419 Occidental South, 5th Floor
Seattle, WA 98104

Dr. Michael Copass, Medical Director
Airlift Northwest
325 9th Avenue
Seattle, WA 98104

Helen M. Shawcroft
Director of Planning
University Hospital RC-34
1959 N.E. Pacific Street
Seattle, WA 98195

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File
CC 84-022

A. N. SHINPOCH
Secretary

STATE OF WASHINGTON

DEPARTMENT OF SOCIAL AND HEALTH SERVICES

Olympia, Washington 98504-0095

November 14, 1985

Robb Childs
Associate Director for Operations
Airlift Northwest
325 Ninth Avenue
Seattle, Washington 98104

Dear Mr. Childs:

The department has received your letter of November 12, 1985 requesting a clarification of, and background information concerning, the department's determination that the acquisition of the helicopter is subject to Certificate of Need review.

To clear up any misunderstanding, the October 30, 1985 letter was a formal determination of Certificate of Need applicability relative to the helicopter air ambulance of Airlift Northwest (ALNW). The department determined that ALNW made a capital expenditure in excess of the expenditure minimum to acquire the Agusta A109 Mk II. The letter of November 8, 1985 requires that a certificate of need application be filed with the department by December 30, 1985.

The additional information you requested will be sent under separate cover. If I may be of further assistance, please contact me at (206) 753-5857.

Sincerely,

Kristina M. Sparks
Supervisor
Project Review Unit
Certificate of Need Program
HB-31

KS:bb
cc: Maurice Click, Washington State Hospital Commission
Larry Thompson, Puget Sound Health Systems Agency
Anita Francis
Jerry Schneider
Beatrice Farrar Ryan

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KAREN RAHM
Secretary

STATE OF WASHINGTON
DEPARTMENT OF SOCIAL AND HEALTH SERVICES
Olympia, Washington 98504

May 7, 1985

~~DGHH~~ File
CC 84-022

RECEIVED
MAY 17 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dorothy F. Teeter
Director of Planning
The Children's Orthopedic
Hospital and Medical Center
P.O. Box C5371
4800 Sand Point Way N.E.
Seattle, Washington 98105

Dear Ms. Teeter:

This is to inform you that the construction of a helipad at Children's Orthopedic Hospital is subject to Certificate of Need review under the provisions of 70.38 RCW and 248-19 WAC. We consider a capital expenditure by a health care facility that enables on-site landing by an emergency services helicopter to be a capital expenditure which substantially changes the services of the facility under the provisions of WAC 248-19-230(1)(b).

Enclosed are Certificate of Need application materials. I would encourage you to meet with staff from this office, the Puget Sound Health Systems Agency and the Hospital Commission prior to development of your application so that we can identify potential issues and discuss elements of your proposal that should be emphasized in your application.

Sincerely,

Frank Chestnut
Director
Certificate of Need Program
HB 31

FC:bb
Enc
cc: Puget Sound Health Systems Agency
Hospital Commission
Katy Chaney, Seattle Dept. of Construction and Land Use
Jerry Schneider

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File cc 84.022

KAREN RAHM
Secretary

STATE OF WASHINGTON

DEPARTMENT OF SOCIAL AND HEALTH SERVICES

Olympia, Washington 98504

RECEIVED
JUL 22 1985
Dept. of Construction & Land Use

July 18, 1985

Hermia Ip
Department of Construction
and Land Use
City of Seattle
Municipal Building
Seattle, Washington 98104

Dear Ms. Ip:

This is to inform you, as a person who expressed an interest in Certificate of Need review requirements for helipad construction at Children's Orthopedic Hospital, that the department has reversed an earlier decision and has determined that the project is not subject to Certificate of Need review. Enclosed are copies of correspondence setting forth the change in our determination.

Sincerely,

Frank Chestnut

Frank Chestnut, Director
Certificate of Need Program HB-31

FC:kg

Enclosures

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KAREN R. GRIM
Secretary

STATE OF WASHINGTON

DEPARTMENT OF SOCIAL AND HEALTH SERVICES

Olympia, Washington 98504

July 12, 1985

The Honorable Ken Jacobsen
Washington State Representative
7307 40th NE
Seattle, Washington 98115

Dear Representative Jacobsen:

I am writing to advise you of further developments regarding the helicopter pad at Children's Orthopedic Hospital (COH).

The Department had advised COH that the project was reviewable under the Certificate of Need (CoN) program. This was based more on a concern regarding an apparent rapid escalation in the number of air ambulance projects under consideration than on a clear interpretation of the rules and regulations surrounding the CoN program.

COH has sued the Department, contending that the project is not reviewable under existing rules. Our Assistant Attorney General agrees with their position, pointing out that the project is not a new service or a substantial change in service, and does not exceed the capital or operating cost thresholds established by the CoN program.

We are going to reverse our initial position and declare the project not subject to review, rather than consume unnecessary time and money in litigation.

Please call me at 753-3327 if you would like to discuss this matter further.

Sincerely,

Bruce Ferguson

Bruce Ferguson
Assistant Secretary

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KAREN RAHM
Secretary

STATE OF WASHINGTON
DEPARTMENT OF SOCIAL AND HEALTH SERVICES
Olympia, Washington 98504

July 18, 1985

Dorothy Teeter
Director of Planning
Children's Orthopedic Hospital
4800 Sand Point Way N.E.
Seattle, Washington 98105

Dear Ms. Teeter:

In response to your legal appeal of our determination of June 10, 1985 that the construction of a helipad was subject to Certificate of Need review, we have reconsidered that determination. After reconsideration, we have concluded the project is not subject to Certificate of Need review under current program rules.

Sincerely,

Frank Chestnut
Director
Certificate of Need Program
HB 31

FC:bb

cc: Puget Sound Health Systems Agency
Washington State Hospital Commission

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KAREN RAHM
Secretary

Hermia
CC 84-022
F.L. 2

STATE OF WASHINGTON

DEPARTMENT OF SOCIAL AND HEALTH SERVICES

Olympia, Washington 98504

RECEIVED

JUN 13 1985

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

June 10, 1985

Mitchell J. Olejko
Davis, Wright, Todd, Riese, & Jones
4200 Seattle-First National Bank Building
Seattle, Washington 98154

Dear Mr. Olejko:

The department has received your letter of May 17, 1985, requesting, on behalf of Children's Orthopedic Hospital and Medical Center (COHMC), further consideration of the May 7, 1985 determination that the construction of a helipad at the hospital facililty is subject to prior Certificate of Need approval.

After a review of the information provided in your letter, I must inform you that the department's original determination remains unchanged. The reasons for this position are as follows:

- a capital expenditure, per WAC 248-19-220(8), will be, or has been, made relative to the construction of a helipad;
- that the helipad is required for, and inseparably linked to, the proposed on-site landing of an emergency services helicopter; and
- that the on-site landing of an emergency services helicopter would constitute a substantial change in the services of the facility per WAC 248-19-230(1)(b).

I would like to again encourage you to meet with the staff from this office, the Puget Sound Health Systems Agency, and the Washington State Hospital Commission prior to the development of your application so that we can identify potential issues and discuss elements of your proposal that should be emphasized in your application.

Sincerely,

Kristina M. Sparks

Kristina M. Sparks, Supervisor
Project Review Unit
Certificate of Need Program HB-31

KMS:GH:kg

Enclosure

cc: Larry Thompson, Puget Sound Health Systems Agency
Maurice Click, Washington State Hospital Commission
Katy Chaney, Seattle Department of Construction and Land Use
Jerry Schneider
Dorothy F. Teeter, COHMC

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Herria

A N. SHINPOCH
Secretary

STATE OF WASHINGTON

DEPARTMENT OF SOCIAL AND HEALTH SERVICES

Olympia, Washington 98504-0095

November 8, 1985

Rob Childs
Airlift Northwest
325 Ninth Avenue
Seattle, Wasnington 98104

Dear Mr. Childs:

On October 30, 1985 the department determined that the development of a helicopter air ambulance service by Airlift Northwest is subject to the requirement of prior Certificate of Need review and approval.

Please submit this application by December 30, 1985. If you would like a pre-application conference, or if you have any other questions, please contact Mr. George Haase of my staff at (206) 753-0905.

Sincerely,

Kristina M. Sparks
Supervisor
Project Review Unit
Certificate of Need Program
HB-31

KS:bb
cc: Maurice Click, WSHC
Larry Thompson, PSHSA
Anita Francis, CCAHT
Jerry Schneider
Beatrice Farrar Ryan

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CC 84-022

PSA
PUGET SOUND HEALTH SYSTEMS AGENCY
Serving The Ten-County Northwest Washington Area
601 Valley Street / Seattle, WA 98109 / (206) 464-6143

LARRY A. THOMPSON
Executive Director

RECEIVED
FEB 25
MAYOR'S OFFICE

February 22, 1985

Charles Royer, Mayor
City of Seattle
1200 Municipal Building
Seattle, Washington 98104

Dear Mayor Royer:

In response to your request, staff at Puget Sound Health Systems Agency have prepared the enclosed responses to your questions regarding helicopter transport in emergency medical situations.

Given the time and resources available to us, we have been unable to convene either an outside technical review panel or to undertake a formal public policy development process leading to definitive criteria. You should view our comments as a staff position paper.

I hope the enclosed comments will be of use to you. Please do advise me should you require further comment from Puget Sound Health Systems Agency.

Sincerely,

Larry A. Thompson

Larry A. Thompson
Executive Director

LAT/sae

Enclosure

cc: Treuman Katz, COH
Jerry Schneider

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February 21, 1985

Charles Royer, Mayor
City of Seattle
1200 Municipal Building
Seattle, Washington 98104

Dear Mayor Royer:

The Puget Sound Health Systems Agency (PSHSA) has prepared the following in response to your questions about the appropriate use of helicopter transport in emergency medical situations.

1. In what circumstances is it appropriate to use a helicopter in emergency medical transport to Seattle health care facilities?

Helicopter transport is appropriate when it operates within a regional emergency medical service (EMS) system. It is most valuable in linking rural and other isolated populations and medical facilities to tertiary trauma centers in Seattle.

Medical conditions which require helicopter transport are those in which more rapid transport and the availability of highly specialized care enroute can affect outcomes when compared to alternative methods of transportation. Helicopter transport is not inherently better than ground transport in ensuring survival and recovery.

Emergency services have developed as part of a regional system in Washington, and helicopter transport is integral to the provision of these services. The EMS system features substantial ground transport services throughout the northwest region, each of which is capable of responding rapidly to calls in the area it serves. Military Assistance to Safety and Traffic (MAST) helicopters transfer patients from accident sites within a 100-mile radius of Fort Lewis to Harborview in Seattle and to St. Joseph in Tacoma. Interhospital transfers and service to areas outside the range of MAST are provided by the fixed-wing transport of Airlift Northwest. Private helicopter service operating out of Bellingham further supports counties in the northwest section of our region.

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The existing EMS system is founded on comprehensive ground transport services and has developed into a well coordinated regional network. As a result, the use of helicopter services can be managed within the present system to better ensure that their use is limited to cases not adequately served by ambulance or plane transport.

2. How frequently is this means of emergency transport required?

Agreement on when medical conditions warrant the use of helicopters has not been reached. The introduction of helicopter transport is so recent that triage guidelines have not yet been developed which might help establish the frequency with which helicopter transport would appropriately be expected.

In the last year MAST completed approximately 220 field trips, most of which were to provide transport of patients from south King, Pierce, and Kitsap counties. Some of these patients were taken to St. Joseph Hospital. Approximately 120 were taken to Seattle hospitals, most of these to Harborview.

The extent to which this level of service approximates the expected need for helicopter transport is not presently known. Efforts are underway to formulate a method to determine the need for helicopter transport and to establish the resources necessary to meet that need. These efforts in Washington and in other parts of the country should be evaluated by clinicians, planners, and administrators in order to prepare guidelines tailored to the special requirements of our region.

3. How many facilities in Seattle and King County should be equipped with helipads to meet the medical need?

Which Seattle hospitals are best suited to meet the medical need?

Helicopter transport is only appropriate for the most critical cases. An evaluation of helicopter transport often cited to support its efficacy in improving outcomes suggests that major improvement occurs only in the more severe classifications representing a fraction of all trauma patients. This study by William G. Baxt and Peggy Moody indicates that helicopter transport is required for only a small subset of trauma patients especially when high quality ground transport systems are available.

MAST helicopters are presently transporting patients within King County directly to Harborview or to University Hospital (and occasionally other hospitals) by way of ambulance from the University of Washington soccer field.

While we cannot confirm that this arrangement is adequate, PSHSA recommends transport to only the most specialized trauma centers in Seattle, of which University and Harborview hospitals are excellent examples. Consideration of additional sites should evaluate not only unmet patient

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care needs, but also the trade-offs which will result in meeting those needs. Limiting the number of helipads may be an important component in ensuring limits on the growth of helicopter services and in fostering effective and cooperative use of the EMS system as a whole.

It is critical that the inappropriate use and proliferation of helicopter transport services be discouraged. Unfortunately, we are in the midst of "air wars" throughout the country as hospitals vie with one another to establish helicopter programs. The number of programs in the country doubled between 1980 and 1983, and the National Medevac Conference in 1983 opened with spokesmen suggesting that the number of programs would (and should) double again in five years. It is not at all evident, especially in areas served by MAST, that additional programs are needed and the impact of further growth may be adverse for the community as a whole. Particular patient care requirements of an institution may not be sufficient to outweigh the additional direct and indirect costs which may result from expanded helicopter services.

PSHSA is especially concerned that individual institutions will establish helipads and eventually separate helicopter programs in an effort to meet particular patient care objectives which might be met satisfactorily under the current arrangement of emergency services.

A conservative approach to the development of helicopter transport programs is advised for several reasons:

a) The present system is extremely cost-effective. MAST operations are provided at no additional cost to residents above the support of federal tax subsidies.

b) In our region, the need for additional helicopter services which would be sufficient to support such an expensive service at an individual institution is unlikely. To justify the program, transportation services would tend to be over-utilized with transport provided in cases which would more appropriately be handled at other levels in the EMS system.

c) Facility costs would tend to increase since helicopter services are generally "loss leaders," powerful marketing tools which may increase hospital utilization but which would not necessarily guarantee the additional revenues required to cover the additional costs incurred.

d) If unnecessary and used inappropriately, helicopter transport services established outside the current system have the potential to adversely affect the EMS programs now serving the region. The development of private programs could result in the elimination of MAST (as specified in federal guidelines). Second, the ambulance

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and plane support systems in place might begin to experience volume reductions which could jeopardize both the quality and financial viability of the services they provide.

In summary, should additional need for helicopter services be found in the area, a consortium approach rather than an institutional approach to the provision of these services is recommended. This approach will avoid duplication, support the development and implementation of appropriate triage guidelines, and encourage continued reliance on a regional EMS system. It will prevent the introduction of such services as marketing tools for individual institutions which needlessly drive the cost of hospital care up while reducing reliance on the existing EMS system.

5. What alternatives are available for transporting patients and what are the medical implications?

Helicopter transport has a vital place in the emergency medical service system. The alternative of not providing such service does not exist. The real alternative is to allow proliferation of helicopter transport services which will unnecessarily increase the cost of hospital care without significantly benefiting the community.

BG:rs:P2
2/21/85

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Your
Seattle
Fire Department

T.E. Gideon, Chief
Charles Royer, Mayor

February 28, 1985

RECEIVED
FEB 28 1985
MAYOR'S OFFICE

The Honorable Charles Royer, Mayor
City of Seattle

RE: HELICOPTER PADS AT HOSPITALS

Dear Mayor Royer,

In response to your recent inquiry regarding our views on the addition of helicopter pads at several of our hospitals, I submit the following.

Medical Considerations

There has been for the past two years a big push on the East Coast regarding the need for helicopters in pre-hospital care programs. We have never seen the need for a helicopter in our program, due to the compressed areas we cover and the large number of hospitals within the City limits.

We currently receive approximately 100 critically ill patients per year within the City of Seattle by Military Assistance for Safety and Traffic (MAST) helicopter and Coast Guard helicopter. The University of Washington and several other hospitals have combined funds and operate two fixed winged aircraft (Airlift Northwest) to pick up severely injured patients in the Northwest United States and Alaska. These aircraft operate out of Boeing Field. Airlift Northwest is planning in the near future to include one helicopter in their operations for local use. This could bring the total number of patients transported by helicopter to 150 per year.

The need for helicopter pads within the City is a slightly different matter. There are three different hospitals in the City that receive the majority of all helicopter patients. They are Harborview Medical Center, University of Washington and Children's Orthopedic Hospital. According to Dr. Michael K. Copass, Medical Director of the Emergency Room at Harborview Medical Center, approximately 60% of all helicopter transports are children. For the most part these patients are major trauma and direct delivery to the hospital of destination leads to decreased morbidity and mortality.

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Currently these patients are either brought to the helipad at Harborview Medical Center and then transferred to the hospital of destination by ambulance or medic unit, or rarely the helicopter lands at the northend of the parking lots north of Husky Stadium and then is transferred to the hospital of destination.

In our efforts to make Seattle a kid's place, we need to provide the finest and fastest emergency care available for the critically ill children who have to go to Children's Orthopedic Hospital by helicopter. It is important that they have a spot as close as possible to Children's Orthopedic Hospital to land. The other priority would be the University of Washington. Harborview currently has the helipad. With these three important hospitals having helipads, I feel that we are providing the best possible care.

There are numerous code requirements for the construction of helicopter pads and helistops. The costs associated with the construction are therefore significant. There would have to be a real need to justify these costs. Additionally, the hospitals would be required to obtain Federal aviation approval for any helicopter pad.

Aircraft operating at low altitudes over the central business district pose a significant problem in the event of a crash. If there was an increase in helicopter operations, the opportunity for incidents occurs. For emergency planning purposes, the Fire Department would therefore have to prepare for this kind of event.

Very truly yours,

Resources-City.
Argument of fiscal resource, partic. if combined w/ over-use of air paths. VA

T. E. Gideon, Chief
Seattle Fire Department

TEG:gac

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Seattle
Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

August 30, 1985

Bud Nicola, Director
Health Department
7th Floor, Yesler Building

RECEIVED
SEP 4 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

Dear Mr. Nicola:

I am writing to ask your help.

As you know, this Department has received an application from the Children's Orthopedic Hospital to establish a helipad on hospital grounds. The Land Use Code classifies the hospital as a Major Institution, and Major Institutions are permitted to establish helistops as a Council Conditional Use if the Council finds that:

a. The helistop is needed to save lives;
b. The helistop is located so as to minimize impacts upon surrounding residential property; and,
c. Use of the helistop will be restricted to occurrences involving life threatening emergencies.

We must make a recommendation to the City Council and our report must examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas as part of the analysis.

The question of medical need is beyond our area of expertise and this is where I am asking for your Department's assistance. In the past, helicopters have made emergency landings at the Graves athletic field and patients are then transported by ambulance to either Children's Orthopedic or to the University of Washington Medical Center. This request by Children's Orthopedic would mean those patients destined for Children's would instead land on hospital grounds with those destined for the University of Washington continuing to land at Graves field. The University of Washington may subsequently apply for a permit for a helistop on the grounds of the U. W. medical campus.

You have agreed to sponsor a public hearing and to give us your opinion on the question of medical need. The questions I would like your opinion on are:

1. What are existing emergency services in Seattle and how does the service fit into the existing services?
2. What emergency services does COH offer that are unique and unavailable elsewhere?
3. Is there a medical need for emergency helicopter service to serve the hospitals in this immediate area, (Children's and University of Washington primarily)? What, if any, would be the effect on the well-being of a patient transported by helicopter versus helicopter and ground transport as it is presently done? Are direct flights versus air/ground transports medically significant in terms of patient morbity and mortality?

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4. Is the current site at Graves athletic field adequate, or is there a medical need to locate such facilities on the hospital grounds? Or are there alternative sites? Would one such facility either at COH or U. W. be a preferred location?
5. What data are available regarding the number of emergencies that are likely to be generated by the population to be served by the helicopter services? How many landings per week will result?
6. If there is an established medical need, how would you define "occurrences involving life-threatening emergencies," as the use must be restricted to such occurrences? Are there other restrictions we should consider, based on existing medical care facilities capabilities?
7. How would you suggest we monitor the occurrences to ensure that the use is restricted to life-threatening emergencies should the use be permitted? Can we ensure that the service is used for emergency purposes only?

We have asked Children's Orthopedic Hospital for more information to support their application for the helistop (see attached). This information is necessary for your consideration of these questions. As soon as we receive it, we will send you a copy. As you know, we are happy to help with the scheduling and public notice of the hearing.

Thank you for your assistance. If you have questions, please call me at 625-2262 or Katy Chaney at 625-4274.

Sincerely,

Katy Chaney

FOR BEATRICE FARRAR RYAN
Interim Director

KC:vg

Attachment

cc: Truman Katz, Director, Children's Orthopedic Hospital

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PUGET SOUND HEALTH SYSTEMS AGENCY
Serving The Ten-County Northwest Washington Area
601 Valley Street / Seattle, WA 98109 / (206) 464-6143

LARRY A. THOMPSON
Executive Director

RECEIVED
FEB 25 1985
MAYOR'S OFFICE

February 22, 1985

Charles Royer, Mayor
City of Seattle
1300 Municipal Building
Seattle, Washington 98104

Dear Mayor Royer:

In response to your request, staff at Puget Sound Health Systems Agency have prepared the enclosed responses to your questions regarding helicopter transport in emergency medical situations.

Given the time and resources available to us, we have been unable to convene either an outside technical review panel or to undertake a formal public policy development process leading to definitive criteria. You should view our comments as a staff position paper.

I hope the enclosed comments will be of use to you. Please do advise me should you require further comment from Puget Sound Health Systems Agency.

Sincerely,

Larry A. Thompson

Larry A. Thompson
Executive Director

LAT/sae

Enclosure

cc: Treuman Katz, COH
Jerry Schneider

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February 21, 1985

Charles Royer, Mayor
City of Seattle
1200 Municipal Building
Seattle, Washington 98104

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1. In what circumstances is it appropriate to use a helicopter in emergency medical transport to Seattle health care facilities?

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2. How frequently is this means of emerg y transport required?

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Which Seattle hospitals are best suited to meet the medical need?

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care needs, but also the trade-offs which will result in meeting those needs. Limiting the number of helipads may be an important component in ensuring limits on the growth of helicopter services and in fostering effective and cooperative use of the EMS system as a whole.

It is critical that the inappropriate use and proliferation of helicopter transport services be discouraged. Unfortunately, we are in the midst of "air wars" throughout the country as hospitals vie with one another to establish helicopter programs. The number of programs in the country doubled between 1980 and 1983, and the National Medevac Conference in 1983 opened with spokesmen suggesting that the number of programs would (and should) double again in five years. It is not at all evident, especially in areas served by MAST, that additional programs are needed and the impact of further growth may be adverse for the community as a whole. Particular patient care requirements of an institution may not be sufficient to outweigh the additional direct and indirect costs which may result from expanded helicopter services.

PSHSA is especially concerned that individual institutions will establish helipads and eventually separate helicopter programs in an effort to meet particular patient care objectives which might be met satisfactorily under the current arrangement of emergency services.

A conservative approach to the development of helicopter transport programs is advised for several reasons:

a) The present system is extremely cost-effective. MAST operations are provided at no additional cost to residents above the support of federal tax subsidies.

b) In our region, the need for additional helicopter services which would be sufficient to support such an expensive service at an individual institution is unlikely. To justify the program, transportation services would tend to be over-utilized with transport provided in cases which would more appropriately be handled at other levels in the EMS system.

c) Facility costs would tend to increase since helicopter services are generally "loss leaders," powerful marketing tools which may increase hospital utilization but which would not necessarily guarantee the additional revenues required to cover the additional costs incurred.

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and plane support systems in place might begin to experience volume reductions which could jeopardize both the quality and financial viability of the services they provide.

In summary, should additional need for helicopter services be found in the area, a consortium approach rather than an institutional approach to the provision of these services is recommended. This approach will avoid duplication, support the development and implementation of appropriate triage guidelines, and encourage continued reliance on a regional EMS system. It will prevent the introduction of such services as marketing tools for individual institutions which needlessly drive the cost of hospital care up while reducing reliance on the existing EMS system.

5. What alternatives are available for transporting patients and what are the medical implications?

Helicopter transport has a vital place in the emergency medical service system. The alternative of not providing such service does not exist. The real alternative is to allow proliferation of helicopter transport services which will unnecessarily increase the cost of hospital care without significantly benefiting the community.

BG:rs:P2
4/21/85

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Dr. Bud Nicola
Health Officer
700 Yesler Building
Seattle, WA 98104

Dear Dr. Nicola:

The essence of the debate about the Children's Hospital helipad should be focused on possible locations that would be satisfactory to all the parties concerned. To date, COH has rejected the notion put forward by many people that it continue to use the soccer field as a landing site. COH has given three main objections to this idea: (1) the field is muddy during several months of the year, (2) landing at the field would add 25 minutes to the trip and (3) the patient's life would be endangered by the transfer from the helicopter to an adjacent ambulance. It is difficult to take the first argument seriously as it could be solved rather easily by using some existing paved area or by developing a new paved area specifically built for helicopter landings and ground transportation access. It is also hard to believe that it could take more that five minutes to transfer a patient from the helicopter to an adjacent ambulance. Since it is only a three-minute ride from the soccer field to the door of the emergency room at COH, it seems reasonable to estimate that using Soccer Field would add no more than 10 minutes to the overall trip. There is little indication in the literature that this much additional time would be critical to the survival or longer term outcome for the patient in the great majority of the cases that are likely to be transported to COH by helicopter. For example, if a helicopter was needed to transfer a patient from a hospital in Bellingham to COH, it is likely to take 70 minutes if the helicopter lands at COH and 80 minutes if it lands at the Soccer Field. If the patient was reasonably stable and could be transported by a Bellingham-based ground ambulance, the trip could be made in 90 minutes or less, safely and at much less cost to the patient. The important question here is how often would 10 minutes make a substantial difference in outcome? COH and other responsible physicans must examine this question in considerable detail before any credible judgments on the medical need for helicopter service to the COH doorstep can be made. It is important to note that COH has used the Airlift Northwest helicopter to bring 14 patients to the heliport at Harborview Hospital over the past few months. These patients have endured a transfer to a ground ambulance and a 30-minute ride to COH. If these 14 patients had been landed at the Soccer Field, they would have arrived at COH about 27 minutes earlier. If minutes are so critical, why has COH not been using the Soccer Field as a landing site since they began using the helicopter service in May of this year? If an additional 27 minutes does not matter, why does the 10-minute increment added by a Soccer Field landing matter? Again, it is up to COH and other qualified physicians to answer such questions in a forthright manner using credible data.

The third argument revolves around the assertion that tubes may fall out when a small patient is moved from one transport vehicle to another, causing unneeded difficulties. It is hard to imagine that this is a problem that cannot be solved, given the vast technological resources available to the medical community today. Surely there are people clever enough to find a way to solve this problem to the

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satisfaction of all concerned.
The three arguments that COH has used to prove that they cannot continue to use the Soccer Field as a landing site simply do not hold up when examined in an objective manner. Unless COH can provide more convincing evidence that the Graves Field landing site is not satisfactory from a medical need point of view, they should continue use it and abandon their plans for a helipad on their premises.

Yours sincerely,

Jerry B. Schneider
5003 45th N.E.
Seattle, WA 98105

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October 23, 1985

Dr. Bud Nicola
Director, Health Department
7th floor
Yesler Building
Seattle, Washington 98104

Dear Dr. Nicola:

I am writing this letter in response to an inquiry from Children's Orthopaedic hospital concerning my professional judgement as to the placing of helipads near selected and designated institutions for the management of the critically ill.

By way of background I am a Board Certified General Surgeon who had been working in trauma for approximately five years. My previous employment was within the state of Maryland as the state medical Director for Emergency Medical Services and as such coordinated the response of the Maryland State Police Helicopter Program which transferred approximately 2,700 critical patients last year. They transported these victims to designated centers for trauma, neonates, pediatric trauma, burns, spinal cord injuries, penetrating eye injuries and replantation centers. During my tenure in Maryland the majority of hospitals upgraded helipads to enable them to access this rapid air transport service.

At this time I am the Medical Director and Chief Executive Officer of Boston Med Flight - a helicopter program, originating in Boston and serving the New England region. This hospital consortium represents Boston University Hospital, New England Medical Center (to include the Kiwanis Pediatric Trauma Institute), Massachusetts General Hospital, the Massachusetts Eye and Ear Infirmary, Boston City Hospital, Beth Israel Hospital, Brigham and Women's Hospital and Children's Hospital Boston. Within Boston there are concerns from various agencies as to the need for the receiving centers to have adequate helicopter landing areas.

Following the designation process hospitals begin to receive not only inter-hospital referrals but also patients directly from scenes of accidents. Patients who previously would have succumbed in the prehospital phase now, because of the emergence of E.M.S. systems and helicopter availability, survive to reach hospital. For many institutions there is a learning process to be able to manage these injuries. There is no doubt that the time from accident to definitive care is at a premium in managing these types of patients and that any increase in time from scene to trauma center may translate out to an increase in mortality or morbidity. Many agencies in their R.F.P.'s for specialty center designation mandate the close proximity of a helipad to decrease transit time to a minimum.

RECEIVED
OCT 25 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

BOSTON
Med Flight
Peabody 1 818 Harrison Avenue Boston, MA 02118 (617) 424-5208

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There are concerns other than that of time which may be of critical importance. An unstable patient should not be handled unnecessarily or transferred from one vehicle to another in their critical state. The experience with pediatric trauma in Baltimore may illustrate this point. At the time of implementation of the program Johns Hopkins did not have a well-equipped helipad and indeed the state police helicopters used to land a few blocks away from the hospital and rely on surface ambulance to complete the transfer. The physicians working within the pediatric trauma center recognized this deficiency and collaborated with community groups, architects and health planners and built a helipad directly on the roof of the hospital. This is served by a dedicated elevator which now takes patients from the helipad directly into the pediatric rescusitation area. Within this area all pertinent expertise immediately is available so that the patient has immediate access to the radiology suite, the CAT scanner or the operating room.

Although no community polls were conducted during the implementation of this program, during my stay in Maryland I received no complaints from community groups concerning the helicopter program. They were made aware that air transport was reserved only for those critical patients in direst need. Even with a busy day at the pediatric trauma center in Baltimore only five or six helicopter transports would be flown during a 24 hour period; this did not seem to cause community concern.

I hope that this brief letter addresses some of the points that will be raised at the public hearing on Thurday. If I can provide any further information please don't hesitate to let me know.

Thank you,

Sincerely,

Alasdair Conn, MD
Medical/Executive Director

1211A/56
AC/js

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Dr. Bud Nicola, Health Officer
700 Yesler Building
Seattle, Washington 98104

October 23,1985

Dear Dr. Nicola:

In response to the scheduled Hearing on medical need for a helipad at Children's Orthopedic Hospital, we would like to submit a number of questions and recommendations which we feel should be examined and analyzed before a decision is made on this project. We hope this list is not overwhelming-- we have tried to be exhaustive without being exhausting. We do feel that air transport is an important and integral part of emergency medical care; we are not sure that the Airlift Northwest's plan to site a helipad at COH has been as carefully thought out as it should, given the potential impacts on such things as health care costs, enviromental safety and quality, and availability of emergency health care delivery systems to patients without adequate financial resources.

We also wondered if it would be possible to review your decision before it is submitted to the Department of Construction and Land Use. We think that it is very important that a draft opinion be circulated to all parties concerned for comment before it is completed and submitted to DCLU. Thank you for your consideration of this matter. If we can be of any further assistance, please feel free to contact us.

Sincerely,

Citizens Concerned About Helicopter Transport

Liz Anderson Ruth Engelberg Anita Francis Jerry Schneider

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We have found these people to be knowledgeable about the complexities of helicopter utilization for emergency medical care. We thought you might find it useful to talk with some of them.

1. Dr. Ken Mattox
   Ben Taub Hospital
   Houston, Texas
   1-713-799-4557

2. Dr. Frank Lewis
   San Francisco General Hospital
   San Francisco, California
   1-415-821-8816

3. Dr. Howard Champion
   Chief of Trauma, Washington Hospital
   Washington, D.C.
   1-202-541-7257

4. Dr. Michael Krentz
   Chairman EMS Committee of American College of Emergency Physicians

5. Dr. Michael Rhodes
   Chief, Trauma Division
   Lehigh Valley Hospital Center
   Allentown, Pa.
   1-215-776-8999

6. A.J. Heightman
   Executive Director of Eastern Pennsylvania EMS Council
   1-215-820-9212

7. Nancy Race
   Assistant Adminsitrator, University of Michigan Hospitals
   Ann Arbor, Michigan
   1-313 -763-2111

8. Dan Frost, Attorney at Law
   Fairfield and Woods
   1600 Colorado National Building
   950 17th Street
   Denver, Colorado 80202
   1-303-534-6135

Some local physicians who have also had experience, either research or clinical, in the use of helicopters for EMS with children and neonates:

1. Dr. Paul Mendelman
   523-6831

2. Dr. Durlin Hickok, Maternal/Fetal Medicine
   747 Summit Ave
   Seattle, Washington 98104
   386-2101

3. Dr. Paul Herndon, Pediatric Cardiology
   PO Box 5588
   Tacoma, Washington 9840
   272-1281

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QUESTIONS FOR CONSIDERATION

I. Questions concerning the evaluation of the existing service

1. Since the inception of Airlift Northwest, what data specifically relate to problems occuring while transporting children and, in particular, with regards to the different systems used?
   a. Fixed wing to ground ambulance
   b. Helicopter to ground ambulance
   c. Ground ambulance to emergency room door

2. If a problem occurred, was the prognosis and outcome altered? There have been 17 patients delivered to COH via Airlift Northwest during the months May to August. 14 went to Harborview initially and were then transferred by ground; 3 were delivered directly to COH's emergency room. These 17 could provide a basis for studying outcome and role of transport.

3. Do assessments for helicopter needs agree across agencies, like Puget Sound Health Systems Agency, Department of Public Health, and Washington Medical Association, as well as across hospitals who may not be either financially or politically involved?

4. What populations are presently well-served by the current transport system and what populations are not? Will this program make a difference in both of these populations?

II. Questions concerning the role of Airlift Northwest as part of existing emergency transport services

1. Medic 1 has been described as one of the best ground transport systems in the nation, with a very fast response time. What will the response time of a helicopter be, taking a call at Harborview, picking up a crew at COH, and then going out to the site? Will it compare favorably or unfavorably with Medic 1, from the time the call is received until the patient is in the hospital?

2. MAST presently plays an important role in emergency medical care, providing emergency transport,without charge, to a wide geographical area. What will its role be, in relation to Airlift Northwest?

   a. Has there been an agreement reached between Airlift Northwest and MAST in terms of which service will transport what patients and under what circumstances?
   b. Does MAST have any plans to purchase and train pilots and crew with smaller helicopters?
   c. Could MAST meet the needs of COH with a smaller, quieter aircraft and a better trained team?
   d. Will the helipad that COH is intending to build accomodate MAST helicopters?
   e. If the Airlift Northwest helicopter is on a call, will MAST be used?

3. Presently, we understand the Airlift Northwest does interhospital transports. Will they also do field pickups?

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III. Questions concerning utilization plans for helipad

1. What population of patients do you anticipate being transported by helicopter?

a. All neonates
b. All intubated patients
c. All patients with critical illnesses
d. Trauma patients requiring surgery

2. Should one assume that all patients that the flight team is sent to will automatically be transported to COH? What are the possibilities of the patient being treated at the referring hospital, if the flight team deems it appropriate (i.e., dying or untreatable cases)? Will COH return the patient to the community hospital, at some point in time, via helicopter or ground ambulance?

3. Will the helicopter be used for transporting organs for transplants? Do you see this service expanding to include this type of use?

4. Are there utilization forecasts for the helipad for at least five years following project completion, as required in the Certificate of Need legislation?

IV. Questions concerning procedures for sending out the Airlift Northwest helicopter

1. Who will be responsible for making the decision to transport by helicopter? Who will have authority to call Airlift Northwest--physicians, residents, nurses?

2. What will happen when a call comes in and the helicopter is out on a mission? Is there a backup helicopter and crew?

3. Will a triage system exist when two or more calls come in at the same time? Further, if triage can work when the helicopter is unavailable, could a similar system be used to determine cases that will not be compromised going to an alternate site?

4. If helicopter transport becomes the "standard of care" regardless of true indications for its use, how will it use be controlled and calls be monitored for true emergencies?

V. Questions concerning site procedures and risks

1. How many yards will the helipad be from the ER door at COH? What is the likelihood that an ambulance will have to be used to transport the patient from the pad to the ER door, as they do at Harborview?

2. What would the transport procedure be during inclement weather? Where would the patient be taken and who would treat the patient if the pilot was unable to land at COH?

3. Will Airlift Northwest need to refuel at the COH pad site?

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4. Noise data, provided by COH, indicate that 15-20 percent of individuals who are sleeping will be awakened by the helicopter noise. This is a particular problem for senior citizens, who are living only yards from the helipad. Can this risk be controlled, minimized by use of a compromise site?

VI. Questions concerning on-board procedures and risks

1. How likely is it that tubes or life support systems will disengage during transfer, either on board the helicopter or during other points of transfer?

2. How accessible is the patient in the helicopter? Can tubes be easily manipulated inside the aircraft? How might tracheostomy or resuscitation efforts be conducted?

3. What part does helicopter noise and vibration within the cabin play in the condition of the patient and the monitoring of medical equipment on board?

VII. Questions concerning stabilization of patients before transport

1. What role does patient stabilization play in transporting a patient safely? Can stabilization provide a system for judging when time is crucial and when it is not?

2. Is there any provision in the Airlift Northwest contract for flight teams to educate or instruct referring hospital personnel in patient stabilization, thus eliminating some of the need to transport quickly and directly to COH?

VIII. Questions concerning experiences with EMS helicopters in other states

1. Why did Stanford University recently decide not to purchase helicopter transport?

2. Did Portland recently deny two hospitals permission to build helipads? If so, why?

3. Currently, there is a lawsuit in progress regarding establishing a helipad in a residential area in Denver. What are the circumstances involved in that case?

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RECOMMENDATIONS

1. An independent peer review of all Airlift Northwest flight records from 1982 to the present to determine the true incidence of these transfer problems and whether or not a change in outcome of the patient was related to transport difficulties (Clinical scholars might be likely candidates for doing such a review).

2. A one on one confidential and anonymous interview between all, both past and present, Airlift Northwest flight physicians and Dr. Nicola to assess the data from actual flight physicians. If there were problems, they would certainly remember as they were the most involved.

3. Any records received from Airlift Northwest should indicate the level of training and experience of the flight doctors and nurses aboard. Were they Board Certified, intensivists, or residents with/without intensive care training? Could inexperience have played a role in deciding to land at the ER door vs. IMA field, rather than actual needs of the patient?

4. Review the three cases that landed at the ER door and determine whether an additional transfer would have effected the ultimate outcome of the patient.

5. In cases where COH indicates that there has been a death, review to determine what actual prognosis and condition the patient was in at the time of the pickup. For example, what was the actual birth weight, stabiiization efforts, etc..

6. Determine what, if any, risks to the patient occur when a tube must be reinserted.

7. Review data on monitoring a patient in three different modes of transportation- ambulance, fixed wing, helicopter. What are inherent problems of each?

8. Review all flight records of MAST so as to determine whether or not any of the patients were compromised by the additonal transfer.

9. Determine patient origins of patients transported to COH via Airlift Northwest for past three years.

10. Examine medical need as it pertains to the student population at Laurelhust Elementary School. The effects of aircraft flying over a school population in terms of stress, safety, and decrease in learning capability due to noise have been documented.

11. Examine medical need as it pertains to impacts on the elderly, with continued and unexpected noise from aircraft landing and taking off close to their homes. Sleep disruption is a powerful impact and one that is well documented.

12. Examine possibilities of alternative sites and triage systems which would allow a balance between the medical needs of patients and of the community.

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Councilwoman Cynthia Sullivan
King County Council District 2

402 King County Courthouse
Seattle, Washington 98104
(206) 344-3483



October 30, 1985

Dr. Bud Nicola, Director
King County Health Department
400 Yesler Building, 7th Floor
Seattle, Washington 98104

Dear Dr. Nicola:

I am concerned that in the review process that is being conducted by the Health Department that the following issues are adequately evaluated prior to the decision being made on whether or not to grant the Children's Orthopedic Hospital (COH) authority to construct a helipad. My concerns are primarily about whether costs to the County and county residents will be increased if this facility is built. For example, will the costs for this service be spread across all users of COH, and if they are not and the service will be provided on an ability to pay basis, then is the service one for truly medical emergency services, or is it that the poor just do not have the same kind of medical necessity. If costs are spread across all hospital users, will this impact the payments King County makes to COH for the care and treatment for children and youth on the counties continuing contract.

A couple of issues which may reach beyond the bounds of this specific facility but are brought in to focus during this process are:

a. Are there other agencies that should be more involved in the process of approving this kind of facility. Examples of such agencies include the Emergency Medical Services Council, King County Health Planning Board, and the Puget Sound Health Service Agency.

b. Is there anything that we, the King County Council and the Health Department, can or should do to push for a regional health plan? If so, what? How? When?

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I recognize that all of the above issues are not resolvable during the review process for the COH helipad, but these are issues which this process has brought to the forefront. If we can find a means to explore these questions and perhaps some direction for the County move on these regional health issues.

Sincerely,

Cynthia Sullivan

CS/ar

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Lothar H. Pinkers, M.D.

GENERAL SURGERY
TRAUMA

1201 - 116TH NORTHEAST
BELLEVUE, WA 98004
206 - 454-5331

RECEIVED
OCT 28 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

24 October 1985

Dr. Bud Nicola
Director, Public Health, King County
7th Floor
400 Yesler Way
Seattle, Wa 98104

Dear Bud,

I'm enclosing copies of some correspondence dating 1983 dealing with pediatric transport costs and times. The last figures on the second page are difficult to read, but the actual amount is $1463. These are 1983 dollars and represent air to ground transportation and ground to hospital. The figures for the helicopter are grossly different and while as I understand it from Dr. Copass, they do not charge the full cost to the patient, somebody has to pay the $2 - $3000 actual costs for those transports. I'm also enclosing the guidelines for perinatal care Chapter 8. Lastly, the reference that I had made was the pamphlet published by the neonatologist at the University entitled, Immediate Care and Transport of the Sick Newborn by Bethany Farris,RN and William E Truog, MD.

As we discussed, the actual deliniation of medical necessity or medical resonableness for helicopter is very scarce. We have made a start of it, at a State level, and may succeed in this in the next six months or so. The next meeting of the WSMA committee on EMS Standards will be in December and dealing with this subject.

If the preponderance of evidence suggests to you that a helipad should be permitted at COH, May I make the following suggestion. Since data is so sparce and since the Children's personna is so aggressive and resistant to review, I really think we need more data. I suggest that individual patient records should be reviewed for medical necessity by an outside panel which includes some people well established in emergency medical services fields as well perhaps out of County reviewers. I would also suggest a conditional use permit, for six to nine months, that would enforce this kind of record keeping and permit a retrospective judgment about the medical necessity for helicopter transport as well as gathering data on frequency

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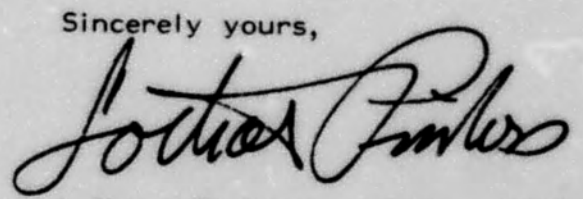
of use, etc. If these items all seem appropriate, then an additional conditional use permit would be issued. If the preponderance of data suggested inappropriate use, then denial of an extension might be a reasonable course of action in the future.

I do not envy you your King Solomon role in "dividing up the baby" but the results of your efforts will be quite helpful on a full State basis.

Sincerely yours,



L.H. Pinkers, M.D. FACS

LHP:ys
Enclosure

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

October 14, 1985

MEMO FOR THE RECORD

RE: Transports to COHMC for August, 1985

Total admissions to COHMC for August 1985		1,071
Ambulance transports to the Emergency Room directly excluding prearranged transports with the transport team		82
Total prearranged newborn ground transports		42
	to COHMC	34
	to UW	8
Total prearranged fixed wing transports		52
	to COHMC	30
Total prearranged rotary transports		34
	to COHMC	6

On an annual basis there are 400-450 ground neonatal transports worked out through the transport team. Eighty to 85% of these go to COHMC.

JMN:dn

P.O. BOX C5371 • 4800 SAND POINT WAY N.E. • SEATTLE, WASHINGTON 98105 • (206) 526-2000

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AIRLIFT NORTHWEST DATA SHEET

August, 1985

FIXED WING

FLIGHT	DATE	FROM (CITY)	TO (RECEIVING HOSPITAL)	MILES	DIAGNOSIS	COMMENTS
8-1320-1	8/1/85	Swedish	Home, Pasco, WA		Melanoma Cancer	1 patient return,pickup
	8/1/85	Yakima, WA	Children's	364	Prematurity, PDA	next patient
8-1321-2	8/1/85	Couer d'Alene, ID	Children's	480	Stevens-Johnson Syndrome	
8-1322-3	8/2/85	University	Baylor University, Houston	3511	Dissecting AAA	Sabreliner
8-1323-4	8/2/85	Ketchikan, AK	Harborview	1257	Subarachnoid Hemorrhage	
8-1324-5	8/2/85	Kalispell, MT	Children's	774	Platelet Disorder	48 WA
8-1325-6	8/3/85	Walla Walla, Wa	Children's	412	Apnea, Bradycardia, Seizures	
8-1326-7	8/4/85	Kennewick, Wa	Harborview	337	Liver Failure	
8-1327-8	8/5/85	Ketchikan, AK	Harborview	1257	Crush Injury Right Arm	
8-1328-9	8/5/85	Yakima, WA	Children's	248	Hydrocephalus, Prematurity	
8-1329-10	8/6/85	Bellingham, Wa	Children's	205	Hemolytic Uremic Syndrome	
8-1330-11	8/6/85	Walla Walla, Wa	University Hospital	412	Leukemia, Subendocardial MI	
8-1331-12	8/6/85	Ketchikan, Ak	Harborview	1257	Recurrent V Tach	Sabreliner
8-1332-13	8/7/85	Yakima , WA	Children's	248	Meningomyelocele	48WA
8-1333-14	8/7/85	Fairbanks, AK	VA Hospital, Oklahoma City	5407	Brain Stem Stroke	Sabreliner
8-1334-15	8/8/85	Wenatchee, WA	Harborview	248	Aneurysm	
8-1335-16	8/8/85	Wenatchee, Wa	Children's	248	Meconium Aspiration	
8-1336-17	8/8/85	Juneau, AK	Valley General, Renton,WA		Unstable Angina	2 patient
			Valley General, Renton,WA	1257	MI, CHF	transport
8-1337-18	8/ 9 /85	Children's	Deaconess, Great Falls, MT	928	IRDS, Prematurity	
8-1338-19	8/11/85	Bellingham, Wa	Children's	205	Acute Respiratory Distress	
8-1339-20	8/12/85	Richland , WA	University Hospital	338	Bladder CA	
8-1340-21	8/12/85	Prosser, WA	Virginia Mason	281	Dementia, Pancreatic CA	
8-1341-22	8/13/85	Children's	Yakima Valley Med Ctr, Yakima	248	Seizures	
8-1342-23	8/15/85	Juneau, AK	Harborview	1662	Recurrent V Tach	
8-1343-24	8/15/85	Petersburg, AK	Children's	1492	S/P Arrest, Aspiration	48WA

β-1344-25	8/15/85	Children's	St. Mary's, Walla Walla, WA	412	Pertussis	
8-1345-26	8/15/85	Ketchikan, AK	Harborview	1257	Multiple Trauma	
8-1346-27	8/16/85	Wenatchee, WA	Children's	248	Pneumonia	
8-1347-28	8/17/85	Kennewick, WA	Swedish	337	Pelvic Fractures	
8-1348-29	8/18/85	Juneau, AK	Harborview	1662	Burn	
8-1349-30	8/18/85	Kalispell, MT	Harborview	774	Burn	48 WA
8-1350-31	8/18/85	Juneau, AK	Harborview	1662	C_5 Quadreplegia	Sabreliner
8-1351-32	8/18/85	Yakima, WA	Children's	248	Near drowning	
8-1352-33	8/19/85	Wrangell, AK	Aborted flight			48 WA
8-1353-34	8/19/85	Children's	Yakima Valley Med. Ctr. Yakima		Bronchopulmonary dysplasia S/P Shunt	2 Patient Transport
			Yakima Valley Med. Ctr. Yakima		Meningomyelocele S/P Shunt	2 Patient Transport
8-1354-35	8/19/85	Bozeman, MT	Tacoma General, Tacoma, WA	1064	Unstable Angina	
8-1355-36	8/20/85	Wrangell, AK	Children's	1452	Congenital heart disease	
8-1356-37	8/20/85	Port Angeles, WA	Virginia Mason	174	Intracerebral hemorrhage	48 WA
8-1357-38	8/20/85	Omak, WA	Cabrini Hospital	332	Retinal detachment	
8-1358-39	8/21/85	Douglas - Okanogan via Winthrop	Children's	255	Transient tachypnea of newborn	
8-1359-40	8/23/85	Browning, MT	Children's	987	Congenital Heart Disease	
8-1360-41	8/23/85	Ketchikan, AK	St. Mary's, Reno, NV	2252	L3 Fx; Tibia-fibula Fx	Sabreliner
8-1361-42	8/25/85	Petersburg, AK	Harborview	1492	Facial fractures, CHI	
8-1362-43	8/26/85	Walla Walla, WA	Children's	412	IRDS, prematurity	
8-1363-44	8/27/85	Great Falls, MT	Children's		Transposition of Great Arteries	2 PT Fligh
		Great Falls, MT	Children's	928	Hypoplastic left heart syndrome	2 PT Fligh
8-1364-45	8/27/85	Richland, Wa	Children's	337	Pseudomonas Sepsis Acute Undifferentiated Leukemia	
8-1365-46	8/28/85	Port Angeles, WA	Children's	174	Near Amputation L Finger	
8-1366-47	8/29/85	Kennewick, WA	Children's	337	Resp. distress, cystic fibrosis	
8-1367-48	8/29/85	Great Falls, MT	Children's	928	Trisomy 18, VSD, Double Outlet RV	

FIXED WING

August, 1985

8-1368-49	8/30/85	Wenatchee, WA	Children's	248	Intracerebral Mass	
8-1369-50	8/31/85	University Hospital	Kalispell Regional; Kal'l, MT	774	Ovarian CA	
8-1370-51	8/31/85	Children's Hospital	Kaiser-Perm'te, Panorama City	1687	Acute Lymphocytic Leukemia	Sabreliner
8-1371-52	8/31/85	Great Falls, MT	Children's	928	Total Anomalous Pulmonary Venous Return	

YEAR TO DATE

RECEIVING HOSPITAL - FIXED WING

# of Flights		COH	HMC	PMC	UH	OTHERS	ABORT
52	Month of August	30	11	0	4	10	1
362	Calendar Year	161	82	8	38	67	2
97	Fiscal Year	43	22	2	10	23	1

TOTAL MILEAGE: (Month of August, 1985) 44,684

Calendar year 264,835

Fiscal year 84,021

H8-75-1	8/1/85	Aberdeen, WA	Harborview	153	1.8	GI Bleed
H8-76-2	8/1/85	Mt. Vernon, WA	Harborview	113.6	.9	80% Burn
H8-77-3	8/2/85	Port Townsend, WA	Virginia Mason	79.9	.8	Intercerebral Bleed
H8-78-4	8/2/85	Omak, WA	Children's	253	2.1	Seizures
H8-7 -5	8/3/85	Bremerton, WA	Children's	43.4	.6	Bowel Perforation *
H8-80-6	8/7/85	Port Angeles, WA	Virginia Mason	125.6	1.1	Unstable Angina
H8-81-7	8/7/85	Coupeville, WA	Harborview	93.6	1.2	G.I. Bleed
H8-82-8	8/8/85	Port Angeles, WA	University Hospital	125.6	.9	Preterm labor
H8-83-9	8/10/85	Port Angeles, WA	Group Health	120.2	1.1	Basilar Skull Fracture
H8-84-10	8/11/85	Auburn, South King County	Harborview	33.6	.4	MVA
H8-85-11	8/11/85	Mt. Vernon, WA	Children's	113.6	.9	Sepsis, dehydration
H8-86-12	8/12/85	Port Angeles, WA	Harborview	125.6	1.1	Transected trachea
H8-87-13	8/14/85	Port Townsend, WA	Children's	81.6	.8	Closed Head Injury
H8-88-14	8/15/85	Port Townsend, WA	Virginia Mason	81.6	.9	Intracerebral bleed
H8-89-15	8/15/85	Port Angeles, WA	Swedish	125.6	1.1	T_{12} Fx; ankle, foot fx.
H8-90-16	8/16/85	Poulsbo, WA	Harborview	39.6	.4	Pedestrian - trauma
H8-91-17	8/17/85	Chehalis, WA	Harborview	151.6	1.0	MCA; head injury
H8-92-18	8/18/85	Port Angeles, WA	Harborview	151.6	1.0	MCA; femur and ankle fracture
H8-93-19	8/18/85	Coupeville, WA	Harborview	87.6	.9	GI bleed
H8-94-20	8/18/85	Port Angeles, WA	Swedish	152.8	.9	Thoracic Cord Compression
H8-95-21	8/20/85	Forks, WA	Children's	215.8	1.7	30 weeks - prematurity *
H8-96-22	8/21/85	Port Angeles, WA	Harborview	125.6	1.0	MCA; multiple trauma
H8-97-23	8/21/85	Bremerton, WA	Harborview	32	.3	C_2 Fx-subluxation
H8-98-24	8/22/85	Port Angeles, WA	Swedish	125	.9	Unstable angina
H8-99-25	8/23/85	South Bend, WA	Harborview	196	1.3	AAA; bowel perforation

H8-100-26	8/23/85	Bremerton, WA	Harborview	32	.3	R/O CVA
H8-101-27	8/24/85	Bremerton, WA	Bremerton, WA	32	.4	C_{3-5} fracture
H8-102-28	8/25/85	Morton, WA	Harborview	138	1.3	MVA; fx humerus
H8-103-29	8/27/85	Port Angeles, WA	Harborview	119.6	.9	Pelvic Fracture
H8-104-30	8/27/85	Chehalis, WA	Children's	141.5	1.2	Meningitis *
H8-105-31	8/28/85	Coupeville, WA	Flight aborted before landing	51.6	.7	
H8-106-32	8/30/85	Bremerton, WA	Harborview	28.2	.4	Fx tib - fib
H8-107-33	8/31/85	Port Angeles, WA	Virginia Mason	126	1.0	Bleeding esophegeal varices
H8-108-34	8/31/85	Port Angeles, WA	Swedish	116.2	.8	T_{11-12} fracture

YEAR TO DATE — RECEIVING HOSPITAL - ROTARY WING

# of Flights		COH	HMC	PMC	UH	OTHER	ABORT	MILES	HOURS	
34	month	6	18	0	1	8	1	3732.2	32.4	month
107	calendar	13	56	3	6	29	1	11061.0	95.9	calendar
63	fiscal year	16	36	0	3	15	1	6814.4	58.6	Fiscal yr

* Direct helicopter landing at COHMC

HELICOPTER TRANSPORT — Helicopter Transport Since Initiation on 5-11-85

DATE	TIME (ER to ER)	NAME	ADMITTING FLOOR	AGE	HOSPITAL NUMBER	DIAGNOSIS	REFERRING HOSPITAL	FLIGHT NURSE/M
05/11/85	1640-1840	[redacted]	IICU	3m	131-030-43-87	Penumonia S/P Arrest	Island Hosp. Annacortes, WA	Killan Morse
05/25/85	1510-1730	[redacted]	PICU	5m	145-030-72-10	Hypertension D & D	St. Helen's Chehalis, WA	Carew Pian
06/02/85	1430-1540	[redacted]	HMC	2y		Head Trauma	Harrison Memorial Bremerton, WA	Carew Copass
06/08/85	2150-0120	[redacted]	PICU	12y	159-030-78-16	Asthma s/p Resp. Arrest	Bremerton Naval Hosp., Bremerton, WA	Carew, Wheeler
06/09/85	0305-0510	[redacted]	HMC/ER	6m		L epidural subdural	Harrison Mem. Bremerton, WA	Carew Wheeler
06/22/85	0130-0350	[redacted]	IICU	1d	173-030-84-10	UGI bleed	Island Hospital Anacortes, WA	Brownstein Killan
07/01/85	0300-0550	[redacted]	PICU	12m	182-030-84-73	Pheumococcal meningitis	St. Joseph's . Bremerton, WA	Killan Lewis
07/16/85	1250-1430	[redacted]	PICU	2y	197-030-91-59	Near drowning	Valley Gen. Monroe, WA	Killan Brownstein
07/26/85	1640-1740	[redacted]	PICU	17y	207-030-99-28	ITP	Valley Medical Renton, WA	Timm Berquist
08/02/85	1530-1945	[redacted]	ACU	7m	214-030-99-88	Seizures	Okanogan Clinic	Meecham Strandjord
08/03/85	1600-1800	[redacted]	IICU	1d	215-031-07-00	Bowel Perforation	Naval Hospital Bremerton, WA	Bloom Frazier
08/11/85	2145-0100	[redacted]	PICU	8y	224-031-07-50	Septic Shock	Skagit Valley Mt. Vernon, WA	Carew Hoffmeister
08/14/85	1445-1610	[redacted]	ER to B4	5y	227-030-99-99	Head Injury	Jefferson Mem. Port Townsend, WA	Bloom Twiggs

.	08/16/85 1820-1850	Salts, James	--	5y		MVA Trauma	on scene pickup Kitsap County Medics to HMC ER	Killan Copass
.	08/20/85 1100-1200	[redacted]	IICU	1d	237-031-07-92	Prematurity Pneumothorax	Forks Comm. Hosp. Forks, WA	Carew Morse
.	08/27/85 1800-1850	[redacted]	IICU	4w	239-031-13-46	Meningitis	St. Helen's Chehalis, WA	Killan Frazier
.	09/15/85	[redacted]	IICU	1d	258-031-20-53	CHD	St. Joseph's Bellingham, WA	Arthur Heffmeister
.	09/15/85	[redacted]	PICU	3y	259-031-20-65	Head Injury	ER Port Angeles, WA	Arthur Hoffmeister
.	09/17/85	[redacted]	IICU	2m		Seizure (?) Resp. arrest (?)	Comm. Memorial Enumclaw, QA	Arthur Geidescheck

SEPA

cc 84-022

RECEIVED
JAN 29 1985
Dept. of Construction & Land Use

January 25, 1985

William Justen, Director
Dept. of Construction and Land Use
600 4th Avenue
Seattle, Washington 98104

Dear Mr. Justen:

Members of the land use committee of the Laurelhurst Community Club have reviewed the environmental checklist submitted by Children's Orthopedic Hospital on its heliport proposal. It is an inadequate estimate of the probable impacts of this proposal and we reiterate our resolution that asks for an environment impact statement.

The heliport was pubically discussed by Treuman Katz (COH Chief Executive Officer) at a well-attended community club meeting two years ago. It was discussed as part of a total proposal for development anticipated by the hospital which includes a new clinic, a new office building, and a substantial increase in the number of beds for patient care. Additionally, we understand a trauma center tied directly to the heliport will be developed. To consider less than the total development planned for the hospital would be contrary to the intent of the state environmental policy act.

Some specific deficiencies we have found in the COHMC checklist are as follows:

Section A.7. Future related activity: COHMC has not mentioned its plan for establishing a trauma center that would be supported directly by the heliport. A full disclosure of this plan should be required.

Section A.10.Approvals. No mention is made of the possibility that COHMC will be required to submit a certificate of need (CON) application by DSHS soon. Our recent resolution asks that a CON be required so that information on medical need and costs will be available. We have reason to believe that DSHS will place such a requirement on COHMC.

Section B.1. Earth: No mention of the current drainage problems experienced from COHMC runoff by residents of Laurelon Terrace, which is adjacent to the hospital, is given. The construction of the heliport will increase current drainage problems by some unestimated factor.

Section B2.1. Air: No discussion of the amount of jet engine exhaust and the toxic substances it will deposit in the adjacent neighborhood is given. Mitigation measures for this problem should be discussed.

Section B.3. Water: Toxic substances would be added to the water runoff from the heliport. No mention of this is made. The response to item B3.c1 (water runoff) is not correct. Fuel spills in particular could enter the city's storm drains. This possibility and any planned measures to mitigate it should be addressed.

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Section B.4b. Plants: The response to item 4b is very misleading; the paved area of the heliport will cover 1600 square feet. If the current "Kitchen Garden" is replaced with 1600 square feet of paving, how can the response of 4d be accurate?

Section B.5c. Migration route: The helicopter flight plan as verbally described calls for flying over a wetlands that is part of a major migratory route for many waterfowl, including Canada geese, herons, mallards, bitterns, as well as shorebirds and beaver and other animals. No mention is made of the impact on these animals.

Section B.7.Environmental health: The response to this item fails to recognize the release of toxic substances into the neighborhood from a twin jet helicopter. Moreover, jet fuel will be stored on the site. Leaks and explosions could occur as could helicopter crashes on landing or take off. For these reasons, the issue of fire hazard and explosion near the emergency room entrance should be addressed. An evaluation by the Seattle Fire Dept. of plans for a worst case scenario for fire and explosion at the landing site should be required. Other safety measures such as a safety fence, safety signage, rules for fueling and maintenance activities on the hospital site, and ground supervision during operation at the hospital should be discussed.

Section B.7b. Noise: The response here is very deficient. Detailed noise data must be developed using measurements from the actual helicopter proposed for use. A noise exposure contour map for the helicopter approach and departure routes as well as for the heliport are needed. A full discussion of noise mitigation measures proposed by the applicant should be provided together with suggestions as to how they could be enforced.

Section B.8. Land use; The city commerical land use code requires that no structure higher than the heliport surface be allowed within 200 feet of the center of the helipad. This standard should also apply to major institutions. There are currently two structures that are less than 200 feet from the proposed location. Item 8c. does not mention these structures.

Section B8.1 Compatability with existing plans: Since COHMC has indicated several times that it has no intention of preparing a Master Plan, it is interesting to note that a response to item B8.1 was avoided entirely.

Section B.10.c Aesthetics: Impacts on the 135 housing units in Laurelon Terrace, directly adjacent to the proposed helipad, and to residents on 44th N.E. who have a direct view of the site should have been discussed. There will certainly be "aesthetic impacts" from the heliport, especially to those particular residents. The response states that replacing the "Kitchen Garden" and three trees with a 1600 square foot paved pad with a big red "H" painted in its center, surrounded by a chainlink fence would not produce any aesthetic changes. This response is clearly wrong.

Section B.11. Light and glare: The intensity, extent, and height of the heliport lighting system is not discussed adequately. Laurelon Terrace and other nerby residents are already adversely impacted by the all-night lighting system in use at the nearby parking garage. No mitigation measures are suggested by the applicant.

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Section B.14. Transportation: This section must be expanded upon by the applicant; not only a helipad, but a transportation service is being proposed. The following factors should be taken into account:

(a) The anticipated number of helicopter trips per day (or per month) should be indicated. The frequency of use clearly is related to the impact.

(b) The helicopter would have to fly from its base to the hospital to pick up its flight crew and equipment. It would then fly to the patient and take the patient to the hospital; thus, every patient picked up generates 2 flights to the hospital.

(c) Every time the helicopter lands, an ambulance would have to be called to the site as hospital personnel are not allowed to transfer a patient from a helicopter because of liability insurance rules. This traffic should be included.

(d) Potential distraction and increased accident potential due to low flying helicopters over arterial streets and intersections should be discussed. The helicopter flight patterns should be described relative to these arterials.

(e) Other items that should be provided include: a map of planned helicopter flight patterns, a discussion of the affect various wind conditions may have on the direction of flight paths and on the vertical clearance ability of the helicopter, and plans for alternate landing sites in case of fog or other problems.

(f) What type and size of helicopter will be used? Helicopters vary greatly in the amount of noise, vibrations, and fumes they emit.

(g) Where would the helicopter be based? Is any maintenance, cleaning, or fueling of the helicopter planned at the hospital site?

(h) Who decides whether to send the helicopter or ground transport on a mission? How will the helicopter be dispatched and what controls are proposed to limit use to only those types of flights (life-saving emergencies) which are permitted?

(i) Who would be allowed to use the heliport? How about Navy Search and Rescue, MAST, etc.?

Section B.16. Utilities: It is not clear from the response if additional storm drains would be needed.

Also, while COHMC states that the large sign was installed on 16 January, it was not actually in place until 18 January. We know that the City will honor a full comment period. It is unfortunate that the large sign was placed only on Sandpoint Way where cars zoom by to other neighborhoods. A large sign should be placed on the adjacent arterial of the most affected community as well.

Clearly, many of the impacts of this proposal would fall on the residents of the area near the hospital and those who live along the flight paths used. A description of these impacts together with appropriate mitigation measures should be included in an environmental impact statement. We hope you agree with us that such a study is clearly indicated by the deficiencies of COHMC's responses to the questions on the environmental checklist.

Moreover, since the Airlift Northwest helicopters would serve the needs of five hospitals (Harborview, University, Providence, Mason, and COHMC), the EIS should cover impacts in the neighborhoods adjacent to these other hospitals as well. The COHMC proposal should not be allowed to be separated from this larger, city-wide context.

We would appreciate receiving a copy of the report which gives your decision and its rationale as soon as it becomes available.

Yours sincerely,

John C Kehoe
President
Laurelhurst Community Club
5208 NE 50th - Seattle - 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

5003 45th N.E.
Seattle, Wash. 98105
December 17, 1984

RECEIVED
DEC 17 1984
Dept. of Construction & Land Use

Mr. William Justen, Director
Department of Construction and Land Use
600 4th Avenue
Seattle, Washington 98104

Dear Mr. Justen:

As you are no doubt aware, the major institutions code requires that DCLU conduct a study of alternatives whenever the City Council must decide on a helipad application. In the case of the pending request by Childrens Orthopedic Hospital (COH) I want to suggest that DCLU staff examine the following alternatives and determine their costs and benefits in terms of neighborhood impact:

Alternative 1: Have 1 helipad in city, located at Harborview Hosp. --to serve all area hospitals.

Alternatives 2-4: Have 2 helipads in city
a. one helipad to serve Harborview, V.Mason, Swedish and Providence Hosps.--located at Harborview
b. a second helipad, to serve Univ. Hosp. and COH--located at either:

(alternative 2) (1) University Hospital
(alternative 3) (2) UW intramural field (Graves' Field)
(alternative 4) (3) Sandpoint Naval Station area

Alternatives 5-7: Have 3 helipads in city
a. one helipad to serve Harborview, V. Mason, Swedish and Providence Hosps.--located at Harborview
b. second and third helipads, to serve Univ. Hosp and COH--located at:

(alternative 5) (1) Univ. Hosp. and COH
(alternative 6) (2) Univ. Hosp. and intramural field
(alternative 7) (3) Univ. Hosp. and Sandpoint Naval Station area

Childrens Orthopedic Hospital and University Hospital are currently designated as Level III facilities for neonata' care. In October, 1984, Swedish Hosp. (not currently a member of Airlift Northwest) applied for a Certificate of Need for a Level III neonatal facility. If it is approved, all three hospitals will be providing this service. It is also possible that Group Health Cooperative Hospital should be included in your analysis as well as the West Seattle, Ballard, Northgate, and Northwest Hospitals. At least, they should be contacted as to their expectations with respect to their membership in Airlift Northwest and their need for helicopter transportation. Airlift Northwest will probably be getting a helicopter that will land at Harborview and serve adjacent hospitals in the early part of 1985.

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I feel that DCLU ought to obtain 5 and 10 year projections on the expected costs and revenues for the proposed Airlift Northwest venture into helicopter transportation as they figure directly into the assessment of alternative location patterns for helipads to serve Seattle hospitals. Interhospital competition patterns as well as regional referral patterns are also interwoven into the issue of how many helipads in what locations are needed. I am sure that such questions will arise at the hearings on this issue (as they have already at the one public meeting sponsored by the Laurelhurst Community Club in November) and that members of the City Council will want answers, not unanswered questions, when the matter reaches them for a decision. This information has to come from the hospitals and would be included in a Certificate of Need application. COH has so far indicated that it does not intend to develop and file such an application. In my opinion, DCLU should encourage COH to develop such an application at the earliest possible time so that a reasonable asssessment of this issue can be made by DCLU and the City Council.

Also, enclosed are additional petitions from residents near COH who are opposed to the helipad at COH. This brings the total number of signatures obtained so far to about 350. Additional petitions are forthcoming.

Yours sincerely,

Jerry B. Schneider

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LUMLU13 LAND USE ROUTING INFORMATION PAGE 01 OF 01

PROPERTY ADDRESS: 07501 NE 45TH ST

PROJECT NUMBER: 9106441

LOC	REVIEWER	DATE TO	FROM	DUE	COMMENT
CLERK		911231		920114	
LU_INTK		911213	911226		
LURS					

INCIDENT: NOTIFICATION OF LAND USE ACTION
PROPERTY ADDRESS: 02501 NE 45TH ST ERROR PAGE: 240

PROJECT NUMBER: 9106441 ZONING: R10A7/65LI/3 NOTICE TEXT:
MASTER USE PERMIT TO ALLOW CHILDREN'S HOSPITAL AND MEDICAL CENTER TO USE AN
EXISTING HELISTOP LOCATED ON THE U OF W CAMPUS. (HELISTOP TO BE USED
FOR MEDICAL EMERGENCIES.) PROJECT INCLUDES THE CONSTRUCTION OF APPROX. 65 FT.
DIAMETER LANDING PAD AND APRON IMPROVEMENTS. ENVIRONMENTAL REVIEW COMPLETED
UNDER NUPR 8405876.

LU COMPONENTS: CE CF NUMBER:
NOTICE STATUS: DATE SPECIALIST:
EARLY PROJECT NOTICE:
LARGE SIGN CONFIRMATION: NA DATE
NOTICE OF APPLICATION: 920116 END OF COMMENT PERIOD: 920130
NOTICE OF REVISED APPL: END OF COMMENT PERIOD:
HEARING DATE: TIME LOC: TYPE:
HEARING DATE: TIME LOC: TYPE:
OTHER DECISION: END OF APPEAL PERIOD: APPEAL
SEPA DEC: COMMENT DATE: END APPEAL: APPEAL
SHORELINE DECISION: END OF APPEAL PERIOD: APPEAL
NOTES:
PF13 HELP PF15 MENU PF17 ROUTING PF18 GMR
PF21 COMP ACT PF24 CANCEL

RL

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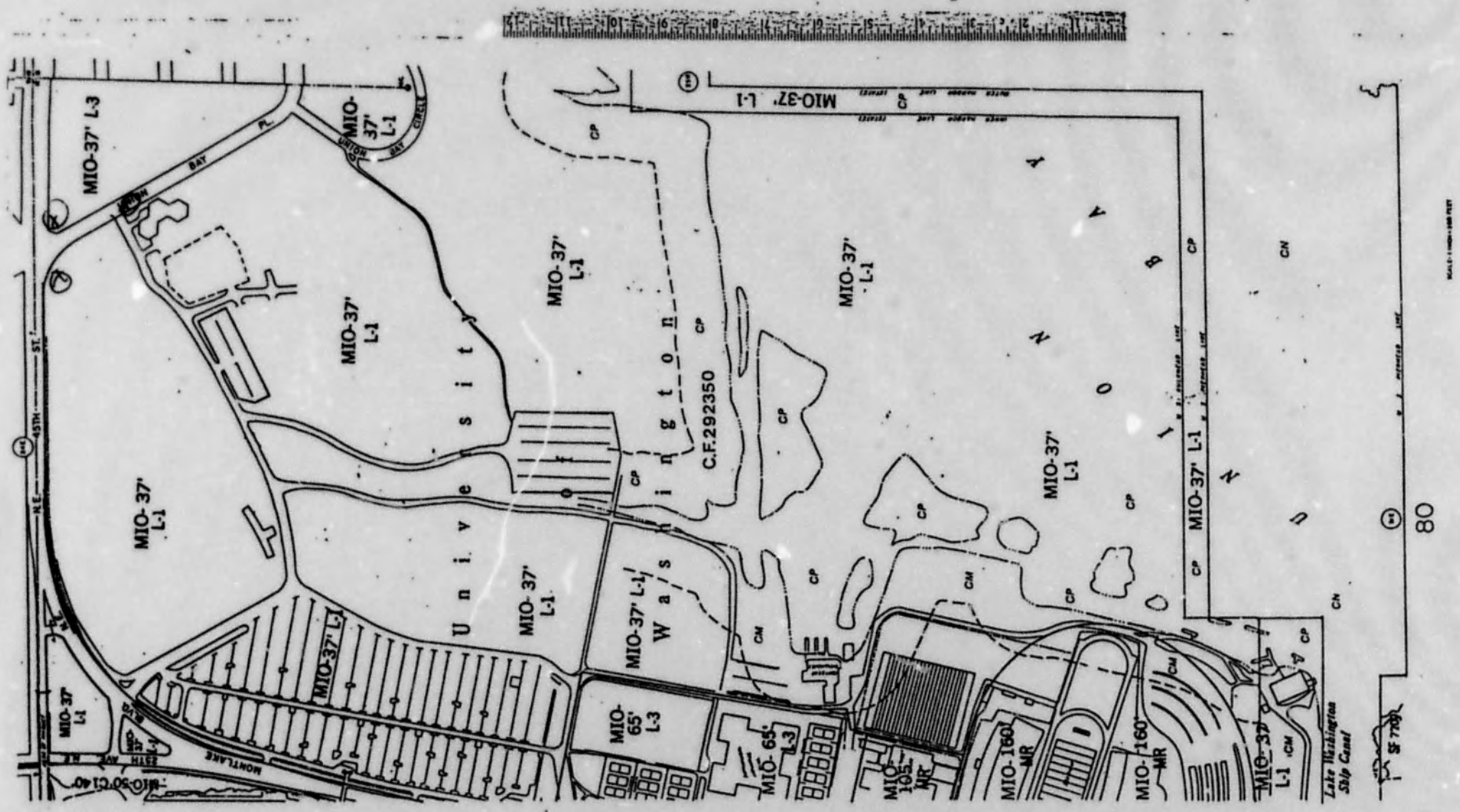
NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

(X) 1/16/92 SK


MIO-37' L-3
MIO-37' L-1
MIO-37' L-1
MIO-37' L-1

INTRODUCTION

Childrens Orthopedic Hospital and Airlift Northwest contest the Notice of Violation filed on August 30, 1985 against 4800 Sandpoint Way.

The hospital and Airlift Northwest sought a reconsideration hearing pursuant to Seattle Municipal Code 23.90.

The matter was heard before the Hearing Officer on October 31, 1985.

Parties to the proceeding were: Childrens Orthopedic Hospital by attorney Rand Kuler; Airlift Northwest by attorney Steve Milam, and Department of Construction and Land Use by Hermia Ip.

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Herrera

Your
Seattle
Department of Construction and Land Use

MEMORANDUM

DATE September 26, 1985

To Dr. Bud Nicola

From Katy Chaney, Director, Land Use Division K Chaney

Subject COH Helipad Facility

Per our understanding at our meeting last Friday, we have prepared the attached public hearing notice and list of medical organizations for notification. If you have any additional agencies which you would like to be involved, please let us know as soon as possible.

Thank you for your assistance.

HI:mer

cc: Tom Byers

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MASTER USE AND CONSTRUCTION APPLICATION AND PERMIT

CITY OF SEATTLE
DEPARTMENT OF CONSTRUCTION AND LAND USE

CC-84-022

PERMIT NUMBER:

PROJECT NUMBER: 8405870

KROLL:

PROPERTY ADDRESS: 04800 SAND POINT WY NE ( )

LEGAL DESCRIPTION:

CONSTRUCTION VALUE
NEW: 0

RELATED FILES/PERMITS: CC-84-022
PERMIT REMARKS:

ALTER: 0

PROJECT DESCRIPTION: Permission is hereby given to do the following according to the conditions stated hereon and on the attachments and according to the approved plans and specifications pertaining thereto, subject to compliance with the ordinances of the City of Seattle:
OTHER COUNCIL COND USE FOR HELISTOP

TOTAL: 0

DCLU:

BLDG. IDENTIFIER: 0
NO. DWELLING UNITS
EXISTING: 0
NEW: 0
DEMOLISH: 0
TOTAL: 0

OCCY GROUP & CHAR:
TYPE OF CONSTRUCTION:
ASSEMBLY OCCUPANT LOAD:
SPRINKLER SYSTEM LOCATION:
NUMBER OF STORIES, BASEMENTS:
USE PER LAND USE CODE:
DEMOLITION LICENSE: NA

ZONING: I-4/I-2/SF 5

DATE	CONSTRUCTION COMPONENT		FEE

OCCUPANCY CERT. REQUIRED?
SPECIAL INSPECTIONS REQUIRED?
ENVIRON. SENSITIVE AREA? N
SHORELINE AREA? N
PROTECTED DISTRICT/LANDMARKS? N
GREENBELT? N

RECEIPT NUMBER: Z09504
RECEIPT AMOUNT: 640.00

PERMIT SPECIALIST:
LAND USE TECHNICIAN: KH
BLDG CODE PLANS EXAM/ENGR:

DATE	MASTER USE COMPONENT	ACTION	FEE
841113	MISC LU FEE		640.00

OWNER/LESSEE: CHILDREN'S ORTHOPEDIC
CONTACT PERSON: DOROTHY TECTER PHONE: 5262004
ADDRESS: 4800 SAND POINT WY NE ZIP: 98105

DATE	STREET USE COMPONENT	ACTION	FEE

CONTRACTOR: LIC. NO:

DIRECTOR OF CONSTRUCTION & LAND USE BY _____

DATE PERMIT ISSUED	CONSTRUCTION EXPIRATION DATE	LAND USE EXPIRATION DATE

OTHER	FEE
INVESTIGATION	.00
REVISION	.00
OVERTIME	.00
TOTAL PERMIT FEES:	640.00

NOTICE TO THE APPLICANT: The Department of Construction and Land Use cannot guarantee any specific time frame for project review. The applicant shall determine applicability of and compliance with all relevant codes. DCLU permit action is based upon information supplied by the applicant. The Department reserves the right to require additional information. Field revisions on issued permits may be required if errors or omissions are discovered.

Construction or substantial progress toward construction of a project for which a Master Use Permit or construction permit has been granted must be undertaken prior to the expiration date. Extension of the construction permit without penalty may be granted if application is made within the 30 days prior to the date of expiration. Additional fees will be assessed to reinstate an expired permit.

Not valid unless signed by the DIRECTOR OF THE DEPARTMENT OF CONSTRUCTION AND LAND USE. Starting construction without a building permit is punishable by fine and/or imprisonment. All work shall be done in accordance with the permit and approved plans. Call for inspection before placing any concrete or installing any piling on private property. Phone 625-2301.

I certify that I have read the above notice, and that to the best of my knowledge, the information which I have provided is complete and accurate.

APPLICANT'S SIGNATURE _____ DATE _____ APPLICANT'S RELATIONSHIP TO PROJECT: G

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Hermia IP Copy

Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

1985

April 18, 1985

Anita Francis
Liz Anderson
Citizens Concerned About Helicopter Transport
5003 45th N. E.
Seattle, Washington 98105

Dear Ms. Francis and Ms. Anderson:

Thank you for your letter of March 28, 1985, about the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on hospital grounds (CC 84-022).

In your letter, you asked why a citizen committee was formed for the five-acre site which COH acquired recently, and why is it not possible for our Department to establish a similar committee for the existing COH campus. Enclosed please find a copy of the COH-CARE and City Agreement which explains the specific terms and functions of the committee. As stated in the agreement, that committee was formed as a stipulation for the property transaction to provide community input and coordination on the future development of that particular site. With the helipad proposal, the SEPA Ordinance and Land Use Code provide for a different format of citizen participation, which involves public notices, comments, hearings and appeal processes. However, we will encourage COH to discuss their helipad proposal with the community as well as to consider preparation of a Master Plan. We are hopeful that they will initiate the process.

You also recommend that this Department conduct an in-depth investigation on medical needs, cost, environmental impacts and alternative sites for the helipad. We must find that the Code requirements are fully met before we can recommend approval of the permit. However, we do not necessarily involve staff in the gathering and research of medical and other data necessary to support the proposal. The burden of proof is on the applicant to satisfy the Code requirements. We review and evaluate the information provided in making our recommendation. The information and our analysis is also subject to review and comment before the Hearing Examiner at the required public hearing. At this stage, COH is still working on preparation of the environmental checklist information which we required in February. We have recently reminded them that, in addition to SEPA review, they must thoroughly address the merits of the proposal based on the Council Conditional Use criteria for the helipad (see letter attached). We will keep you informed of responses from COH.

An equal employment opportunity, affirmative action employer
Seattle Department of Construction and Land Use 400 Municipal Building Seattle Washington 98104

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Your suggestion to send copies of our correspondence to Frank Chestnut of the Department of Social and Health Services (DSHS) and to Larry Thompson of the Puget Sound Health Systems Agency (PSHSA) is well taken. We will do so. If you have further questions, please do not hesitate to call Mrs. Hermia Ip at 625-4509.

Very truly yours,

Katy Chaney

FOR WILLIAM J. JUSTEN, P. E.
Director

HI:lld

Enclosures

cc: Treuman Katz, COH
Frank Chestnut, DSHS
Larry Thompson, PSHSA
Tom Byers, Office of the Mayor

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RECEIVED
APR 1 1985
Dept. of Construction & Land Use

5003 45th N.E.
Seattle, Wash. 98105
March 28, 1985

William J. Justen, P.E.
Director
Dept. of Construction and Land Use
400 Municipal Building
Seattle, Wash. 98104

Dear Mr. Justen:

Thank you for your letter of 20 March. We do not understand your position as expressed in your second paragraph, that you cannot form a citizens advisory committee. We know that no formal master planning effort can be required under the current code. But, we see no reason why an advisory committee (with staff support from the city) cannot be devised to deal with COH expansion plans. Why has such a committee been established for the 5-acre parcel at N.E. 70th and Sand Point Way when no development is planned for the next few years? Our problems are both larger and more immediate. Your letter does not address this point as also described in our previous letter.

We agree with your point that helicopter transport programs and policies require a regional approach. However, your view of the city's responsibilities in this matter seem very limited in relation to the requirement in the code (23.48.05) that states that: the helistop must be needed to save lives, should be located so as to minimize impacts upon surrounding residential property, should be used only for life-threatening emergencies, and that the Director's report shall examine alternative locations for the helistop. We believe that this statement requires you to include medical need and cost issues as well as land use and environmental impact concerns. The PSHSA memo represents a good start on this issue. Our letter to you of 12-17-84 outlines some ideas as to the major alternatives that we believe need to be studied. Our main concern is that we have the opportunity to participate in the scoping of the study your department is required to conduct as stated above. When will this study by initiated? What resources will be allocated by DCLU to conduct it? Will an outside consultant be employed by DCLU? How will other hospitals (e.g., UW, Harborview, Providence, Mason, etc.) and other affected communities (e.g., Montlake, Windermere,etc.) be represented?

We have recently learned that a helicopter service has been started at Valley General Hospital in Renton and at St. Luke's in Bellingham. We have also heard that 3 Tacoma hospitals are about to begin a helicopter service. Evergreen Hospital in Kirkland already has a helipad and is considering initiating a service in the near future. These actions indicate that this issue needs a regional study and that Seattle's response should relate to and harmonize with the activities of the other hospitals in the region. The PSHSA is clearly the key agency in this situation and we urge you to encourage and support further work on this issue by them that would complement your study of the alternatives.

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We have enjoyed working with Mrs. Hermia Ip and feel she has done a fine job on this issue to date. We will keep her posted with any information that we develop on this issue. We realize that her time is a scarce resource and hope you will see to it that she gets the help she needs to conduct (for the first time we believe) the study of alternatives required in the major institutions code.

It would be most helpful if you would send copies of your letters to Frank Chestnut of the DSHS in Olympia and Larry Thompson of the Puget Sound Health Systems Agency. This will allow a higher level of coordination to take place as this issue moves through the review and hearing process.

Sincerely,

Anita Francis

Anita Francis
Liz Anderson
Citizens Concerned About
Helicopter Transport

cc:
Charles Royer, Mayor
Tom Byers, Office of the Mayor
Jim Smith, PSHSA

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To Mayor Ip

5003 45th N.E.
Seattle, Wash. 98105
March 27, 1985

RECEIVED
APR 9 - 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. Tom Byers
Office of the Mayor
Municipal Building
Seattle, Wash. 98104

Dear Tom,

We appreciated having the opportunity to talk with you and Mrs. Hermia Ip last week about our problems (present and potential) with Children's Orthopedic Hospital. Subsequent discussions have identified the following points that we feel need further discussion:

1. We feel that the PSHSA "policy guidance" paper is a good start but is not sufficient to be a base for a formalized city policy on the use of helicopters for medical transport to hospitals located in the city. What can be done to enable the PSHSA to continue its work on this issue while there is still a little time before decisions have to be made?

2. What will DCLU be able to do with current staff resources to implement the requirements of the major institutions code (Section 23.48.05) regarding helistops? Will outside consultants be required? If so, are plans being made to identify and hire some appropriate assistance?

3. William Justen has written a letter to us (3-20-85) that states that "while the City of Seattle has the responsibility to address the land use implications of hospital helipads, the role of assessing the need and cost effectiveness of such facilities in medical practices is beyond the function of the city government." But, the code states that a conditional use may be permitted if the Council finds that: the helistop is needed to save lives, is located so as to minimize impacts upon surrounding residential property, is used only for life-threatening emergencies, and that the report shall examine alternative locations for the helistop.(Section 23.48.05). Our interpretation of this indicates that DCLU is required to conduct a broad and deep investigation of medical need, cost, environmental impacts, and alternative sites. Do you agree with our interpretation of the code?

4. You should know that COH administrator (Treuman Katz) was invited to talk with the Land Use Committee of the Laurelhurst Community Club at a meeting on Tuesday evening, March 25. He was invited about 3 weeks prior to this meeting and agreed to come. He cancelled out a few days before the meeting and refused our request to send a substitute. We have tried to improve our communications with him in a constructive way but have not been successful.

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5. As you may know, the current contract that defines the relationship between Airlift Northwest and the participating hospitals was established on April 15, 1982. It was to expire on Feb. 15, 1985. We presume that it has been extended by amendment until a new contract can be negotiated. We believe that this new contract is a vital piece of information that should be carefully examined before any decisions are made regarding the heliport.

Any help you can give us with the above questions will be greatly appreciated. We would also appreciate help in reaching goals specific to COH, which we discussed at our meeting with you:

1. For COH to prepare a master plan
2. For COH to decentralize
3. to establish sincere, honest communication between COH and the impacted neighborhood.

Thanks for your help and interest, Tom.

Sincerely,

Anita Francis

Anita Francis
Liz Anderson
Citizens Concerned About
Helicopter Transport

cc: Hermia Ip

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RECEIVED
APR 8 1985
Dept. of Construction & Land Use

5003 45 N.E.
Seattle, WA 98105
April 3, 1985

Charles Royer
Mayor, City of Seattle
1200 Municipal Building
Seattle, Wash. 98104

Dear Mayor Royer:

Your response (26 March) to our letter (7 March) regarding the proposed helicopter service to Children's Orthopedic Hospital is appreciated as is a concurrent letter from William Justen. However, both letters seem to presume that we have not read and understood the major institutions code.

In you letter you refer to the "triggers" in the major institutions code which can require the preparation of a master plan. Be assured that we have looked at them carefully and have concluded that none apply in the COH situation. COH has told us they have no intention of preparing a master plan, now or ever. And, they can expand significantly without being affected by any of these "triggers." As we stated before, the major institutions code offers us no protections from the expansion plans being developed by COH. We are concerned about more than just the helipad proposal. It has simply triggered the community into action.

In William Justen's letter (20 March, copy to you), he refers to the major institutions code and states that the city can deal only with the land use aspects of the helipad issue. Our reading of section 23.48.05 of the master institutions code indicates that the city can indeed undertake a broad and in-depth study that can include medical need and cost as well as environmental impact issues. We have written to William Justen about this.

Your request to the PSHSA for a policy guidance study was timely and welcome. However, much more work needs to be done before an acceptable policy statement can be formulated. We urge you to request some follow-on work from the PSHSA and to provide them some support to investigate this issue in more depth.

We would greatly appreciate your interest in and attention to this issue.

Yours sincerely,

Anita Francis

Anita Francis
Liz Anderson
Citizens Concerned About
Helicopter Transport

cc:
Larry Thompson, PSHSA
✓William Justen, DCLU

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William Justen, Director
Dept. of Construction and Land Use
600 4th Ave.
Seattle, Wa. 98104

RECEIVED
FEB 4 1985
Dept. of Construction & Land Use

Dear MR. Justen.

As concerned citizens of the community surrounding Childrens Orthopedic Hospital we oppose the construction of a helipad

We have numerous concerns covering the noise pollution, frequency and timing of the flights, the danger associated with potential accidents (not only to those of us in the community but also the people within the hospital) and the economic impact to property values.

It is our belief that at there are other viable alternatives to this proposal that have not been adequately considered and deserve some attention. One possibility being a better landing pad at the University field or cooperative use of the univ. hospital landing facility.

In conclusion it is our belief that this proposal requires an in depth study prior to any action. Thank you in advance for your consideration.

SINCERELY,

Mark & Juanita Bunch
4715 45th N.E.
Seattle, Wa.

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Resolution, November 14,1985

The Board of Trustees of the Laurelhurst Community Club supportsthe development of a regional plan for the siting of heliports for emergency medical care. This plan should be based on an analysis of the medical need, the potential adverse impacts on communities, and the costs of helicopter services.

The designation of sites should be limited to the minimum necessary to meet the needs of the region. Where there is a choice, the location of the heliports should be limited to sites where overflights and landings will have the least impact on residential communities.

Criteria for use must be established in the regional plan so that helicopter service is limited to emergencies. These criteria should define conditions, such as difficulty of access, time constraints, and life-threatening situations, which make helicopter transport the only reasonable choice.

The Hospital's projections for helicopter use and its contract for services with Airlift Northwest indicate the proposal is for a commercial transportation service which is costly, may not be limited to medical emergencies, and includes financial incentives for overuse.

Quality emergency care has been satisfactorally provided by helicopter transport to the University's intramural field and Harborview's trauma Center. At this time, the Board of Trustees of the Laurelhurst Community Club opposes the approval of a helistop at Children's Orthopedic Hospital until a medical need for the helistop on campus is substantiated.

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December 30, 1985

RECEIVED
DEC 3 1 1985
DEPT. OF CONST. & LAND USE

Beatrice Farrar Ryan, Director
Department of Construction and Land Use
400 Municipal Bldg.
Seattle, Wa 98104

Dear Ms. Ryan:

The report submitted by Dr. Nicola, Director of Public Health, is an inadequate basis for a Council Conditional Use decision on the application for a helistop at the site of the Children's Hospital. The report does not contain an analysis based on the criteria set in the Code, nor does it address the issues before our community.

Specifically, the Code requires that the medical need be determined and the alternative sites for meeting that need be evaluated. Presumably, the intent of the Code is to allow siting of helistops only if the need can be substantiated, to limit the use of the helistop to meeting that need, and to site helistops where the least adverse effects on the community will be felt. Dr. Nicola does not provide the Council with the analysis necessary to assure that intent is met in its siting decision.

A major conclusion in the Nicola report is that 5 to 10 percent of all children transported (to COH by air?) fall into a category of patients where a 3 to 5 minute delay may be lifesaving. This conclusion is drawn from Nicola's conversations with transport physicians. The lack of any documentation of what questions were asked, how many physicians were interviewed, and what control of bias was maintained makes this conclusion highly questionable, particularly in light of the successful use of the soccer field for landing emergencies to date.

Major assumptions in the report are false. Nicola's conclusions are based on the assumption that the number of cases transported by air (also undocumented) will remain the same even if a helistop on campus is permitted. He also assumes that all pediatric trauma cases will go to Harborview, the regional trauma center. COH states in its environmental analysis that it expects trauma patients to be flown in and has indicated to us that it is emerging as a trauma center.

We question Nicola's premise in commenting that the consortium of hospitals sharing a helicopter service is a sensible approach which will make it easier to establish a systematic approach to provision of services. A consortium may or may not achieve this end. In the case of Airlift Northwest, the basis of agreement is financial. Three hospitals, which receive substantial government funding, are underwriting a very expensive operation which is not financially feasible to other hospitals. There are no rules limiting use and directing service based on need and quality care. The COH proposal, as indicated by its projections for helicopter use and its contract for services with Airlift Northwest, is for a commercial transportation service which is costly, is not limited to medical emergencies, and includes financial incentives for overuse.

The recommendation for an interim conditional use permit is based on undocumented conclusions and false assumptions. It is not acceptable. Specific conditions to assure that use will be limited to emergencies must be established before a permit is granted. Those conditions cannot be specified until medical need is defined as it applies to the Orthopedic Hospital. Revoking a hospital's permit for misuse is not a viable option in any case and certainly unworkable when there are no specified standards for use.

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The Laurelhurst Community Club has asked that the designation of hospital helipad sites be limited to the minimum necessary to meet the needs of the region. Where there is a choice, we have asked that the location be limited to sites where overflights and landings will have the least impact on residential communities. Given the adverse impact of helicopters on the quality of the residential living environment, we know these requests are both reasonable and responsible.

We have additionally asked that criteria be established to assure that helicopter service is limited to emergencies. These criteria should define conditions such as difficulty of access, time constraints, and life-threatening situations which make helicopter transport the only reasonable choice.

We do agree with the Nicola recommendation that emergency transport of patients by helicopter be a planned part of a complete EMS transportation system, with specific criteria for use, rather than a hospital-by-hospital provided service. This plan should be based on an analysis of the medical need, the potential adverse impacts on communities, and the costs of helicopter services. An ongoing evaluation of helicopter use which includes review by health care consumers as well as physicians and administrators should be a part of the plan.

We believe the Hospital should provide the City with an analysis of its proposal addressing the issues of medical need and alternative locations. It has not and very likely will not do so. Therefore, we must rely upon your department to provide the factual analysis needed by the Council or to simply recommend denial based on a lack of information.

We remind you that the Orthopedic Hospital has refused to disclose its plans for future development. It will be impossible for the Council to make an informed decision on the helistop without knowing the Hospital's intent for growth and development.

Sincerely,

Liz Anderson Anita Francis Kate Hemer Jerry Schneider

Liz Anderson Anita Francis Kate Hemer Jerry Schneider

Laurelhurst Community Club
Hospital Liaison Committee
4537 55th Avenue Northeast
Seattle, WA 98105

cc: R. M. Nicola, MD
Director, Seattle-King County
Department of Health

Members, Seattle City Council
George Benson Delores Sibonga
Virginia Galle Sam Smith
Michael Hildt Jim Street
Paul Kraabel Jeanette Williams
Norm Rice

Hugo W. Schimmelbusch
Gisela H. Schimmelbusch
4702-45th Ave. N.E.
Seattle, Wa. 98105

January 23, 1985

RECEIVED
JAN 25 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Attn: Mr. William Justen, Director
Department of Construction
and Land Use
Room 400, Municipal Building
600-4th Ave.
Seattle, Wa. 98104

Re: Application for Helipad at Cildrens Orthopedic Hospital and Medical Center (COHMC), Application No. CC84-022.

Dear Mr. Justen:

This letter concerns our opposition to the proposed helipad at CHOMC. We have been residing at above address for over 20 years. Our residence is located on 45th Ave. N.E., directly East of CHOMC, and we have been enjoying our neighborhood in the absence of noise, except when coast guard and military helicopters were landing on CHOMC grounds occasionally in past years (approximately up to 10 years ago). Granting permission of a helipad with several helicopter flights day and night, threatens to disrupt living and sleeping patterns in the neighborhood.

We do believe that with modern life saving and transport techniques other than helicopters, just as many lives can be saved. We believe tnat helicopter technology is too expensive and represents nothing but a flashy status symbol to the hospital using them. We believe that the use of the UW meadows of landing (presently used) should be continued. If children are too sick to be transported by any other means, helicopters should take them to the UW hospital helipad for treatment at that facility.

Sincerely,

Hugo W. Schimmelbusch
Hugo W. Schimmelbusch

Gisela H. Schimmelbusch
Gisela H. Schimmelbusch

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RECEIVED
JAN 25 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Kathleen McHugh Johnston
4200 N. E. 50
Seattle, Washington 98105

January 23, 1985

Re: Appl. # 8504-022

This is to tell you I am against the above land use application.

The noise factor would be detrimental not only to residents of the area but to the children confined to the hospital as well.

Please consider this objection from one of many land owners. Sincerely,

Kathleen McHugh Johnston

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Jan. 23, 1985

William Justen, Director
Dept. of Construction and Land Use
600 4th Ave.
Seattle, Wa. 98104

RECEIVED
JAN 25 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. Justen:

RE: Proposed helipad at Children's Orthopedic Hospital

As a neighbor of COH, I am concerned about the proposed helipad, and believe that COH should be required to prepare an environmental impact study regarding this project.

Many of us in the nearby neighborhood have questioned the projected number of helicopter landings per month at COH, and wonder if only the truly "life saving" cases will be flown in, or rather if the helicopter landings will become frequent in order to make the service financially viable. Several medical authorities have wondered aloud if eventually broken legs and hang nails might be treated using the helicopter service.

This possibility raises the issue of environmental impact. What about the noise level on a regular on-going basis? What about the possibility of an accident or crash involving the helicopter? What about the air pollution from helicopter engine emissions?

I ask that DCLU require COH to conduct an enviromental impact study to address these and other issues.

Sincerely,

Jane Johnson

Jane Johnson
4323 NE 45th St.
Seattle, Wa. 98105

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CHARLES R. HOUGH
5054 - 44TH AVENUE N. E.
SEATTLE, WASHINGTON 98105

24 January 1985

RECEIVED
JAN 25 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dept. of Construction & Land Use
400 Municipal Bldg.
600 4th
Seattle Wa. 98104

Re: Application #CC 84-022
Helicopter Pad - Children's Orthopedic Hospital -

To Whom It May Concern -

My wife and I live in close proximity to Children's Hospital and we wish to be good neighbors, as we wish them to be to us.

This is a residential neighborhood where we want a reasonable peace and quiet. To have helicopters flying in and out, with all their noise is simply not acceptable. I don't think the hospital has really proved its point that the University playfield is not efficient.

I hope you will deny the hospitals application & let the helicopters leave as they have been doing for years on the University playfield or at the University Hospital -

Thank you - Charles R. Hough -

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Jan 10, 1985

Office of Construction & Land Use
600 4th Ave, Seattle 98104

RE: application #CC 84-022

RECEIVED
JAN 25 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

We oppose the helipad installation at Children's Orthopedic Hospital.

The noise and land use around COH is at maximum now!

As property owners at Laurelon, where my elderly mother lives, and View Ridge area we remind you that we have supported and worked for the addition of housing for handicapped, Ronald McDonald, the addition to COH itself and the garage - Enough!

Barbara L Erak
6807 54 NE
Seattle 525 8759

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PUGET SOUND HEALTH SYSTEMS AGENCY
Serving The Ten-County Northwest Washington Area
601 Valley Street / Seattle, WA 98109 / (206) 464-6143

LARRY A. THOMPSON
Executive Director

Hi
For your file.
Cam

RECEIVED
FEB 25 1985
MAYOR'S OFFICE

February 22, 1985

Charles Royer, Mayor
City of Seattle
1200 Municipal Building
Seattle, Washington 98104

Dear Mayor Royer:

In response to your request, staff at Puget Sound Health Systems Agency have prepared the enclosed responses to your questions regarding helicopter transport in emergency medical situations.

Given the time and resources available to us, we have been unable to convene either an outside technical review panel or to undertake a formal public policy development process leading to definitive criteria. You should view our comments as a staff position paper.

I hope the enclosed comments will be of use to you. Please do advise me should you require further comment from Puget Sound Health Systems Agency.

Sincerely,

Larry A. Thompson

Larry A. Thompson
Executive Director

LAT/sae

Enclosure

cc: Treuman Katz, COH
Jerry Schneider

TB —
Who should see?
- Ann Ormsby DCLU
- Cindy Maisel Housing
- Chuck Kleeberg CAR

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February 21, 1985

Charles Royer, Mayor
City of Seattle
1200 Municipal Building
Seattle, Washington 98104

Dear Mayor Royer:

The Puget Sound Health Systems Agency (PSHSA) has prepared the following in response to your questions about the appropriate use of helicopter transport in emergency medical situations.

1. In what circumstances is it appropriate to use a helicopter in emergency medical transport to Seattle health care facilities?

Helicopter transport is appropriate when it operates within a regional emergency medical service (EMS) system. It is most valuable in linking rural and other isolated populations and medical facilities to tertiary trauma centers in Seattle.

Medical conditions which require helicopter transport are those in which more rapid transport and the availability of highly specialized care enroute can affect outcomes when compared to alternative methods of transportation. Helicopter transport is not inherently better than ground transport in ensuring survival and recovery

Emergency services have developed as part of a regional system in Washington, and helicopter transport is integral to the provision of these services. The EMS system features substantial ground transport services throughout the northwest region, each of which is capable of responding rapidly to calls in the area it serves. Military Assistance to Safety and Traffic (MAST) helicopters transfer patients from accident sites within a 100-mile radius of Fort Lewis to Harborview in Seattle and to St. Joseph in Tacoma. Interhospital transfers and service to areas outside the range of MAST are provided by the fixed-wing transport of Airlift Northwest. Private helicopter service operating out of Bellingham further supports counties in the northwest section of our region.

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The existing EMS system is founded on comprehensive ground transport services and has developed into a well coordinated regional network. As a result, the use of helicopter services can be managed within the present system to better ensure that their use is limited to cases not adequately served by ambulance or plane transport.

2. How frequently is this means of emergency transport required?

Agreement on when medical conditions warrant the use of helicopters has not been reached. The introduction of helicopter transport is so recent that triage guidelines have not yet been developed which might help establish the frequency with which helicopter transport would appropriately be expected.

In the last year MAST completed approximately 220 field trips, most of which were to provide transport of patients from south King, Pierce, and Kitsap counties. Some of these patients were taken to St. Joseph Hospital. Approximately 120 were taken to Seattle hospitals, most of these to Harborview.

The extent to which this level of service approximates the expected need for helicopter transport is not presently known. Efforts are underway to formulate a method to determine the need for helicopter transport and to establish the resources necessary to meet that need. These efforts in Washington and in other parts of the country should be evaluated by clinicians, planners, and administrators in order to prepare guidelines tailored to the special requirements of our region.

3. How many facilities in Seattle and King County should be equipped with helipads to meet the medical need?

Which Seattle hospitals are best suited to meet the medical need?

Helicopter transport is only appropriate for the most critical cases. An evaluation of helicopter transport often cited to support its efficacy in improving outcomes suggests that major improvement occurs only in the more severe classifications representing a fraction of all trauma patients. This study by William G. Baxt and Peggy Moody indicates that helicopter transport is required for only a small subset of trauma patients especially when high quality ground transport systems are available.

MAST helicopters are presently transporting patients within King County directly to Harborview or to University Hospital (and occasionally other hospitals) by way of ambulance from the University of Washington soccer field.

While we cannot confirm that this arrangement is adequate, PSHSA recommends transport to only the most specialized trauma centers in Seattle, of which University and Harborview hospitals are excellent examples. Consideration of additional sites should evaluate not only unmet patient

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care needs, but also the trade-offs which will result in meeting those needs. Limiting the number of helipads may be an important component in ensuring limits on the growth of helicopter services and in fostering effective and cooperative use of the EMS system as a whole.

It is critical that the inappropriate use and proliferation of helicopter transport services be discouraged. Unfortunately, we are in the midst of "air wars" throughout the country as hospitals vie with one another to establish helicopter programs. The number of programs in the country doubled between 1980 and 1983, and the National Medevac Conference in 1983 opened with spokesmen suggesting that the number of programs would (and should) double again in five years. It is not at all evident, especially in areas served by MAST, that additional programs are needed and the impact of further growth may be adverse for the community as a whole. Particular patient care requirements of an institution may not be sufficient to outweigh the additional direct and indirect costs which may result from expanded helicopter services.

PSHSA is especially concerned that individual institutions will establish helipads and eventually separate helicopter programs in an effort to meet particular patient care objectives which might be met satisfactorily under the current arrangement of emergency services.

A conservative approach to the development of helicopter transport programs is advised for several reasons:

a) The present system is extremely cost-effective. MAST operations are provided at no additional cost to residents above the support of federal tax subsidies.

b) In our region, the need for additional helicopter services which would be sufficient to support such an expensive service at an individual institution is unlikely. To justify the program, transportation services would tend to be over-utilized with transport provided in cases which would more appropriately be handled at other levels in the EMS system.

c) Facility costs would tend to increase since helicopter services are generally "loss leaders," powerful marketing tools which may increase hospital utilization but which would not necessarily guarantee the additional revenues required to cover the additional costs incurred.

d) If unnecessary and used inappropriately, helicopter transport services established outside the current system have the potential to adversely affect the EMS programs now serving the region. The development of private programs could result in the elimination of MAST (as specified in federal guidelines). Second, the ambulance

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and plane support systems in place might begin to experience volume reductions which could jeopardize both the quality and financial viability of the services they provide.

In summary, should additional need for helicopter services be found in the area, a consortium approach rather than an institutional approach to the provision of these services is recommended. This approach will avoid duplication, support the development and implementation of appropriate triage guidelines, and encourage continued reliance on a regional EMS system. It will prevent the introduction of such services as marketing tools for individual institutions which needlessly drive the cost of hospital care up while reducing reliance on the existing EMS system.

5. What alternatives are available for transporting patients and what are the medical implications?

Helicopter transport has a vital place in the emergency medical service system. The alternative of not providing such service does not exist. The real alternative is to allow proliferation of helicopter transport services which will unnecessarily increase the cost of hospital care without significantly benefiting the community.

BG:rs:P2
2/21/85

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CC 84-022

Seattle
Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

November 7, 1985

Re: Helipad Proposal of Children's Orthopedic Hospital
(CC 84-022)

Anita Francis
Liz Anderson
Citizens Concerned about
Helicopter Transportation
4746 45th Avenue N. E.
Seattle, Washington 98105

Dear Ms. Francis and Ms. Anderson:

This is to confirm our understanding that your comments on the Environmental Study prepared by Shapiro and Associates dated October 16, 1985 will be submitted to us by November 15, 1985. As you know, we are currently reviewing the document, and we will consider public comments which are submitted by November 15, 1985.

Thank you very much for your attention to this matter. If you have any further questions, please call Hermia Ip, Land Use Specialist of our office, at 625-2781.

Very truly yours,

BEATRICE FARRAR RYAN
Interim Director

/Hermia Ip

By
HERMIA IP
Land Use Specialist

HI:mer

cc: Tom Byers
Treuman Katz
Dorothy Teeter

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OFFICE OF THE
ATTORNEY GENERAL
University of Washington Division
(206) 543-4150

James B. Wilson
Steve Milam

Elsa Kirchner Cole
Gary L. Ikeda
Carol S. Niccolls

RECEIVED
SEP 24 1985
Dept. of Construction & Land Use

September 23, 1985

Ms. Beatrice Farrar Ryan
Interim Director
Department of Construction and Land Use
400 Seattle Municipal Building
600 Fourth Avenue
Seattle, WA 98104

Re: File No. Z853959 - Request For Reconsideration of Notice of Code Violation

Dear Ms. Ryan:

We represent Airlift Northwest and Dr. Michael Copass, Medical Director for Airlift Northwest, who received on September 2, 1985, a Notice of Violation of Land Use Code. The Notice states that the Airlift Northwest and Michael Copass are in violation of the Land Use Code for "using or permitting the use of the premises as a landing pad for helicopters . . . ." The notice does not indicate the facts upon which this allegation is based. It indicates that this activity is in violation of the following code sections: 23.40.02C[sic]; 23.48.05A[sic]; and 23.90.02B[sic].

Seattle Municipal Code Section 23.40.020C identifies the elements which must be proven in order to obtain a variance. Seattle Municipal Code Section 23.48.005 states that a helistop is a council conditional use in the major institution classification. Seattle Municipal Code Section 23.90.002B states:

> It is a violation of this Land Use Code to use or cause to be used any structure or land or to construct, locate or cause to be constructed or located any structure within the City of Seattle in any manner that is not permitted by the terms of any permit or authorization issued pursuant to this Land Use Code . . . .

The first two cited code sections suggest that the alleged violation relates to an impermissible structure. The language in

Ken Eikenberry Attorney General
112 Administration Building, University of Washington
Seattle, Washington 98195

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the notice suggests that the violation relates to an unauthorized use under Seattle Municipal Code Section 23.90.002.

APPELLANTS' INTEREST IN RECONSIDERATION

Children's Orthopedic Medical Center (COHMC) is the owner of the land described in the notice. Application of the terms of this notice would wrongfully subject Airlift Northwest and Dr. Michael Copass to penalties in the event of any similar occurances in the future.

OBJECTIONS TO NOTICE

Seattle Municipal Code Section 23.40.020C does not apply because there is no "structure" at issue.

Seattle Municipal Code Section 23.48.005A does not apply because Airlift Northwest and Dr. Michael Copass did not use a "helistop" on the premises of COHMC. This term is defined at 24.08.090 as "an area on a roof or on the ground used by helicopters . . . for the purpose of picking up or discharging passengers or cargo. . . ." There is no such designated area on the subject land. Helicopter landings have been so rare that it is impossible to identify "an area on . . . the ground used by helicopters . . . for the purpose of picking up or discharging passengers or cargo . . . ."

Seattle Municipal Code Section 23.90.002B has not been violated by Airlift Northwest and Dr. Michael Copass because they did not use the land or cause it to be used in an impermissible manner. Seattle Municipal Code Section 23.90.002B states that a violation occurs only if a person or entity used land in an impermissible manner or causes land to be so used. It cannot be shown that Airlift Northwest and Dr. Michael Copass are responsible for any helicopter landings.

Furthermore, the rare instances of helicopters landing on the subject property have occurred only on the occasion of direct and immediate life threatening emergencies where time, indeed seconds, could determine the difference between life and death.

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REQUESTED RELIEF

Airlift Northwest and Dr. Michael Copass respectfully request that the notice and determination of code violation be withdrawn.

Very truly yours,

Steve Milam
Assistant Attorney General

SM:ph

cc: Dr. Michael Copass
Robert Muilenburg
David Gitch
Polly Ellingson

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Children's Helistop

If you wish to receive notice of the availability of Final EIS and/or decision, please sign below.

Please print Name	Address
Albert A. Feldmann	4873 Terrace Dr. NE
Helen Mennon	4252 NE 50th SE 98105
Maryann E. Spangler	4013 N.E. 46th St. 98105
Dale Swanson	5036 45th N.E. 98105
Judith J. Platt	4526 - 45th Ave N.E. 98105
A. Wesley Roberts	4134 - 42nd NE. 98105
Anita Francis	5003 45th NE 98105
Mavis Kemp Pres Hawthorne Hills Community Club	6060 - 50th NE 98115
Charles L Baer	4328 N.E. 43rd 98105
Bart Baxter	3905 48th PL NE 98105
Damaris Rice	3815 - 46 Ave. N.E. 98105
Cheryl Kitchin	4702 - 44th Ave NE 98105
Lucille Conrad	4656 - 41st Ave NE 98105
Linda Giddens	4338 - N.E. 46th 98105
Thyrsten A. Johnson	4411 - 43rd Ave N.E 98105
Mary Titcomb	3115 W. Laurelhurst Dr 98105
Lola G. Sells	4620 41st Ave. N.E. 98105
Joy Scott	4339 NE 45 98105
Paul D. Julio	7035 - 51st Ave NE 98115

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NAME	Address
Jane Johnston	4323 NE 45 St, 98105
JOHN MENDENHALL	5033 44th NE 98105
Lola Lantz	4708 44th N.E. 98105
LARRY PENSIERO	4841 NE 44 98105
Seelye Martin	5217 NE 43rd 98105
Patricia Cern Ward	4036 NE 45th 98105
KIM A. SCHUYLER	4851 NE 39TH 98105
Charles R. Nelson	4921 NE 39th 98105
Scott Cobb	4654 - 41 NE 98105
HUGO W. SCHIMMELBUSCH	4702 - 45th AVE NE 98105
Enoch M. Bryan	4141 - 42 Ave NE 98105
BARBARA H DAVIS	4525 51ST AVE NE. 98105
ED LAPIC	3822 43 Ave NE 98105
DAVE BELVIN	4757 - 45 NE 98105
Richard Dimond	4318 - 55th Ave, NE, 98105
Cynthia Sullivan	402 Kinglo Cirths 98104
LIZ Anderson	4746 45th NE 98105
Julie Pai	4331 NE 45th A 98105

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RECEIVED
JUN 19 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

#7 File 84.022 File 2

Resolution passed by the Board of Trustees of the Laurelhurst Community Club, June 10, 1985 (unanimously)

Be it resolved that the Board of Trustees of the Laurelhurst Community Club opposes the establishment of a helipad and associated increased level of emergency service at Children's Orthopedic Hospital and Medical Center. The Board has been concerned for some time with questions about medical need, safety and environmental impact and has been disappointed with COH's lack of cooperation in sharing information about their proposed plans. In addition, alternative landing sites at other locations such as University Hospital and the intramural field are reasonable alternatives and should be investigated. However, COH's recent challenge to the requirement made by the Washington State Department of Social and Health Services that COH file a Certificate of Need application, impels us to oppose the granting of any permit that will allow COH to proceed with the proposed helipad and associated emergency treatment capability expansions. Information about the multiple costs and benefits of the COH proposal will not be available to the City of Seattle, the residents of the Laurelhurst community and other impacted communities, other affected hospitals,medical prepayment agencies, and current providers of emergency medical ground transportation unless a Certificate of Need is prepared by COH.

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UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

Office of the Executive Director of Hospitals

Harborview Medical Center
University Hospital

May 20, 1985

Anita Francis
5003 45th N.E.
Seattle, WA 98105

Dear Ms. Francis:

This letter is written in response to your letter to me dated March 7, 1985. Your understanding is correct in regard to University Hospital's plans to operate a helipad on the roof of its new east wing addition. The primary purpose of this helipad is to reduce the time required to transport critically ill patients. It would also increase patient safety by eliminating the need to shift patients from one transport vehicle to another. It will also reduce costs to the patient by eliminating the cost of the ambulance transport. Currently, patients are transported to the University Hospital by helicopter and ambulance. Helicopters now land on the University campus at the IMA fields to the north and east of the hospital. It is then necessary to transfer the patients to an ambulance and transport them to University Hospital. The ability to land the smaller patient transport helicopter on the University Hospital will make it possible to proceed directly from the helicopter to the hospital more quickly without the need for an intermediate transport via ground ambulance. This will significantly reduce medical risk to the patient and eliminate the cost of the ambulance portion of the transport. In our assessment, these factors constitute a substantial benefit to the patient.

You ask whether it makes sense to have two helipads so close together. My response would be that it makes sense to have helicopter landing capability at Harborview, University and Children's Orthopedic hospitals. These are the hospitals which typically deal with the most critically ill or injured patients in our society and are the hospitals of last resort. This will provide immediate access to adult critical care and

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the Burn and Trauma Unit at Harborview Medical Center, the High Risk Obstetrical Units at University Hospital and the Pediatric Critical Care and Neonatal Intensive Care Units at Children's Orthopedic Hospital. A helicopter landing site should be located close enough to the emergency entrance of each of these hospitals so transfer via ground transport vehicle, with its associated patient discomfort, delays, medical risk, and cost, is unnecessary. Consequently, the determining factor for siting of the helicopter landing facilities is more the location of these types of tertiary referral hospitals than the relative proximity of these hospitals to each other.

In your letter, you requested a copy of the agreement between the University and Children's Orthopedic Hospital which species the types of pediatric patients that go to each institution. I have enclosed a copy of the agreement between the University of Washington Department of Pediatrics and the Children's Orthopedic Hospital and Medical Center Department of Medicine which defines the relationship. Section VI details the specifics of this arrangement.

In your letter, you also requested a copy of the contract between Airlift Northwest and the various participating hospitals. Enclosed is a copy of the contract which is currently in effect for Airlift Northwest.

Sincerely,

Robert H. Muilenburg
Executive Director
of Hospitals

jal
cc: Lloyd David
Helen Shawcroft

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

RECEIVED
FEB 19 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

February 13, 1985

Hermia Ip
Municipal Building
600 4th Avenue, Rm. 408
Land Use Division
Seattle, WA 98104

Dear Hermia,

I am sending you documentation of our meeting of February 7th. I would like written confirmation from you that these are the issues about which we provide further documentation. We would also like a written confirmation from you that this will complete the information you require to determine the environmental impact status on this project. I have also enclosed the site map that you requested.

Although you may not know the exact schedule for hearings on our helistop, will you please provide us with an estimated schedule as to when the city council will be considering this project?

I am also hoping to hear from you this week as to your determination of what, if anything, will be required from DCLU to complete our short stay remodel.

Thank you for your assistance.

Sincerely,

Dorothy F. Teeter

Dorothy F. Teeter
Director of Planning

DT:js

cc: Treuman Katz

P.O. BOX C5371 • 4800 SAND POINT WAY N.E. • SEATTLE, WASHINGTON 98105 • (206) 526-2000

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

RECEIVED
FEB 19 1985
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LAND USE DIVISION

February 13, 1985

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Municipal Building
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Seattle, WA 98104

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Thank you for your assistance.

Sincerely,

Dorothy F. Teeter

Dorothy F. Teeter
Director of Planning

DT:js

cc: Treuman Katz

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

OCT 2 [illegible] 1985

October 21, 1985

Ms. Hermia Ip
City of Seattle
DCLU
400 Municipal Building
Seattle, Washington 98104

Dear Hermia:

Please find enclosed two (2) copies of a completed environmental checklist on our proposed helistop. We are looking forward to presenting this to you and Cliff Portman on Tuesday, October 22, 1985.

Once you have reviewed it, please feel free to call me with any questions.

Sincerely,

Dorothy F. Teeter
Director of Planning

hg
Enclosures
cc: Treuman Katz

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4800 SAND POINT WAY N.E. • P.O. BOX C5371 • SEATTLE, WASHINGTON 98105 • (206) 634-5000

File 84-022

Please respond to:
CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER
4800 Sand Point Way NE/P.O. Box C5371
Seattle, WA 98105/Phone: 526-2000
ext. 2116

UNIVERSITY OF WASHINGTON
School of Medicine
Department of Pediatrics/RD-20
Seattle, WA 98195/Phone: 543-3180

January 24, 1985

RECEIVED
JAN 28 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justen
Director, Department Construction & Land Use
600 47th Avenue
Seattle, WA 98104

Dear Mr. Justen:

I am writing to let you know that the proposed Heliport Pad at Children's Orthopedic Hospital and Medical Center (COHMC) is unnecessary and will be detrimental to our neighborhood. The current transport system of landing at the University of Washington intramural fields is quite successful and does not jeopardize patients. It is only a few minutes away.

I am currently a physician at COHMC. Previously, I was involved in patient transports for over two years while serving in the United States Public Health Service. It should be noted that COHMC does not have a burn unit or a trauma unit. Thus, patients with these complications would be taken to Harborview Hospital.

Finally, I feel strongly that the disruption to our children both those in the hospital and those at home would be significant if helicopter transports land at COHMC. At the least COHMC should be required to make an environmental impact study on their proposal. I would be most willing to discuss these concerns freely at any future time.

Thank you for your attention to this matter.

Sincerely,

Paul M. Mendelman

Paul M. Mendelman, M.D.
Assistant Professor of Pediatrics
University of Washington
Associate, Division of Infectious Disease
Children's Orthopedic Hospital
and Medical Center

PMM:lm

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File CC 84-022

THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

Treuman Katz
Chief Executive Officer

April 26, 1985

Representative Ken Jacobsen
404 House Office Building
Olympia, Washington 98504

Dear Representative Jacobsen:

On April 3, 1985, Ms. Nancy Greenawalt, a COHMC staff person, wrote a letter to you regarding an amendment to Engrossed Substitute House Bill 397 which would have required a Certificate of Need review for on-site use of aircraft transportation of patients to and from a hospital. Children's Orthopedic Hospital and Medical Center opposed that amendment because it could have hindered our plans to establish helicopter transport service in emergency medical situations.

In that letter Ms. Greenawalt indicated that COHMC had "widespread support including that of Mayor Charles Royer and the Puget Sound Health Systems Agency." That statement is inaccurate. Ms. Greenawalt is new to COHMC and misunderstood the situation. COHMC has not asked for nor received formal support for our position from either Mayor Royer or the Puget Sound Health Systems Agency. It is important to the Hospital that we have a good relationship with the community built on mutual trust. I am sorry that the misunderstanding occurred because it could jeopardize that relationship.

You can be assured that the Hospital has followed and will continue to follow formal channels in seeking approval for helicopter transport service.

Sincerely,

Treuman Katz

Treuman Katz
Chief Executive Officer

hg

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4800 SAND POINT WAY N.E. • P.O. BOX C5371 • SEATTLE, WASHINGTON 98105 • (206) 526-2001

THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

April 29, 1985

RECEIVED
MAY 1 - 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Katy Chaney
Director
Land Use Division
Seattle Department of
Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Re: The Children's Orthopedic Hospital and Medical Center
Helipad Proposal

Dear Ms. Chaney:

Thank you for your letter of April 17, 1985, and for your assistance in connection with our request for the City's approval of the construction of a helipad at COHMC. If I may, I would like to request that you amplify or explain some of your comments regarding the standards for the City's review of our application for council conditional use approval.

You enclosed a copy of Section 23.48.05, which set forth the criteria for approval of a helipad. When you allude in the April 17 letter to our need to justify "the medical need for the helipad facility," I believe that is a reference to Section 23.48.05A.1.a. This provision of the applicable code section requires a showing that the "helistop is needed to save lives."

Your letter appears to say that we are required to show the cost-effectiveness of the helipad's usage and development. I could not find a provision in Section 23.48.05 requiring such an analysis. I would appreciate your assistance in explaining the need for this type of analysis.

In your letter, you indicate that you are concerned about the proliferation of helipads and the resultant undesirable effects on neighborhoods. It would be of assistance to us if you would provide us with examples of such undesirable effects, or amplify your concerns sufficiently so that we could be sure that we address the City's specific concerns.

P.O. BOX C5371 • 4800 SAND POINT WAY N.E. • SEATTLE, WASHINGTON 98105 • (206) 526-2000

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(3) Finally, you indicate that the City's review cannot proceed without an analysis of the helipad in light of the goals and objectives of the Puget Sound Health Systems Agency and the State Department of Social and Health Services Certificate of Need Program. We would very much appreciate a clarification of this statement. The Puget Sound Health Systems Agency's goals and objectives are simply an interpretation of those of the State Department of Social and Health Services Certificate of Need Program. The proposed helipad is exempt from certificate of need review under the policy of the legislature embodied in the Health Planning Act (Chapter 70.38 RCW) and the regulations of the Department of Social and Health Services interpreting that Act. I presume that the Seattle Department of Construction and Land Use is not going to assume the role of the Certificate of Need Program and ask us to address our arguments to it as if a Certificate of Need were required where one is not. In any case, please advise us of your thought about this matter.

Again, thank you for your assistance. We very much appreciate the dialogue between COHMC and the Department of Construction and Land Use on this matter.

Sincerely,

Dorothy F. Teeter

Dorothy F. Teeter
Director of Planning

DT:js

cc: T. Beyers
L. Thompson
F. Chestnut
T. Katz

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

RECEIVED
FEB 19 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

February 13, 1985

Hermia Ip
Municipal Building
600 4th Avenue, Rm. 408
Land Use Division
Seattle, WA 98104

Dear Hermia,

I am sending you documentation of our meeting of February 7th. I would like written confirmation from you that these are the issues about which we provide further documentation. We would also like a written confirmation from you that this will complete the information you require to determine the environmental impact status on this project. I have also enclosed the site map that you requested.

Although you may not know the exact schedule for hearings on our helistop, will you please provide us with an estimated schedule as to when the city council will be considering this project?

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Thank you for your assistance.

Sincerely,

Dorothy F. Teeter

Dorothy F. Teeter
Director of Planning

DT:js

cc: Treuman Katz

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In a meeting with Hermia Ip, our DCLU land use technician last week, a fairly thorough discussion of the helistop issues occurred. DCLU is requesting the following additional information from us:

1) Description of current helicopter transport procedure, including documentation of frequency, time lost from landing at the playfield, and patient safety/outcome issues. Explain more clearly why we aren't willing to use the playfield instead.

2) Documentation of noise level. The city is recommending that we hire a consultant to measure the decibel noise at various times and locations--e.g. landing, take off, approach paths, etc. They also want to know more specifics about the mitigating measures COHMC will take to muffle the noise, and the duration of the noise at approach, landing, and take off.

3) Documentation of the frequency of helicopter transports at different times of the day. (Can we say, for example, that nighttime helicopter transports will be less frequent than daytime; can we categorize the types of admissions that we get now at night, and figure out how many of them should have been helicopter transports.) What mitigating measures will COHMC take to decrease the frequency of helicopter transports whenever feasible (cost, ground transport, etc.).

4) Description of the quantity and quality of exhaust from the helicopter, and the mitigating measures COHMC intends to take to control emissions.

5) Description of the light and glare generated by the helicopter, and how far away it can be seen. Depiction of exact location of ground lights of surrounding helipad.

6) Description of the fenced barrier COHMC will construct as required by FAA, and a description of the existing landscaping around the helistop.

7) Description of how far it will be from the helicopter to the Emergency Room, and how long this transfer takes.

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

December 10, 1985

TO: Cliff Portman
Senior Land Use Specialist
City of Seattle
Department of Construction and
Land Use
402 Municipal Building
Seattle, WA 98104

FROM: Nancy Greenawalt Nancy

RE: Answers to DCLU questions on Environmental Checklist

Attached is a memo from Susan Killen of Shapiro Associates which addresses the following:

1. A larger scale map of the area surrounding Children's Orthopedic Hospital detailing the flight path into and out of COHMC.

2. An estimate of the number of MAST flights to COHMC per year.

3. A discussion of circumstances which would necessitate deviation from the proscribed flight path.

4. A quantitative estimate of the noise levels for a MAST helicopter.

In addition per your request, I have enclosed a landscape plan indicating the species and square footage of plant life including and surrounding the helistop.

dj
Enclosures

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12·27 R2: 8405870 CC84-022 Children's Hosp

Add'l. Names for notice (from October '85 to present Helistop 1-7-86):

Agencies

Seattle S.E.P.A. Public Info. Center (D.S. notice)

Dep't. of Ecology (D.S. notice)

Seattle - King. County Health Dep't. - Dr. Brad Nicola

~~2. Fed. Aviation Administration~~

Bernice Stern, Chairman,
Transportation Commission
WSDOT Division of Aeronautics
8600 Perimeter Rd., King Co. Int'l Airport
Seattle, WA 98108

Individuals / groups

~~Karen Rasmussen~~
~~Fraselin & Watkins~~, for Laurelhurst Condominium
Suite 2300 4th & Blanchard Bldg.
2121 4th Avenue
Seattle, WA 98121

Karen Rasmussen
Suite 2306

Grace H. Malson
P.O. Box 51087
Seattle, WA 98115

Ramy N. Haugh
5054 44th NE #3
Seattle, WA 98105

Lola Goetz
4708 - 44th NE
Seattle, WA

Kathleen McHugh Johnston
4200 N.E. 50th
Seattle WA 98105

Marvel Wickenburg
4705 - 45th NE
Seattle, WA

Helen Newman
4252 N.E. 50th
Seattle WA 98105

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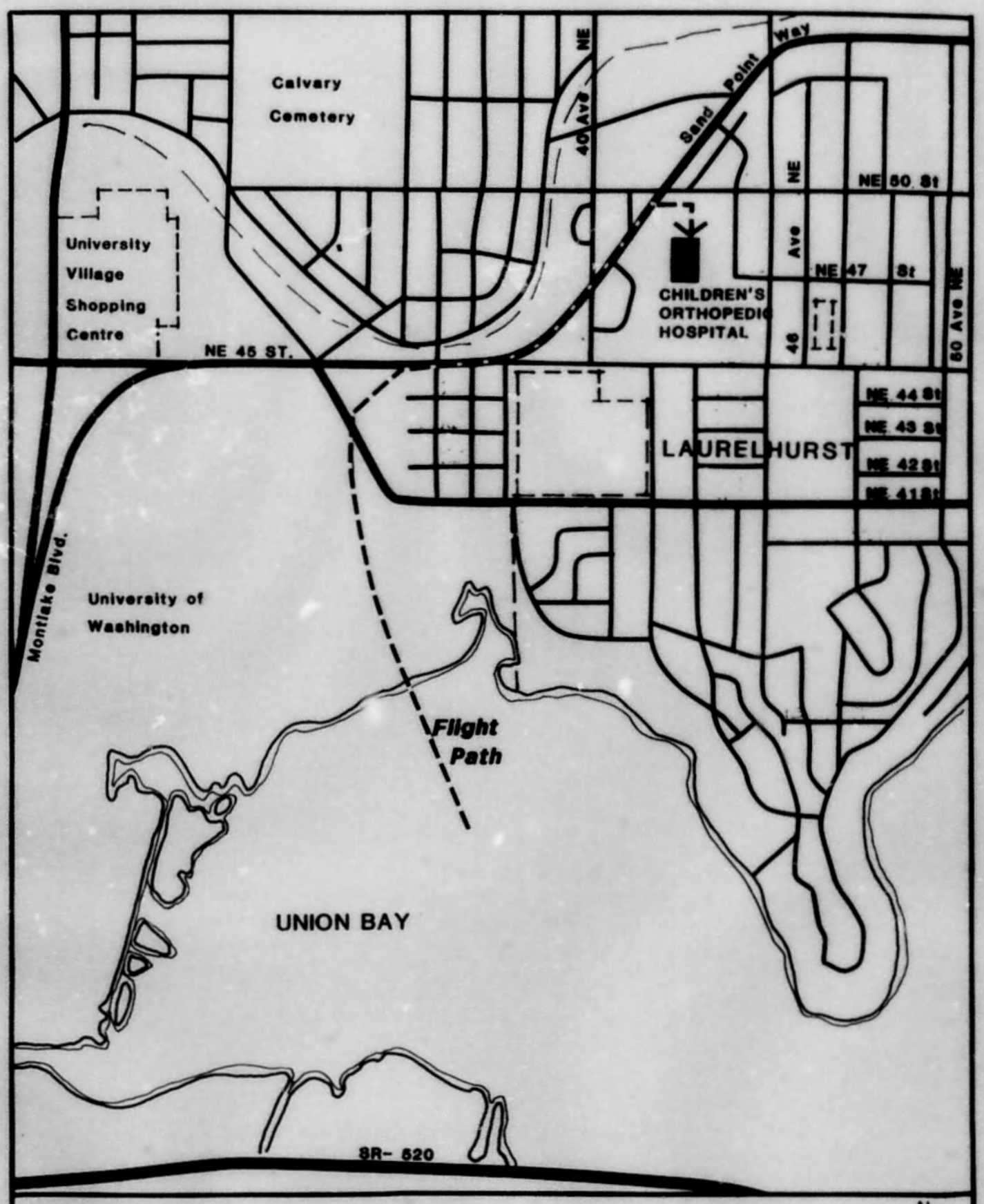

FIGURE 1

CHILDREN'S ORTHOPEDIC HOSPITAL HELIPAD

VICINITY MAP

N

SHAPIRO & ASSOCIATES

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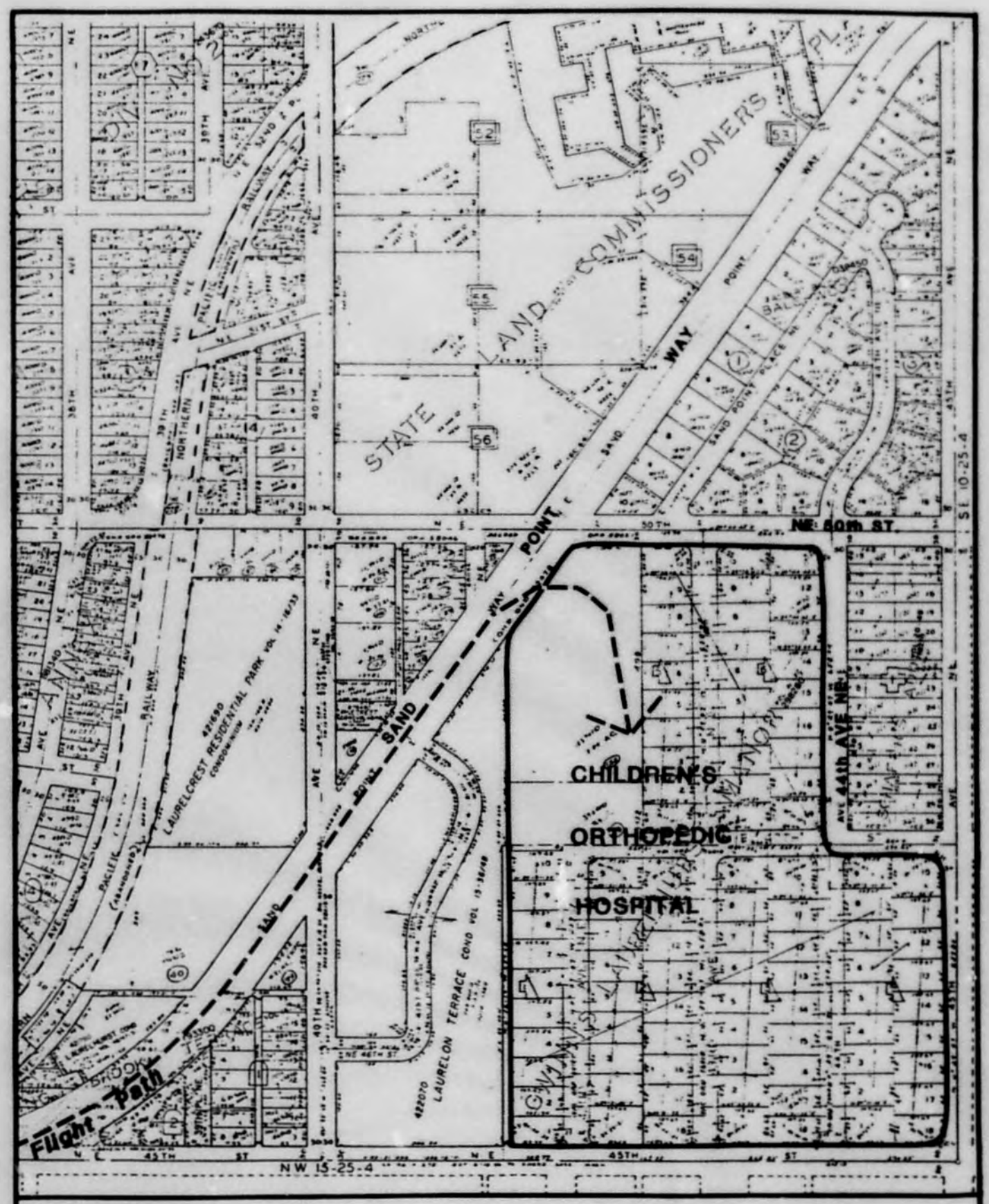

FIGURE

CHILDREN'S ORTHOPEDIC HOSPITAL HELIPAD

SHAPIRO & ASSOCIATES

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Letter of Transmittal

SHAPIRO & ASSOCIATES INC

The Smith Tower
Suite 1812
506 Second Avenue

Seattle
Washington 98104

206/624-9190

Date December 9, 1985

Re COHMC Helipad

To Nancy Greenwalt
Children's Orthopedic Hospital & Medical Center
4800 Sand Point Way
Seattle, Wash. 98119

We are sending you

Response to questions/additional information for DCLU

For your

___ Information ___ Review ___ Signature

___ Approval ___ File ✓ Distribution

Remarks If DCLU wishes additional noise information noise monitoring could be done for the MAST - it would take an additional week approximately and arrangements would need to be made with MAST.

Signed

white: to addressee yellow: to originator pink: to file

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1. COH Flight Path

The COH flight path, along the Ship Canal, across Union Bay and onto Sand Point Way, was selected by Airlift Northwest in consideration of three factors: (1) safety, (2) noise abatement, and (3) prevailing wind direction. According to Airlift Northwest (Jim Jackson, December 4, 1985), the three pilots "always" use the same flight path in their approach to COH. The only time that they would deviate from their normal flight path is when the prevailing wind direction requires them to perform a "pedal turn," which enables them to back the helicopter into the helistop. This situation occurs only when strong east winds in excess of 30 knots exist. According to NOAA Sea-Tac data, strong easterly winds occur in Seattle less than 1% of the time. Even under these circumstances, the Airlift Northwest's flight path approach to COH does not change. The "pedal turn" maneuver is performed over the COH parking structure north of the proposed helistop.

Inclement weather does not affect the helicopter's flight path to COH because the helicopter would not be used during adverse weather conditions (Gene Hill, November 15, 1985). In the event that two helicopters were attempting to use the COH helistop at the same time, a situation that has yet to occur, one helicopter would retreat along the flight path and "orbit" over either Graves Field or out over the water near Husky Stadium.

2. Comparative Noise Analysis: AUGUSTA vs. MAST

This report presents a comparison of the general noise from the MAST (Military Assistance in Safety and Traffic) and the AUGUSTA Model A-109 helicopters. This study was requested by the City of Seattle's Department of Construction and Land Use in order to supplement the noise data in the Environmental Checklist on the proposed helistop prepared for the Children's Orthopedic Hospital and Medical Center (COHMC). Actual helicopter noise level data for the AUGUSTA was measured at COHMC by Seton, Johnson & Odell and is presented in their noise evaluation report. There is no actual noise level data taken on the MAST helicopter at COHMC. Noise level data for the MAST helicopter in this analysis is from several Federal Aviation

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Administration reports and from a conversation with the manufacturer of the MAST helicopters, Bell Helicopter Company.

The MAST helicopter is a Bell 212 with the military designation UH-IN. The following range of noise measurement levels was measured from a distance of 500 feet, and represents averages of noise values taken of a Bell 212 at optimal performance levels:

1. Flyover at 110 knots	Peak levels of 80-90.5 dBA
2. Approach	78-93.3 dBA
3. Takeoff	80-87 dBA

Sources: Charlie Cox, Bell Helicopter Company, personal communication, December 4, 1985; and Helicopter Noise Exposure Curves for Use in Environmental Impact Assessment, November 1982, Federal Aviation Administration.

Noise is measured in decibels (dBA) on a logarithmic scale designed to approximate human response to sound. Each incease of 10 dBA in the noise level is subjectively judged as an approximate doubling of loudness. A 3 dBA change is generally the smallest increment that can be perceived by the average person.

Compared to the noise measurements taken for the AUGUSTA Model A-109 by Seton, Johnson & Odell on May 12 and 15, 1985 in the vicinity of the proposed COHMC helistop, the MAST helicopter produced higher noise levels than the AUGUSTA. The MAST noise levels range from 7-17 dBAs for the flyover to 8-23 dBAs for the approach, and 3 dBAs for the takeoff higher than the AGUSTA. Note that the noise levels recorded for the MAST helicopter represent averages of noise values obtained during flight tests conducted by the Federal Aviation Administration, while the AUGUSTA noise level measurements were obtained at COHMC.

The MAST helicopter produced higher noise levels than the AGUSTA due to the phenemenon of "blade slap." Blade slap is the popping noise resulting from the tip of the blade slicing through the air turbulance generated by

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the trailing edge of the blade. According to the Federal Aviation Administration report, the noise signature of a helicopter is composed of contributions from several sources that include the main rotor, tail rotor, engine and transmission noise. In general, it is the main rotor and tail rotor that dominate the noise produced by a helicopter. The main rotor provides the lift and thrust forces for the helicopter and generates sound as a result of the inherent aerodynamic forces on the blade. The MAST helicopter records high noise levels due to the effect of "compressibility blade slap." The MAST helicopter peak noise level in a flyover occurs well before overhead passage and is caused by the highly directional compressibility blade slap.

Summary Statement

Based on available date, the MAST helicopter has noise levels somewhat higher than the AUGUSTA, primarily due to blade slap and aircraft design.

3. Frequency of MAST Helicopter Landings

The frequency of MAST helicopter landings at COHMC would continue to remain low. Under current plans, the MAST helicopter would continue to use the soccer field much as it does today; however, there is the possibility the helistop could be used if the situation warrants it. Based on the existing use, this would annually be in the range of 0 to 11 round trips.

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

December 17, 1985

Julia Gibb, Land Use Specialist
Department of Construction and
Land Use
Seattle Municipal Building
Room 400
600 - 4th Avenue
Seattle, WA 98104

Dear Ms. Gibb:

Per our discussion last week, I asked our consultants, Shapiro & Associates, to review and comment on the letter submitted to DCLU from Citizens Concerned about Helicopter Transports. Those citizens questioned the validity of noise and safety data in the COHMC environmental checklist. In the attached documents, Shapiro & Associates not only verify and support the accuracy of their data, but also defend the methodology of the noise study and the qualifications of the acoustical engineer who conducted the tests. It appears to us that we have more than adequately demonstrated that noise and safety issues were addressed, and that for the purposes of this process, are not significant issues. Additionally, Cliff Portman had expressed concern that alternative sites were not sufficiently pursued. A mitigated DNS requires COHMC to explore alternative solutions which meet the objective of the original proposal. Since one of our objectives is to minimize the number of handlings necessary to bring a child to COHMC, it is clear that there are no alternative sites which meet that objective except a helistop at COHMC.

COHMC is very concerned that this process has taken and may still take an unjustified length of time. In the interests of public safety and accountability, every conceivable issue has been reviewed and addressed by Shapiro & Associates through the environmental checklist. COHMC believes that a DNS is highly justified. The children of Washington need access to the technology available to save their lives. It is wrong to deny them their only chance, when in fact COHMC has more than met every requirement to obtain a land use permit. This is not only our opinion, but also that of the Washington State Department of Transportation, Aeronautics Division. At their initiative the state DOT contacted COHMC to offer their assistance and support in an attempt to expedite this process. Under separate cover they will contact DCLU, city

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council, and the mayor's office with supporting documentation and a recommendation that COHMC be given a conditional land use permit as soon as possible.

I expect DCLU to issue a declaration during the first week of January, 1986. If I can offer additional information, please call me at 526-2004.

Sincerely,

Nancy Greenawalt

Nancy Greenawalt
Director of Government Affairs

dj
Enclosures

cc: William Hamilton

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COHMC HELIPAD
ADDITIONAL NOISE AND SAFETY INFORMATION

The following provides additional clarification of the noise and safety information contained in the Environmental Checklist for the proposed helistop at Children's Orthopedic Hospital and Medical Center (COHMC).

The resume for Russ Altermatt is attached. Mr. Altermatt authored the "Helipad Noise Evaluation" for COHMC. The entire report was submitted with the checklist.

The sites selected for study and used to measure background noise were chosen in consultation with Hermia Ip (DCLU) and Kurt Horner (King County Health Department). The site selection rationale is discussed in greater detail on page 7 of the noise report. The consultant coordinated efforts to ensure the background noise monitoring would be conducted at those sites that were most likely to be affected by helicopter flyovers and, therefore, would reflect the "worst case" conditions.

The actual background noise measurements were taken on different days and at different times at all selected sites to obtain an average (an average is an approximation and is a standard basis for noise impact assessment) for both day and nighttime background noise. The method of monitoring these sites is discussed on page 9 and a summary of all measurements is found in Table 2, page 10. The background noise reported on page 10 is an accurate measurement of noise at those monitored sites.

Tables 4 and 5 are correct. It is important to note that Table 5 was provided only to give additional information on the helicopter landings with average monthly figures and should be treated separately from Table 4.

The comparison of background noise with helicopter noise was made in terms of DNLs rather than Ldns since measurement in DNLs is used as standard terminology by EPA. It should also be noted that DNL and Ldn indicate the same measurement (Day-Night Level) and, therefore, the change in the measurement terminology used will not alter the impact analysis. Further discussion is found on page 2 of Mr. Altermatt's report.

The measurement of one helicopter landing provides sufficient information to determine whether the landing of a helicopter would be expected to create a significant noise impact since the "magnitude" of the impact could be ascertained. Of course, monitoring of additional landings would provide more precise information; however, it is unlikely that the magnitude would change significantly.

Mr. Altermatt, in conversations with Airlift Northwest, discussed the differences in take-off and landing with the "fully" loaded helicopter versis the "partially" loaded helicopter as described in the letter to Hermia Ip from the Citizens Concerned About Helicopter Transport (November 15, 1985). Mr. Altermatt determined through these discussions and professional judgement that the differences are insignificant and the conclusions drawn remain valid.

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As stated in Table 4 and referred to in the "Citizens" letter, the maximum noise from the helicopter take-off is measured to be 84 dBA at Location 1; the lowest night Leq is 41, not 33. This helicopter noise may be sufficient to arouse some people from sleep as discussed on page 17. The increase in noise would be significant in terms of dBA increase; however, in accounting for the time duration, the increase would be insignificant. There is no standard that clearly defines the guidelines for duration and significance. The average monthly figures presented by Mr. Altermatt's report showed an objective calculation to provide guidance in resolving the duration issue.

The Seattle/King County noise regulations are also included in Mr. Altermatt's noise report (pages 2-5) to provide additional contextual information; however, helicopters are exempt from these regulations (page 5).

Although noise measurements during the helicopter landing were only taken at Site 1, the data was applied to the other sites with attenuation over distance incorporated into the estimate. The interpolation of data taken at Site 1 and used to predict measurements at the other sites did not include absorption by air and, therefore, is an overstatement of noise as opposed to an underestimate and, therefore, is considered a "worst case."

The factors influencing attenuation that would be caused by buildings and open windows is too complex to be quantified realistically. Mr. Altermatt indicated (conversation 12/12/85) the attenuation figures could be between 20 and 30 dBA, plus or minus.

Mr. Altermatt also indicated (conversation 12/12/85) that a significant impact would be an increase in sound of more than 3 dBA (a doubling of sound).

The risk figure of 5.48 accidents per 100,000 flight hours presented in the Checklist considers all turbine-powered rotorcraft (Annual Review of Aircraft Accident Data, U.S. General Aviation, 1981). The figure of 11.16 accidents per 100,000 is used for all rotorcraft, not 13.38 per 100,000 as cited in the "Citizens" letter. The 5.48 figure was considered more appropriate since it was known that the helicopter was turbine-powered (also, twin-engines provide additional safety). The number of flights would be 20 for this calculation since the 48-minute average flight time recorded by Airlift Northwest includes the flight to pick up the staff as well as the flight to delivery the patient (hence, the 40 round trips discussed in the Environmental Checklist). The predicted number of years between accidents based in the above data would be 95.04. If one uses the accident rate for air taxi service presented in the "Citizens" letter (short-haul helicopter service most similar in distance and take-offs and landings to Airlift Northwest) of 5.78 accidents, the number would be adjusted to 90.1 years between accidents. Also, it should be noted that fewer than 40% of the COHMC-related figures are at night.

The assumptions for flight time per trip (48 minutes) used for noise assessment is the actual average figure derived from records kept by Airlift Northwest and is the best available information.

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In reseaqrching these data, several factors should be kept in mind. First, additional studies of emergency helicopter accident rates are still being conducted; therefore, the data used is the best availiable data until these more current studies are completed. Second, a mishap could occur at any point on the trip. The number of years predicted between accidents based on number of flight hours would be similar to the conclusions drawn regardless of the location of the helip-ad. Third, FAA data show the accident rate to have decreased by more than half over a seven-year period, one could project the accident rate will decrease further. Finally, when predicting the statistical probability of risks of any kind, a multitude of factors enter into any conclusion. All precautions are taken by Airlift Northwest to ensure the safest and best service.

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RUSSELL ALTERMATT
Acoustical and Electrical Engineer

EDUCATION: B.S., Engineering Physics, Oregon State University, 1971 - Coursework in Acoustical Engineering

REGISTRATION: Professional Engineer in Electrical Engineering, 1979, Oregon

PROFESSIONAL MEMBERSHIPS:
Acoustical Society of America
Institute of Noise Control Engineering
Audio Engineering Society

EXPERIENCE: January 1981-Present:
Seton, Johnson & Odell, Inc.
Responsible for industrial, mechanical, community and architectural projects requiring noise analysis. Project engineer for studies requiring technical expertise in the field of sound and vibration control as they relate to architectural acoustics, building equipment, environmental, industrial and product noise control. Projects have included:

-- Evaluation of traffic noise and isolation requirements at a proposed condo site

-- Prediction of construction noise at a traffic bridge in Salem

-- Evaluation of HVAC noise in the classrooms of a private school

-- Study and analysis of router room noise at an electronics assembly plant

-- Evaluation of proposed condominium complex location and isolation relative to aircraft noise

-- Development of work program for noise survey to assess impacts of proposed bulk loading terminal

-- Ambient noise survey to assess noise levels surrounding site of proposed resource recovery facility

-- Assistance in preparation of noise section of environmental impact assessment for a proposed log yard and sawmill

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RUSSELL ALTERMATT
Acoustical and Electrical Engineer

EDUCATION: B.S., Engineering Physics, Oregon State University, 1971 - Coursework in Acoustical Engineering

REGISTRATION: Professional Engineer in Electrical Engineering, 1979, Oregon

PROFESSIONAL MEMBERSHIPS: Acoustical Society of America Institute of Noise Control Engineering
Audio Engineering Society

EXPERIENCE: Mr. Altermatt joined Seton, Johnson & Odell in 1981 as acoustical engineer with primary responsibility for all of the firm's work requiring analysis of industrial noise, transportation related community noise, architectural acoustics, and mechanical systems noise. Representative projects include:

Transportation:
-traffic impacts on a proposed residential development
-traffic impacts of Elliott Bay Marina
-truck traffic impacts of Port Angeles log yard
-traffic impacts of proposed industrial facility at Cherry Point, WA
-construction noise from bridge construction
-impact of freeway and light rail operation

Industrial:
-community noise impacts of proposed bulk loading terminal
-community noise impacts of proposed resource recovery facility
-noise study of an asphalt batch plant
-evaluation of machine noise in an electronics plant
-industrial noise survey for OSHA compliance in a steel fabrication shop

Architectural:
-evaluation of HVAC systems noise in classrooms
-sound isolation in multifamily development affected by aircraft noise.
-acoustical design of a school music room
-acoustical analysis/design in churches
-acoustical design for office interiors

Prior to this period, Mr. Altermatt held similar positions with two other consulting firms and the Puget Sound Naval Shipyard. He has a total of 8 years experience specializing in acoustical engineering.

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RUSSELL ALTERMATT (cont.)

-- Sound level measurements for a conditional use permit for the operation of an asphalt batch process plant

-- Acoustical analysis and recommendations for the music room of an elementary school

July 1979-January 1981:
Daly Engineering Company,
Responsible for measurement, evaluation, and recommendation for control of sound and vibration. Specific areas of concentration included control of sound within a room, isolation of a room from external noise, evaluation of mechanical equipment noise and vibration, design of sound system.

1977-July 1979:
Van Gulik and Associates, Inc.
Responsible for noise and vibration measurement and control, testing and design of electronic instrumentation and electrical control systems. Projects included measurement, analysis and recommendation for noise problems relative to Oregon Department of Environmental Quality, and Oregon Workman's Compensation Board (OSHA) regulations. Evaluation and recommendation for sound isolation of multi-family dwellings. Responsible for sizing and layout of cable, conduit and fusing for feeder and branch circuit supplying industrial machinery; sizing of motor starter.

January, 1976, to September, 1977:
Puget Sound Naval Shipyard
Acoustical Engineer. Duties included design of test agendas, operation of Carr Inlet Acoustic Range for ship testing, performance of data analysis. Product: Naval Ship Acoustical Survey Reports.

Summers 1968, 1969, 1970
Student Engineer; Portland General Electric Co., Design and estimating of materials and labor for installation of electrical service hookup and distribution system consturciton. Service hookups included commercial, and single and multi-family residential: sizing, transformers, and cables.

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ATTACHMENT FOR APPLICATION REQUIREMENTS FOR COUNCIL APPROVALS

Application #CC-84-22

In addition to the information you must show IN DETAIL on your plans, you must provide complete, detailed, and accurate information on the items below, if applicable, to assure that your request receives a thorough review. DCLU will base its decision on your request substantially on the information that you provide on this form and on the required plans. Use additional paper if necessary.

This information supplements information required on the Environmental Checklist for projects subject to SEPA. If you have fully answered these questions on another form required by this application, you make make a cross reference in the space provided for response below instead of answering the question again.

All applicants for Council approvals must have a pre-application conference with the Land Use Review staff. Call 625-4509 for an appointment.

1. Describe the proposal, including the type of use proposed (e.g., rezone for what use, type of major institution); whether it is a new use or expansion of an existing use; the characteristics of the use, or changes anticipated by the expansion (number of clients, students, staff, employees or residents; hours of operation; types of programs; types of deliveries; what type of structures are proposed (e.g., townhouses, apartments).

   Construction of an emergency helistop on the COHMC campus is being proposed. Such a helistop will support our existing air ambulance service. There are no anticipated changes in operations due to constructing this helistop.

2. Describe the existing use of the site.

   Hospital grounds.

3. Is any demolition proposed?

   No.

4. Describe the anticipated benefits the proposed use or development would provide (for example, providing low income housing or a community service).

   The anticipated benefit is greater safety in transporting critically ill or injured patients to COHMC. Current practice necessitates an extra transfer from the helicopter to a waiting ambulance to transport the child to COHMC. Such delays are costly and can mean the difference between recovery, death, or irreversible damage for the patient.

5. In the case of public facilities, describe the public necessity for the facility.

   Not applicable.

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6. What are the potential impacts of your proposal on the neighborhood (e.g., traffic congestion, increased parking demand)?

The potential impact on the neighborhood is the additional noise level of the helicopter during landing and take off.

7. Please describe what measures would mitigate negative impacts of the proposal on adjoining properties (e.g., noise from construction, autos, equipment, outdoor play areas; light and glare, fumes and odors) or on public streets (e.g., traffic, parking and utilities).

The proposed location of the emergency helistop is sited directly outside the COHMC Emergency Room, in the heart of the campus. This location should minimize the noise that accompanies a helicopter, since it is located as far away from the majority of residential property surrounding the campus. Flight paths, both ingress and egress, are directed over the least populated areas; the final approach and departure will be over the parking garage, west on Sand Point Way, and then over Lake Washington. This pathway is intentionally planned to affect the fewest residences possible.

8. If you are requesting any waiver or change in development standards, please provide your reasons or justification.

Not applicable.

9. Attach required transportation plan determined upon in the preapplication conference for your proposal.

Not applicable.

10. Attach pre-application conference form.

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November 15, 1985

4746 45th N.E.
Seattle, WA 98105

Addressee: Elizabeth Anderson

Hermia Ip
Department of Construction and Land Use
Municipal Building, 600 4th Avenue
Seattle, Washington 98104

Dear Ms. Ip,

The following comments on the report prepared by Shapiro and Associates for Children's Hospital, dated October 8,1985, have been developed by various members of the Laurelhurst community. They are intended to be of use to DCLU as they review this report prior to making a determination of significance with regard to the application by Children's hospital for a permit to build a helipad on their campus.

1. The noise section of this report was prepared by Russell Altermatt, an employee of Seton,Johnson and Odell, Inc. We note that Mr. Altermatt is a registered engineer in the State of Washington but that does not mean that he has suitable credentials as an acoustical engineer as Washington has no such category. What are the credentials of Mr. Altermatt in the noise assessment field? Our review of his work indicates that his capabilities and experience in the conduct of noise studies may be very limited and that the city should prepare their own assessment of noise information. A second opinion is imperative.

2. Figures 1 and 2 in the Shapiro report are very important in terms of its contents. Yet, the scale of Figure 1 is entirely inappropriate to a clear definition of the intended flight path of the helicopter. Our observations of four helicopter landings at COH have shown us that the helicopter actually turns south a considerable distance north of the location shown on Figure 1 (i.e.directly over the apartments in Windermere Circle instead of over the parking garage as shown in Figure 1 and as described in the text on page 18).Figure 1 is incorrect and misleading. It should be redone at a larger scale and more accurately. Figure 1 is also intended to show the relation (distance) between the helipad and the school playground and Laurelhurst City Park (see page 11). These are NOT SHOWN on the map. Figure 2 should show the location of the proposed helipad. It should also be a scale map with the scale indicated on the map. One cannot possibly interpret the findings of the Shapiro report without a map that shows the location, to scale, of the major subject of the report in relation to the many residential structures in the immediate vicinity and objects near the proposed helipad, such as the oxygen tank, gas meter,campus streets, etc. Figure 3 is cited on page 3 of the report but is missing from all of the copies made available to the community for review. Both of the figures included in the report are misleading and not appropriate to a clear presentation of the textual material.

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3. The noise section of the report is very deficient for several reasons. The main purpose of a noise analysis is to determine how much additional noise, beyond normal background noise, is likely to be produced by the proposed action. The noise measurement sites selected for the purpose of measuring BACKGROUND NOISE LEVELS were generally inappropriate, as we shall show, and have led to results that are higher than they should be. On the other hand, the methods used to measure the HELICOPTER NOISE were severely deficient and have produced noise levels that are lower than they would have been had the study been conducted properly. The net result is that the increase in noise reported has been understated substantially. The background noise measurements were all taken near existing sources of noise in the neighborhood. Substantial noise is emitted continuously from Children's Hospital and two of the stations (numbers 1 and 2) are located very near the hospital. The other three stations were located adjacent to Sand Point Way, a heavily used arterial. No stations were located such that the true background noise level experienced by the people who live in the residential areas adjacent to the hospital could be recorded. The result is that the background noise levels reported on page 10 of Altermatt's report are high by at least three dB(A). Comparison of the background noise figures in Table 4 with those in Table 5 in Altermatt's report (page 20) shows that his conversion is incorrect. The appropriate figure in column 1 of Table 5 should be 50 rather than 52. The helicopter figure of 55 should be more like 58, giving a difference of +8 rather than the figure shown. The figure of 68 shown in column 3 of Table 5 is very suspect. Noise experts have told us that they normally get measurements of 70 adjacent to the I-5 freeway during rush hour. It is absolutely absurd to think that a background level of 68 is a reasonable figure for location 3. Location 3 is also an inappropriate location to measure background noise as it too distant from the scene of the action to have meaning. One can note that presence of the N.A.'s in column 3 of Table 4 as confirmation of this point. More importantly, the entire concept of Table 5 is incorrect. The comparison of background noise with helicopter noise should be made in terms of Ldns rather than DNL in dB(a)s. Clearly, this analysis is an insufficient basis for assessing the true impact of helicopter noise in this situation. As one critic pointed out, the use of average DNL is like a man with one foot in a fire and one foot in ice and saying "on average, he is comfortable." Using average noise figures is inappropriate.

Were the background measurements actually taken or was 1 site measured and that informatioin used TO PREDICT what background noise of other sites would be? This is the method used in the measurement of helicopter noise. Ms. Ip asked them to include their methodology in their report. Also, the city asked specifically that four sites be measured for helicopter noise; they did not comply with that request. We asked to have noise measured at Laurelon Terrace, as they will be most impacted. That also was not done.

Moreover, these figures are based on only one landing of the helicopter. In order to be credible, at least six landings should be measured so that a measure of the deviation about a mean noise level

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can be derived. One cannot obtain a standard deviation measurement with only one measurement or observation. We feel that the noise study is seriously deficient in terms of the way the background noise and helicopter noise measurements were taken. Persons present at the test noted that the helicopter was not loaded fully (like it would be in actual operation) for this test. More detail on the observations of citizens who observed the noise test are contained in letter to Hermia Ip, dated May 24,1985. Briefly, it only had two instead of three adults aboard, carried no isolette and may or may not have had a full load of fuel (the capacity of the Agusta fuel tank is 146 gallons and a gallon of aviation fuel weighs about 6.5 pounds, giving a total weight of 950 pounds for a full tank). If the helicopter was carrying a half-tank of fuel, it may have been about 500 pounds lighter than normal. Add another 180 pounds for a missing passenger and another 200 pounds for the missing isolette and you have an underload of nearly half a ton. We suspect that the Agusta used in the noise tests was operating with only about half of the load it would carry under normal operating conditions and so the noise measurements made under these conditions have little credibility. A fully-loaded helicopter would have to have a higher rotor speed to lift or lower this additional weight and so would have made more noise as noise is proportional to rotor and engine speed.

Referring to Table 4 one can see that the maximum noise from the helicopter on take-off was measured to be 84 at location 1 (which is located about 100 yards from the landing site). This is an increase of about 50 over the nighttime reading of 33 measured at site 1 (Table 2). This is a tremendous increment of noise and is sure to interrupt the sleep of many of the residents of the area. It is also well beyond the maximum permissible sound levels allowed in King County in residential areas (55 dB(A)) as stated in 25.08.410 of the land use code. Furthermore, the report nowhere mentions the usual 5 dB(A) penalty that is assigned to the whine generated by jet engines.

4. The noise report deals with only the noise characteristics of the Agusta helicopter currently operated by Airlift Northwest. However, it is clear that if a helipad were to be built it would also be used by MAST helicopters, currently Hueys(UH-1H). On page 17,the report indicates that an "obstaqcie free area of 85 feet in diameter" is planned; this is certainly large enough for a Blackhawk or Huey to land. The noise characteristics of Hueys are much more intense than those reported,since the Hueys are significantly louder than the Agusta 109's. It is also possible that MAST's Hueys will be replaced with new BLACKHAWKs in the near future.
Our investigations show that BLACKHAWKs are twice as heavy as the Huey and are likely to be even noiser. For comparison, the unloaded weight of the Agusta is 3,900 lbs. while a Huey weighs 6,000 and the BLACKHAWK weighs 11,000. Additionally, the Agusta is 35 feet long while the BLACKHAWK is 57 feet long. A proper noise study should include tests with Hueys and projections for BLACKHAWKs. It is not likely that conditions that would require MAST to land at the soccer field while Airlift Northwest lands at the hospital could be sustained on either a logical or operational basis. This is especially true since Airlift Northwest flights are supposed to be limited to INTERHOSPITAL transfers while MAST will handle field pick-ups of patients which are more likely to be in critical condition requiring stabilization in a

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hospital. The Shapiro report notes that (page 17) "the helistop will be PRIMARILY used by a helicopter flown by Airlift Northwest..." Would this heliport be restricted to use by ALNW's Agusta or not?

5. On page 20 of the Altermatt report, the assumption is made that the peak noise levels would occur at site one. No evidence is given in support of the assumption and it cannot be presumed to be correct. Measurements should have been conducted at other sites so that some evidence that peak noise levels were in fact measured. It is our understanding that the DCLU did instruct COH to make sure that the noise was measured at at least four sites. The fact that this was not done diminishes the credibility of the results severely.

6. On page 14 of the Altermatt report, it is stated that the maximum noise level measured was 73 dB(A) at a flying height of 500 feet. This is higher than noise measurements typically found alongside the I-5 freeway during rush hour. What would the level be if the helicopter flew at less than 500 feet? What would it be at an altitude of 1000 feet. There is no evidence provided as to what the noise characteristics of other possible flight paths might be and none are discussed under the heading of mitigating actions. Obviously, there can be no way to insure that all pilots flying under all conditions will follow exactly the same flight path Nor will all pilots conform to one specific altitude. Under such circumstances, a variety of flight paths must be examined before any reasoned judgments can be made regarding the most likely noise pattern impact on adjacent residential areas.

7. The building noise reduction factor used by Altermatt (25 dB(A)) on page 17 is high by at least 5 dB(A). Further, is assumes that all windows are closed at all times. This is certainly not the case for the homes located near the hospital as they have an unobstructed western exposure and get very hot during the summer months. The windows in these homes are usually open during this time. A home with open windows can be expected to attenuate noise only by a factor of 10 dB(A), not the 25 dB(A) figure used by the consultant.

8. The summary of the forecast noise impact given by Altermatt on pages 18 and 19 is deficient in several respects. He does not define the term significant impact used in point number 1 and this conclusion is faulty because the whole analysis is faulty. He offers no evidence to support conclusion number 2. Such evidence should include the number of people living within each of several isonoise contour lines. The consultant did not bother to determine how many people of various types live in the impacted community and so cannot possibly determine how many lives would be impacted by the noise generated by the helicopter. Drawing such unsupported conclusions is unprofessional and illustrates a bias that cannot be tolerated in a study of this type. The third conclusion has been shown to be faulty due to methodological deficiencies regarding the measurement of background noise (too high) and helicopter noise (too low with too few measurements on too few helicopter types). It is not sound. The fourth conclusion lacks any supporting evidence. If the consultant had been in some of the homes during a helicopter landing then he would have some basis for making such a conclusion. He was not and his conjectures are not sufficient to reach such a conclusion. There is more to noise that what you see on a

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noise meter and vibratory effects are among the characteristics that one does not see on a noise meter.

To compare helicopter noise with that of a passing truck, as is done in this report, is ridiculous. If a truck were flying in the air and descending in your direction, it would be a better comparison.

8. On page 21 of the Altermatt report, point number one is invalid since he does not discuss the "worst case" as he should. Point number 4 fails to recognize that the hospital buildings will reflect noise to the north while noting it will shield the residential areas to the south. This is another example of the bias exhibited by Altermatt in his analysis of the most likely noise pattern on adjacent residential areas. Point number 5 suggests that noise barriers could be placed in the vicinity of the helipad but we have seen no inclination on the part of COH to consider this option. The statement by the consultant that a noise barrier that would reduce noise levels by 5 dB(A) is insignificant is beyond belief as the quantity of noise is very substantial in a neighborhood where background noise levels are generally well below the maximums allowed in King County. He then goes on to state that the presence of noise barriers would make it more difficult for the helicopter to land and produce even more noise. Yet he offers no evidence to support this statement which would have to come from the examination of a preliminary design of a noise barrier setup, a projection of the attenuation effects of such noise barriers and an examination by helicopter pilots as to their likely effects on their ability to make swift and safe landings on the helipad. It is interesting to note that fences 2.5 and 3.5 feet high are proposed on page 17 of the Shapiro report. How high would a noise barrier have to be to be effective in this location?

9. Contours of noise levels should have been prepared using the Federal Aviation Administration (FAA) Integrated Noise Model Version 3.8. This is the newest FAA approved computer model for predicting aircraft noise exposure and is a standard technique used in studies of this type.

10. In the residential area near the hospital, background noise has increased steadily over the past few years due to heavily increased traffic on Sand Point Way and activity at Children's Hospital. When background noise in a neighborhood approaches 55 dB(A), there should be an effort to keep the noise below 55, the city standard.

11. On page 2 of the Shapiro report, regarding plans for future additions, expansion, or further activity related to this proposal, COH answers, "No." Yet, on #9, page 2, they state they are expanding the short stay (surgical) unit, remodeling third floor C Wing, and expanding the oxygen storage facility. Are none of these activities related to future plans related to the helistop and helicopter usage? Do they deny any plans to develop a trauma center, which would clearly be related to helicopter usage? Mr. Katz, (COH's CEO) has stated that COH is becoming a trauma center. Apparently there are no state statutes which regulate this; therefore, the implications that this has on the surrounding community should be explored in an environmental impact statement as this is the only opportunity available for such a

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review.

12. On Page 8, a discussion of types and levels of long-term, as well as short-term impacts is asked for. What types and levels of noise created by the project on a long-term basis can be expected? Nowhere in the report are projections of numbers of cases that might be expected in the future--5 or 10 years, at least. The number of cases expected is clearly related to impact and some consideration should be given to this concern.

13. On page 13 we note that the copies of the Shapiro report we received from the hospital were not signed and were undated. We do trust that our copies are the same as were submitted to the City, and merely note this factor for the record.

14. On page 14, the statement is made that the helistop is located 85 feet due north of the hospital. This measurement is to the edge of the helistop and is misleading because the distance on the sidewalk from the center of the proposed helistop to the emergency room entrance is 225 feet (75 yards or three-fourths the length of a football field). The patients would have to travel this distance in the open. This distance is actually LONGER and the patient would be exposed to the elements longer than would be the case at the soccer field. The statement also says that 15-30 patients are expected via helicopter each month but gives no evidence in support of this forecast. We do know that only 11 patients were transported to COH via MAST during all of 1984. What is the reason for the substantial rise from 11 per year to an estimated 180-360 per year? Since national studies have shown that overuse is a substantial problem once a helicopter service is installed, a more rational procedure for estimating the number of flights is essential to a credible environmental analysis. The Shapiro study contains no such material. It is also very important to note that there would be FOUR FLIGHTS over the neighborhood for every patient. If one takes the COH estimates, this means that 720-1440 FLIGHTS are projected each year. It is not clear whether this estimate includes MAST flights or not. In fact, nothing is clear about the expected level of use of the proposed helipad as no solid work has been done on this topic. This issue is further confused by the statement on page 27 that refers to an additional 30-40 helicopter trips per month. W have found that these numbers vary all over the place depending on which COH or Airlift Northwest person is talking and the group that is listening.

In fact, in the Shapiro report, 3 different sets of estimates for number of flights are given: page 14 &17 say 15-20 per month, page 27 says 30-40 per month, and page 2 of the unpaginated Appendix B says 20-40 per month. And, nowhere in the report is there any indication of how these numbers were arrived at. Since the impact of number of flights per month is so profound, such an undocumented situation is simply not acceptable.

15. On page 14, statements are made that the helicopter would be used only for emergency situations. Yet, no definition is offered as to how this would be determined. Only examples are cited and no evidence is given as to why such patients must come to COH. Instead, reference is made to the regional status of COH which is a self-designation that

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does not recognize the substantial capabilities of Mary Bridge Hospital, Tacoma General, and other hospitals in the region to deal with near drowning, severed arteries and the other examples given. In community meeting, when we asked COH for a Master Plan, we were told they couldn't share one with us because competition is so intense between hospitals right now. From this statement made by the hospital administrator, I think it's safe to assume that other hospitals in the region offer some of the same services that COH would be transporting patients by helicopter to receive. In most situations, it is the time between the initial call and arrival at the nearest hospital that is critical. Once the patient has been stabilized, transport to other facilities should be considered. This report suggests, without supporting evidence, that all children in the region should be brought to COH. A review of the evidence on patient origins reveals that 96% of COH patients come from the state of Washington. Yet, the report tries to make it sound like large numbers come from Montana, Alaska and Idaho. These points are made to show that all the material in the Shapiro report must be examined with great care and constant questioning.

16. On page 15, the description of the existing procedures used at the soccer field do not distinguish between patients who are enclosed in an isolette which has its own life support system and those who are not in an isolette. Since there is a substantial difference between these two type of patients, the procedures used should be described separately instead of the confusing way it has been done. We have been told that there were only 2 of 11 patients who were neonatal patients in an isolette that were brought to COH by MAST in all of 1984. Yet the text in the Shapiro report makes it sound like all patients who have been landed at the soccer field have been in isolettes. On the following page, it is stated that the TRAVEL TIME from the soccer field to COH is 20-30 minutes. A very reasonable estimate of the travel time is 3 minutes. This misstatement is followed by a series of items that describe conditions at the soccer field that make it sound like it rains all the time in Seattle. None of the problems cited are of a type which could not be solved easily with the application of some dollars and common sense.

In the second paragraph of page 16, an estimate is made that it would take 1-2 minutes to transfer the patient from a helipad at COH to the emergency room entrance. Yet, in the same paragraph, they state that landing at the soccer field will take an additional 15-25 minutes. Why can a transfer be made in 1-2 minutes at one location while it takes 12-22 minutes in another? This is just another example of the bending of the numbers to fit preconceived conclusions.

17. The discussion of alternative helistop locations on page 16 is seriously deficient. It is clear that alternatives have not been seriously examined and this is a strong reason why DCLU should make a determination of significance. The land use code requires that alternataives be examined. The Shapiro report has not done this in any suitable way. DCLU should expect the applicant to examine the alternatives as specified in the code. Since this has not been done, the only way it can be done is to make a declaration of significance and insure that an adequate study of the alternatives is developed at the EIS scoping meeting. One of the alternatives should be the do-nothing alternative which would involve a continuation of a few MAST

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flights to the soccer field each year. Another should determine what can be done at the soccer field to provide for a suitable landing site for both MAST and Airlift Northwest helicopters.

A final comment on the alternatives section in the Shapiro report is the statement that the proposed COH site would not interfere with existing campus traffic. In fact, people who have observed the several landings at COH have noted that traffic has been disrupted by the landings. In fact, a substantial traffic hazard exists at COH as drivers have a tendency to watch the helicopter instead of the road and collisions can be expected to result on Penny Lane, a factor which has been ignored in the Shapiro report. Such predictions are supported by collisions resulting from drivers watching the helicopter land at St. Luke's Hospital in Bellingham.

18. On page 17, it is stated that the helicopter would be used to transport critically ill or injured infants, children or adolescents. Does this definition satisify the city requirement that only life-threatening emergency patients be transported by helicopter? The Shapiro report does not address the essential question. Yet, DCLU must have an operational definition of the term "emergency" before it can make its recommendations on this application to the Hearing Examiner and City Council.

19. On page 18, a description of the proposed flightpath is given. People who have observed the several helicopter landings find it to be inaccurate. First, the helicopter has been observed to have arrived from a different direction each time it has landed at COH. The pilot of an Airlift Northwest helicopter has told us that wind conditions may cause him to use a flight path that is different from the one described. The helicopter has never turned sharply at the Penny Lane entrance to COH and turned south to touch down as described. Instead it has turned over the Windemere Circle residential area and has turned slowly to the south and made a very gradual and slow descent to a landing at the hospital. The noise impact on the homes in the Windermere Circle area is very great during this maneuver yet there were no noise measurements made in this area during the noise test. Witnesses testified to this effect at the recent Medical Need Hearing held by Dr. Nicola.

20. The section on air quality impacts from jet engine emissions on page 19 is very deficient. It does not indicate what the content of the emissions from the jet engines will be nor does it discuss the possible health effects of these emissions. Anyone who has been close to a helicopter landing knows that the quantity of foul-smelling jet exhaust fumes is huge, much like being on the ground at a major airport. The lighthanded way that this issue is treated in the Shapiro report is further evidence that a full environmental impact statement should be required. The statement on page 21 that no toxic substances would be released into the environment is simply not true, as jet exhaust contains several toxic substances.

21. On page 20, Appendix A, it is noted that the rate and volume of surface water runoff will be negligible. However, residents of the multi-family dwellings downhill and west of the proposed helistop

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(Laurelon Terrace) have had chronic problems with water runoff due to expansion of COH, the most recent being the large parking garage. Recently there has been flooding (up to auto hubcaps) of the Laurelon Terrace parking lots and excess moisture in building crawl spaces. To subject this delicate situation to yet an increased area of "impervious surface" without exploring the impact in some detail seems foolhardy and unfair. We wonder whether Don Smith, whose opinion is noted on page 20, actually inspected the area and talked to residents. What additional projected runoff does he anticipate? On page 20, it is mentioned that "a catch basic COULD be provided to regulate drainage of the helistop surface...", but there is no commitment to do so. Since there have been almost continual problems with poor water drainage in this area, due to the large surface area taken up by COH buildings, streets, parking lots, and sidewalks, the proposed heliport, although perhaps not large itself, will cause a further deterioration of this situation and the situation should be examined in detail.

22. The discussion of safety on page 21 is seriously deficient in a number of respects. The fact that $20 million of liability insurance is required in the Airlift Northwest contract indicates the risk that is involved. The (erroneous) conclusion in the Shapiro report that one accidnet might occur every 95 years is based on 3 assumptions, each of which is challengeable.

(1) Their figure of 5.48 accidents per 100,000 flight hours is, unfortunately for us all, too low. In the FAA statistics, the accident rate varies greatly by the TYPE OF FLYING being considered. Personal/business flying and aerial application (spraying) have accident rates over 30.00 per 100,000 flight hours while search & rescue operation and highway traffic advisory flying have a rate of 12.09 per 100,000 flight hours, and air-taxi type operations have a rate of 5.78. For all helicopters, undifferentiated by type, the rate is 13.38. (Review of Rotorcraft Accidents, National Transportation Safety Board, August, 1981). The FAA figures are not categorized for hospital-based helicopter flying specifically, so it is not clear from this data which accident rate figure is appropriate. The rate of 5.78, which is closest to the figure used in the Shapiro report, is for air-taxi type operations. But, hospital-based helicopter services can hardly be called air-taxi's and use of their accident rate figure is misleading. As pointed out by Dan Reich, flight director of the Denver hospital flight program (in JAMA, 253:17, page 2476), hospital-based helicopters typically "involve more takeoffs and landings (the maneuvers most likely to result in crashes) than in the industry in general. Also, 40% of hospital flights are at night." If higher speed is used because of an emergency situation, that could increase the accidnet rate also (FAA report, page 11). In fact, a study is currently underway to determine whether there are more accidents per flying hour in hospital-based helicopter programs than in other activities involving use of helicopters. The medical director of the St. Joseph Hospital Lift Flight Program in Omaha, Neb., a nationally-recognized emergency medicine researcher, states that the rate for emergency medical service helicopter crashes in the U.S. is 21 per 100,000 flight hours (JEMS, June 1985, p.30). Unfortunately, Poulton does not give the source of his information. In conclusion, there seems to be very little reason to support the notion that the air-taxi

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accident rate applies to the hospital-based helicopter service, as used in the Shapiro report. It is possible that search & rescue operations are more similar and their accidnet rate of 12.09 per 100,000 flight hours would be appropriate. If Dr. Poulton is correct, the figure to be used is 21/100,000 flight hours.

(2)The second assumption on which the accident projection is based is the average total flight time to service COH of 48 minutes. No information is given as to what is included in this figure, but it seems too low. Were flights to and from Harborview and/or Boeing Field included? It is necessary to review the likely data to obtain a more reasonable figure.

The helicopter is based at Boeing Field at night and Harborview Hospital during the day. Flights must come in to COH to pick up the crew and equipment from either of those 2 places, taking abouta 10 minutes from lift off to touch down from Harborview to COH or 20 minutes from Boeing Field to COH. It then must go out to where the patient is. Ground ambulances would braing a patient in faster than the helicopter up to distances of about 50 miles. If the distance is less than that, the helicopter is making unwarranted pickups in the city. At 100 miph, 50-60 miles whould take 25-30 minutes out and the same to return to COH. The plane then must return to Harborview or Boeing Field. The range of time would appear to be:

	Harborview	Boeing Field
From Hangar	10	20
Pick-up and	30	30
return	30	30
To Hangar	10	20
Totals	80"	100"

(3) The third assumption involves the number of flights to be expected per month. The figure that was used in the calculation was unstated, but working backwards from their figures, the number of flights they used was 20 per month. Their own estimates vary from 15 to 40 per month. Since a "worst case scenario" is surely appropriate in such a serious situation as this, and since helicopter use will no doubt increase over time, 40 cases per month is a better figure to use than 20.

Using their assumptions, we get the following result:
Flight time (48 min.) X no. of flights/mo. (20), divided by 60 = hours fly /mo. Hrs. per month x 12 = hrs. fly/year (192). 100,000 flight hours divided by hrs. fly/yr = no. of years it would take to reach 100,000 hrs. =(520.8). Divided this by the expected accident rate (5.48) = probable no. of years between each accident = 95.04.
If one uses a flight time of 80 minutes and 40 flights per month and expected accident rate of 12.09, the probable no. of years between each accident is 12.92.

However, if use all worst assumptions, we get an even more dire prediction: flight time of 100 minutes, and 40 flights per month, and

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expected accidnet rate of 21 per 100,000 hours, the probable number of years between each accident is only 5.9.

It seems likely that the insurer's for Airlift Northwest were aware of this alarming accident rate, since the liability insurance carried on the helicopter, according to the ALNW contract is $20 million dollars.

We would also like to point out that some city officials are under the impression that the FAA governs the safety of helicopters. The fact is, they do so only on a limited basis and apparently do not monitor the situation at all. It is up to the city to consider safety aspects of the helicopter and to be prepared to monitor and somehow enforce a flight plan agreement if this proposal is approved. Enclosed is a copy of the FAA form filed on this heliport proposal, which indicates how insubstantial is their involvement. Note that type of helicopter to be used is not even considered, although FAA data reports show differences rates of accidents among type of aircraft, ranging from 2 per 100,000 hours flown to around 50 per 100,000 hours flown. There is also no indication of the proposed flight path on this form. (See exhibit 1, NOTICE of LANDING AREA PROPOSAL.)

Finally, people who have examined the Airlift Northwest helicopter closely have noted that the windshield wipers have been removed because that tend to scratch the windshield. It does not seem a safe thing to do. But, what agency is in a position to monitor such things and look out for the safety of the residents of the area?

23. On page 22, mention is made of the fact that a large oxygen storage tank is located just a few feet west of the proposed helicopter landing site. However, no mention is made of the fact that COH has plans to greatly enlarge the size of this storage tank. It is clear that further discussions of the significant omission are needed. It is also noted that the discussion of this issue with A.J. Fenstermaker of the Seattle Fire Department was held in February, long before the study by Shapiro and Associates was initiated. This indicates that this topic was not investigated by Shapiro and Associates as part of their study. Why such an important safety hazard is treated so lightly is beyond comprehension.

Should a crash or major fire emergency occur at this site, it could result in serious loss of life. Therefore, specific procedures for built-in fire protection for the site should be required, following National Fire Protection Association standards as determined by the Seattle Fire Department. The fire code requirements for a H-3 heliport should be applied, since larger aircraft, such as Navy rescue helicopters may use the site also. To vaguely allude to "fire fighting foam" on the site, as is done in the Shapiro report, is totally inadequate.

Also, related to fire hazard, we question the statements that there will be no re-fueling capabilities at the helistop because we can imagine situations where having fuel available would be very important. For example, a helicopter returns from a long flight and receives a call to go to another distant location but has insufficient fuel on board. While re-fueling capabilities may not be contemplated

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initially, we feel they will be once the helicopter is established and operating.

24. The report does not address the fact that with increase in use of the helipad, noise generated by the helicopters will impair teaching of students in the elementary school 1 1/2 blocks away. Nor does it address the particular safety risks of flying over ak playground where 350 students might bek playing at recess. The proposed flight path suggests not flying over the school, but the pilot himself concurred that the flight path will change as weather conditions vary.

In summary, we find that the environmental checklist is seriously deficient in a number of important respects. Further, now that the state has required Airlift Northwest to submit a Certificate of Need application, it is clear that some of the information that is needed to properly evaluate this proposal will be revealed during this process. In the meantime, we think that DCLU should make a finding of significance and require a full EIS by the applicant. Particularly important is the need for a careful and detailed examination of alternatives which should be done by the applicant. These should be defined in a scoping meeting and we look forward to participating in such a meeting the near future.

Also, in Katy Chaney,s letter to Dorothy Teeter of COH on 2/20/85, she asks specifically for informatioin regarding economic costs of this proposal and how they influence the use of this service. Yet, there is no cost information or cost analysis included in this report. A copy of the contract COH signed with ALNW was also requested by Ms. Chaney. Any cost analysis would be deficient if itk did not also include an examination of the inter-hospital contract and the contract between Harborview and Seattle Jet Center as well.

We are very concerned about the apparent lack of agreement between the City and COH on the scope of the definition "life-saving emergency", as stated in the Land Use Code. As Ms. Chaney said in her letter of 6/5/85 to Ms. Teeter, "It is important for COH to document the medical need and circumstances under which the helipad facility will be used. The analysis should discuss the medical need and effectiveness of the helipad service compared with the current ground transportation service. Further, the discussion should document the capital improvement and operational costs of the helipad, and show how such expenditure will be recovered by the reasonable use of the facility without abusing the level of frequency or critical usage." The reasons for this request was clearly shown in the letter of Chaney to Teeter of 2/20/85:"WHAT IMPLICATIONS DO THE ECONOMIC DATA HAVE ON THE PROBABLE FREQUENCY AND EXTENT OF USE?" None of this information is given in the Shapiro report.

We are also concerned about the ability on the City's part to monitor and enforce any limits on the types of landings at the site. Those upon whom the condition is placed are those who shall decide whether it applies in any particular case. Some credible review procedure would be essential if the proposal is approved.

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Since the medical emergency aspects of this proposal are of great importance in evaluating it, we feel that a thorough discussion of these aspects is warranted. According to provisions in the Major Institutions Code, a helistop on a hospital campus must be limited in use to life threatening emergencies. At the "Medical Need Hearing" conducted by Dr. Bud Nicola, COH testified that all ALNW helicopters would be landed directly on campus regardless of the condition of the patient aboard. In other words, the hospital is not willing to accept any restrictions put on the use of this proposed landing site. This isk further substantiated by information supplied in the Shapiro report, Attachment A, pg. 14. They state that "the use of the helicopter would be limited to severely ill or injured children requiring transport." We feel that someone needs to differentiate between those emergencies that involve seriously ill or injured children and those that are actually life-threatening as the city code dictates.

It is obvious from their statements that the hospital is now purporting that the only acceptable means of transportation for these patients is the helicopter. Statistics provided from Medic One would easily disprove this notion. To most parts of King County, their longest response time is twelve minutes. An ALNW helicopter would barely have their engines revving at Harborview in this same time frame and would still face trip to COH to pick up a flight team before proceeding to administer care to a designated patient. On page 14, this report states that an emergency would be identified by a physician in an outlying area (outside King County (?) Outlying needs defining) and helicopter transport agreed to by the Medical Director of ALNW. The Medical Director of ALNW, Dr. Copass, to our knowledge has no experience in pediatrics and certainly has a vested interest in not only the success of ALNW but in the volume of flights executed. Is he the appropriate person to be deciding what patients will receive helicopter to transport? We think nothing less than a review board involving peers, and citizen participation should be set up if this permit is granted.

We take exception to the fact in this report COH continually mentions that this service would be used to transport severely injured children, as these cases specifically go to HARBORVIEW which is our regional trauma center and COH does not have the capabilities to deal with traumatic injuries.

It is further stated on page 14 of this report that this helistop is needed because "delay in providing the most sophisticated care can mean the difference between successful recovery and death." We would like to see the DATA that would support such a claim. Our research has shown that in most emergency cases the biggest difference in patients outcomes is due to tne quality of care administered and stabilization of the patient before transport, not the speed of such transport.

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In this report, examples of emergencies requiring helicopter transport are given on page 14. Consultation with pediatric physicians revealed this information:

The first example is that of a near-drowning victim. The City should require COH to produce the current data available on this type of case. Are these not surviving at present because of the current method of transportation by ground? This is a serious allegation and should be substantiated.

The second example listed is that of "severed arteries." These cases involve traumatic injuries requiring the services available only at Harborview. COH does not have a vascular surgeon on staff and could not care for this type of case.

The third example is that of "hypoplastic heart." This is a universally FATAL condition that COH has not treatment nor cures for.

The fourth and fifth examples are, respectively, that of premature births at outlying hospitals, and overwhelming infection. Both of these emergencies are handled well by current methods of stabilization at the scene and ground transport.

The sixth example is that of "ingestion of toxic substances." These do not require helicopter transport to COH. They require treatment at the closest emergency room available.

On page 15 of Attachment A, COH suggests that the current system of landing at the UW soccer field is inadequate because it substantially increases the patients' risk of death or injury. Yet, they offer no data that would support this claim nor have they offered any such data to Dr. Nicola. They offer a list of tasks that are associated with transferring a patient from the soccer field to COH. It is our understanding that in most cases the only support system that must be moved outside of a self-contained isolette is an I.V. pole and this does not require reconnection.

All of the concerns raised in this section will NOT be eliminated by locating the helipad on COH's campus, as the distance from the helipad is 85 ft. (according to the Shapiro report) from the emergency door. Harborview currently transfers their helicopter patients to ambulance in order to transport them 100 yards to their ER door. Yet, there has been no suggestion from Harborview that this is a less than adequate situation.

COH maintains in this report that the additional transfer at the soccer field increases risk to the patient but is unable to support this claim with any factual information. These transfers have been taking place for 11 years, so certainly if there is information to support this notions, COH should have submitted it to DCLU along with this report. All of the medical need information in this report has been supplied by COH--they have not sought any outside expertise or analysis with regard to this matter.

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The hospital does not anywhere in this section address if changes in outcome from the underlying disease process has taken place which is directly related to transport from a helicopter to a ground system.

On page 16, they suggest that travel time from the soccer field to the COH campus is 20-30 minutes. We have timed this trip and it takes less than 3 minutes. The amount of time spent transferring the patient from helicopter to ambulance is exactly the same amount of time required to transfer the patient from helicopter to a gurney or ambulance when the aircraft lands on; the COH campus. A helicopter cannot land directly in the emergency room of COH!

The risks that are identified and associated with inclement weather or night operations on page 16 are the same risks a pilot will be experiencing with a helipad sited at COH, with additional risks to the surrounding community. Muddy conditions of the soccer field can be dealt with by siting the pat near the soccer field instead of the COH campus.

On page 16, the hospital makes the statement that "the reduced transport time reduces the risk of permanent disability or death." Again, they offer NO DATA to support such a claim.

The information provided by COH in the Shapiro report supports the premise that this proposed service is not desired primarily to provide transport for life-threatening medical emergencies. Rather, it is a service that, once established, is intended to become the standard means of transport to COH with no regard to patient condition and obviously with no regard to impacts felt by the surrounding community. This report presents many unsubstantiated claims and "screams" for data.

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Over the past number of years all trauma cases, including pediatric cases, have gone to Harborview Hospital. Indeed, the ALNW barochure says "Harborview Medical Center provides the only Level 1 emergency trauma care in the WAMI region and the NW Regional Burn Center (Airlift Northwest, undated brochure, page 1). The most critically ill neonates have gone to University Hospital. Are changes planned in this distribution? If so, COH should be required to show how and why. What cases will COH in fact receive?

It is important that the therapeutic outcome of patients that were landed at the UW soccer field versus the emergency room door at COH be presented. This has never been done.

The noise study was inadequate, safety issues were inadequatly handled, and many other issues mentioned in this response were inadequately investigated. In addition, requests for information from Katy Chaney (as well as the community) have been ignored. An environmental impact statement is the only opportunity available to obtain this information which is so critical to an adequate evaluation of the true impact of this proposed heliport.

Sincerely,
Citizens Concerned about Helicopter Transport

Jerry S. Schneider

Liz Anderson

Anita Francis

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(Exhibit 1)

Form Approved OMB No. 2120-0036

epartment of Transportation
ral Aviation Administration

NOTICE OF LANDING AREA PROPOSAL

ME OF PROPONENT, INDIVIDUAL OR ORGANIZATION
e Children's Orthopedic Hospital and
dical Center
DRESS *(No., Street, City, State, Zip Code)*
300 Sand Point Way N.E., Seattle, WA 98105

☒ Establishment or Activation
☐ Alteration
☐ Deactivation or Abandonment
☐ Change of Status
} OF
☐ Airport ☐ Ultralight Flightpark
☒ Heliport ☐ Seaplane Base
☐ Other *(Specify)*

Location of Landing Area

1. NEAREST CITY OR TOWN	2. COUNTY	3. STATE	4. DISTANCE AND DIRECTION TO NEAREST CITY OR TOWN	
Seattle, WA	King	WA	Miles	Direction
NAME OF LANDING AREA	**6. LATITUDE**	**7. LONGITUDE**	**8. ELEVATION**	
ildren's Hospital Helistop	47°39'51"	122°1[illegible]48"	121	-- / --

Purpose

Use	Type Ownership	If Change of Status or Alteration, Describe Change.	Construction Dates To Begin/Began	Est. Completion
Public	☐ Public		ASAP	2 months
Private	☒ Private			
Personal				

Other Landing Areas

	Ref. A5 Above: Direction from Landing Area	Distance from Landing Area
There is one VFR airport within 3NM of the hospital. Lake Union is 1.8 NM away in the SW direction. Boeing Field is within 10NM (8.1NM away and in a SW direction.		

Obstructions

Type	Height Above Landing Area	Direction from Landing Area	Distance from Landing Area
amp post 0' Cypress Tree he imaginary surfaces for heliports described in FAR 77.29 indicate no further obstructions in any direction for proposed site.		S.E.	

Noise Considerations

Identification	Direction from Landing Area	Distance from Landing Area
ousing along Sand Point Way NE from niversity ball fields to COHMC and ue North of existing garage. A total istance of about 3/4 of a mile.		

D. Landing Area Data

		Existing *(If any)* Rwy #1	Rwy #2	Rwy #3	Proposed Rwy	Rwy	Rwy
1. Airport, Seaplane base, or Flightpark	Magnetic Bearing of Runway(s) or Sealane(s)						
	Length of Runway(s) or Sealane(s) in Feet						
	Width of Runway(s) or Sealane(s) in Feet						
	Type of Runway Surface *(Concrete, Asphalt, Turf, Etc.)*						
2. Heliport	Dimensions of Landing and Takeoff Area in Feet				85' circle		
	Dimensions of Touchdown Area in Feet				40' x 40'		
	Magnetic Direction of Ingress/Egress Routes				In - west Out - west		
	Type of Surface *(Turf, rooftop, etc.)*				Concrete		
3. All	Description of Lighting *(If any)*				Direction of Prevailing Wind		

F. Operational Data

1. Estimated or Actual Number Based Aircraft

Airport, Flightpark, Seaplane base	Present *(If est. indicate by letter "E")*	Anticipated 5 Yrs. Hence	Heliport	Present *(If est. indicate by letter "E")*	Anticipated 5 Yrs. Hence
Multi-Engine			Under 3500 lbs. MGW	0	0
Single-Engine			Over 3500 lbs. MGW		
Glider					

2. Average Number Monthly Landings

	Present *(If est. indicate by letter "E")*	Anticipated 5 Yrs. Hence		Present *(If est. indicate by letter "E")*	Anticipated 5 Yrs. Hence
Jet			Helicopter	0	15-20/mo.
Turboprop			Ultralight		
Prop			Glider		

3. Are IFR Operations Anticipated
☒ No ☐ Yes Within _____ Years Type Navaid:

H. Application for Airport Licensing

☐ Has Been Made ☐ Not Required ☐ County
☐ Will Be Made ☐ State ☐ Municipal Authority

CERTIFICATION: *I hereby certify that all of the above statements made by me are true and complete to the best of my knowledge.*

Name, title, *(and address if different than above)* of person filing this notice—type or print.
Dorothy F. Teeter
Director of Planning

Signature *(In ink)*
Dorothy F. Teeter

Date of Signature
Feb. 14 1985

Telephone No. *(Precede with area code)*
206 526 2004

Form 7480-1 (4-83) SUPERSEDES PREVIOUS EDITION

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8511.9 8/30

CLU- MAYOR'S RESPONSE DUE 9/12 LOG 2429

ALBERT A. FELDMANN
P. O. BOX 85568 UNIVERSITY STATION
SEATTLE, WASHINGTON 98105

Aug. 30. 1985

RECEIVED
SEP 3 1985
MAYOR'S OFFICE
AK
TB

The Hon. Charles Royer, Mayor
Seattle Municipal Building
Seattle, WA 98101

Dear Mr. Royer ,

Several months ago I wrote to you , protesting against the planned landing of helicopters at Childrens Orthopedic Hospital without an investigation of the merits of a claimed need that would turn one of Seattle's finest neighborhoods into an airport environment. Your reply , that COH would indeed be asked to show such a need, was indeed satisfactory. In the meantime COH appears to have taken advantage of a legal loophole to avoid having to show this need and , continuing its policy of bad faith and duplicity towards the residents of this neighborhood , has started to land helicopters on its grounds even before a helipad has been constructed. The history of COH's encroachment on this neighborhood. is a matter of record and so are its broken promises to respect the quality of living here. After the latest violation of both the peace and safety of local residents I have protested to Ms Ormsby of the D.C.L.U. and am enclosing a copy of my letter.

Sincerely yours
Albert A. Feldmann

Albert A. Feldmann

4873 Terrace Drive NE
Seattle, WA 98105

RECEIVED
SEP 5 1985
Dept. of Construction & Land Use

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ALBERT A. FELDMANN
P. O. BOX 85568 UNIVERSITY STATION
SEATTLE, WASHINGTON 98105

Aug. 30. 1985

Ms Anne Ormsby
Dept. of Cost and Land Use
Municipal Building
Seattle, WA 98101

Subject: COH Helicopter Landings

Dear Ms Ormsby,

Further to our telephone conversation of Aug. 28. I want to reiterate my protest against the violation, by the Childrens Orthopedic Hospital, of the safety of the many residents of this densely populated area in flying helicopters at low altitude over their homes and landing them on the hospital grounds. I also want to protest against the environmental pollution caused by the engine noise of these helicopters, which is about to turn one of this city's most quiet neigborhoods into a heliport area.

With regard to the specific instance of this week's landing I heard the noise but was not an eye witness .However, I have spoken with eye witnesses and given them your name and address so that they can send you written affidavits of their observations for potential appearance as witnesses in Court .Let me add that as Vice President of the Laurel Crest Condominium Owners Association , I represent 79 families in addition to myself in this protest. The administration of Mayor Royer has done a creditable job of keeping Seattle a very liveable city and your handling of this violation by an institution whose motto appears to be " the public be damned " ,will be a good indication whether this administration is capable of protecting us against such encroachments in the future or not.

Sincerely yours
Albert A. Feldmann

cc. Mayor Charles Royer

Albert A. Feldmann

4873 Terrace Drive NE
Seattle, WA 98105

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November 8, 1985

Hamia

RECEIVED
NOV 12 1985
Dept. of Construction & Land Use

Ms. Beatrice Ryan
Interim Director
Dept. of Construction
& Land Use
600 4th Avenue
Seattle, Washington 98104

Dear Ms. Ryan:

Since writing to your office last, and since the public hearing held on October 24, 1985, my concern about a helicopter landing at Children's Orthopedic Hospital in Seattle has continued and increased--not decreased.

I fully support and welcome a state review and state regulations as well as a full certificate of need filing as reported in an article in the Seattle Times of November 7, 1985.

As a ten-year resident of Laurelon Terrace contiguous to the planned site of the helipad and in direct path of diagonal flight plan, too, I am especially concerned about the safety factor and also the detrimental effect on residents' health who live in this condominium complex of 136 units. It was alarming and distasteful to find that Mr. Truman Katz of COH, when asked about the effects on Laurelon Terrace, did not even know where Laurelon Terrace was, and when told just shrugged it off. Are Laurelon residents considered expendable?

As a thirty-two year resident of Laurelhurst, I among many others highly resent being represented as uncaring and as a wealthy, selfish citizen. Generalizations and stereotyping by news media is dangerous ans careless--yes, libelous--and untrue. Hundreds and hundreds (and upwards) of hours, thousands of dollars over many, many decades have been contributed to COH by residents of Laurelhurst.

However, these same residents do not believe that the horrendous expense of a helicopter (puchase, maintenance, salary, insurace) is necessary; nor is a helicopter necessary when three other hospitals --one within short distance of COH--have identical landing facilities and trauma services already in place--this is duplication of services; since no problems are recorded (present and past) of landings at the UW soccer field, it seems that there is no medical justification for this COH plan; and finally, the residents do not believe that further institutional encroachment in a family-residential neighborhood is wise or fair.

Please proceed carefully and slowly in final assessment of all assertions and merely implied needs by COH. Please ponder seriously why COH does not want a certificate of need, a state review, and/or open communication with Laurelhurst and Laurelon Terrace residents.

Thank you.

Sincerely,
Maryann E. Spangler
Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105
(206) 524-4151

cc:

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LAW OFFICES
FRANKLIN & WATKINS
A PROFESSIONAL SERVICE CORPORATION
SUITE 2300
FOURTH & BLANCHARD BUILDING
2121 FOURTH AVENUE
SEATTLE, WASHINGTON 98121

H. JOEL WATKINS
RICHARD J. WATKINS
JOEL WATKINS, Jr.
KAREN O. RASMUSSEN
MURIEL M. TSANG

TELEPHONE (206) 728-1511

RALPH E. FRANKLIN (1984)
MICHAEL KEYS COPASS (1987)

REPLY TO FRANKLIN & WATKINS

REFERENCE NO.

4775-001

October 28, 19

RECEIVED
OCT 30 1985
SEATTLE CITY COUNCIL

Seattle City Council
Department of Construction and Land Use
600 Fourth Avenue
Seattle, WA 98104

Re: Hearing on Conditional Use Permit For Proposed Helipad at Children's Orthopedic Hospital

Ladies and Gentlemen:

Franklin & Watkins, Inc., P.S. represent the Laurelhurst Condominium. The Laurelhurst is a complex of 56 apartments located at 4545 Sand Point Way N.E., Seattle, Washington. The Laurelhurst residents are concerned about the proposed helipad at Children's Orthopedic Hospital ("COH"). The Board of Directors of the Condominium Association has asked Franklin & Watkins to express the Condominium Association's views to the City Council.

In general, the Laurelhurst is in accord with the positions of the Mountlake Community Club, the Laurelhurst Community Club and the View Ridge Community Club. The area residents are concerned about three major factors. First of all, they are concerned about the safety and environmental impacts of the proposed helipad. It is undisputed that helicopters traveling to and from the COH helipad would generate significant additional noise and constitute a potential safety hazard in the neighborhood.

There has been previous testimony to indicate that the safety hazard would increase as the frequency of helicopter flights increases. The helicopter service is likely to be used as frequently as possible since the cost of the transportation decreases the more it is used; hence, an ever-increasing safety risk and escalating noise problems from helicopter traffic would be likely to result.

Secondly, COH has failed to demonstrate that there is a medical need for the helipad which is not currently being met by

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the MAST service with other existing services. The MAST service is currently provided free of charge. The military and other helicopters such as Airlift Northwest land at the University of Washington fields and are transported to COH or the University of Washington Hospital via ground transport. There has been no showing that any lives have been lost as a result of the additional overland transport or that allowing helicopters to land at COH would actually save any lives. COH has asserted that additional risks are caused by existing services, but they have not translated those allegations of risk into the necessary medical showing of concrete evidence of harm.

Third, it appears to the Laurelhurst residents that the main interest of COH (and University of Washington Hospital, which is also proposing to secure a helipad) is in promoting the hospitals' services. Apparently, a helipad will enhance the existing services of the hospital and perhaps draw in more health care users from out of the region. While this may be an appropriate economic consideration for COH, it is not sufficient for the Department of Construction and Land Use, which must base the issuance of a conditional use permit on a finding of medical need, i.e., that the helipad is necessary to save lives.

In conclusion, the Board of Directors of the Laurelhurst Condominium Association oppose the issuance of a conditional use permit to COH for the helipad as a medical need has been demonstrated.

Very truly yours,

FRANKLIN & WATKINS, INC., P.S.

By Karen Olson Rasmussen
Karen Olson Rasmussen

KOR:sz
L03011

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Cliff

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

December 13, 1985

Leo C. Johnston
4200 Northeast 50th Street
Seattle, Washington 98105

Dear Mr. Johnston:

Your letter identifies the key issues associated with the Children's Orthopedic Hospital (COH) Helipad proposal. I have heard from many of your neighbors, who are also disturbed and concerned about helicopter traffic in the Laurelhurst neighborhood.

Beatrice Farrar Ryan, Interim Director of the Department of Construction and Land Use (DCLU) tells me that she and her staff are currently reviewing COH's environmental checklist and a recent report from the Seattle-King County Department of Public Health on the medical need for a helipad facility.

Additionally, DCLU has issued a Notice of Violation (NOV) to COH because they have been landing helicopters without permit. I hope that the NOV will serve to curtail the landings until a permit decision is made.

Thank you for sharing your concerns and comments about this difficult situation. Please do not hesitate to call Cliff Portman, Senior Land Use Specialist, at 625-4509 if you have further questions or witness additional helicopter landings.

Sincerely,

Charles Royer

CR:cpg

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DCLU MAYOR'S RESPONSE DUE 12/11 LOG 2798

RECEIVED
DEC 2 1985
MAYOR'S OFFICE

CL
AK > FYI

11/27

9.1158

4200 N.E. 50th Street
Seattle, WA 98105
November 27, 1985

Office of the Mayor
City of Seattle
Seattle, WA 98104

Gentlemen:

While I am not one to complain about petty annoyances and have been slow to involve myself with my neighbors in the Laurelhurst area, I feel more and more constrained to speak out against the helicopter pad proposed for the Childrens Orthopedic Hospital.

First, while I am not an expert in such matters, I cannot believe that the helicopter proposal, taken as a whole, would be economically feasible. This is not to say that I do not value the lives of children that might be saved. On the contrary, I feel that many more lives could be spared through using this money in other areas of medicine.

In addition, the noise of helicopters landing and taking off in this residential area is of no small consideration. There are many elderly and infirm persons living within close proximity to the proposed pad, and I feel sure that the extreme noise must be anything but beneficial to their health. Another helicopter landed at the hospital today, and I can attest to the fact that the noise was extremely irritating even to me, and I am not one of the older residents of the area. I can just imagine how the noise must affect the young patients in the hospital, much closer than most of the neighbors.

I hope that adequate consideration will be given to both sides of this issue before permission is granted for construction of a helipad at this location.

Very truly yours,

Dale C. Johnson

cc - Department of
Construction and Land Use

RECEIVED
DEC 4 - 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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4200 N.E. 50th Street
Seattle, WA 98105
November 27, 1985

Office of the Mayor
City of Seattle
Seattle, WA 98104

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In addition, the noise of helicopters landing and taking off in this residential area is of no small consideration. There are many elderly and infirm persons living within close proximity to the proposed pad, and I feel sure that the extreme noise must be anything but beneficial to their health. Another helicopter landed at the hospital today, and I can attest to the fact that the noise was extremely irritating even to me, and I am not one of the older residents of the area. I can just imagine how the noise must affect the young patients in the hospital, much closer than most of the neighbors.

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Very truly yours,
Leo C. Johnston

cc - Department of
Construction and Land Use

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25 January 1985

RECEIVED
JAN 28 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dept. of Construction & Land Use
Municipal Building, Rm. 400
600 - 4th Ave.
Seattle, WA 98104

Gentlemen:

SUBJECT: APPLICATION #CC84-022

I am writing to request that you require the Children's Orthopedic Hospital & Medical Center (hereinafter COH) to file an Environmental Impact Statement in regard to the construction of a helipad site on their premises. Secondly, I ultimately, strongly urge you to vote AGAINST permitting such construction at COH.

My concerns are: 1. The environment & safety of the residents.
2. The actual need of such a site.

The environmental issues involved in allowing a heliport to be built at COH are noise, health & pollution. COH has indicated they intend to lease a twin engine helicopter. In November, 1984, a single engine KIRO helicopter came & landed, or hovered over COH. The vibrations rattled my windows so hard when it flew by my house that I was afraid they would shatter. The noise was deafening. This was approximately 11:30 a.m. I reside four blocks away from the proposed location of the helipad site, close to where the KIRO helicopter was that day. The twin engine that COH plans to use will be louder still with a much higher decibel rating.

This noise & rattling of windows was most distressing. Surely, the children of the residential area, as well as the hospitalized children will be terrified waking up at night hearing such noise.

When asked what impact this could possibly have on public services, COH responded that the Fire Department could conceivably be involved. Obviously, the possibility of a helicopter crash in this residential area exists.

I am futhermore concerned that COH has made no provision for the jet fuel run-off that accompanies the use of these helicopters in their plans.

I find COH's assumption that building such a helipad site would have no environmental impact completely and totally ludicrous. Apparently, they must feel this way as they have refused to file such a statement to date.

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Secondly, I question if there really exists a true need for a helipad site at COH. For years COH has used the Intramural field at the UW with seemingly no transport-related injuries to their patients. Karen Cummings, COH Nursing Administration, admitted there has been no actual deaths than can be attributed to the helicopter service via the UW field. Indeed, Mrs. Cummings and the remainder of the COH administration refuse to produce any documentation of specific incidents where patients have suffered any problems at all directly related to such transports.

COH maintains that traffic congestion in the area on football game days at the UW presents a problem to using the Intramural field. However, traffic lanes from the field toward COH are blocked off by the police department hours before game time. An ambulance transporting off this field would have a straight, unimpeded lane of traffic all the way to the COH emergency room.

They also feel the poor condition of the Intramural field no longer makes it a viable alternative to helicopter service. Why not improve the field, put in a landing pad with the funds set aside for the proposed site at COH, and accept the gracious offer to use the landing strip at the Sand Point Naval Air Station on game days. True, this would extend the ambulance ride to the hospital from 3 to 7 minutes, but I feel that the six Saturdays a year that this would involve does NOT justify the use of COH putting in their helipad and disrupting the peace and quiet of the longtime residents. Something we should all be able to do is to enjoy our homes.

Lastly, I would like to remind you that the Laurelhurst neighborhood has been situated here long before the arrival of COH. COH knew there would be certain concessions to be made when doing business in this beautiful residential area.

Make no mistake about it, COH has been a tremendous asset to our local community and the State of Washington as a whole. We all appreciate knowing there is competent medical care nearby when our children become ill. But, emotions aside, and unlike the media would have us believe, this is STRICTLY A MARKETING ISSUE. This is one that COH hopes will attract more patients, and thus more revenue to enable them to survive in an ever-increasing competitive market. (Please see enclosed article). Unfortunately, they are trying to do this at the expense of our community's health and welfare, not to mention our pocketbooks as this will surely result in lower property values should this helipad be built.

Again, <u>PLEASE</u> require COH to file the Environmental Impact Statement & do NOT approve Application #CC84-022, the construction of the helipad at COH.

Thank-you for your time and attention to this matter.

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Sincerely,

Kathryn F. Peterson

Kathryn F. Peterson
Employee & Resident of COH
5007 - 44th N.E.
Seattle, WA 98105

enc: article

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Wide use of helicopters seen as productive hospital marketing tool

The use of helicopters for Houston's Hermann Hospital 'has been a tremendous success for the hospital in terms of generation of patients,' says one hospital official there.

less than one death per 100 casualties, compared with 4.5 deaths per 100 casualties in World War II. It is unknown how much helicopters contributed to the improved survival rates, because the medical care of injured soldiers also improved.

The use of hospital-based helicopters began in Europe, and came to the United States in 1972.

As the number of helicopters has grown, so has their sophistication and price. The state-of-the-art hospital helicopter is powered by two turbine engines, gulps 80 gallons of fuel an hour, and even may include air-conditioning. Purchase price for the Bell 222, for example, is about $1.2 million.

Additional costs include the helicopter's medical gear and the installation of a landing pad, lighting, fuel storage tanks, and communications equipment.

Many hospitals hire a helicopter service, which typically provides the helicopter, three pilots, and a mechanic. The hospitals provide the flight nurses and paramedics, and, sometimes, also physicians.

EVEN WITHIN the helicopter industry, some experts think that hospitals are buying more expensive helicopters than they need.

Floyd Helm, vice president of Rocky Mountain Helicopters, which operates helicopters for 21 hospitals, adamantly asserts that hospitals don't need two-engined machines, which cost twice as much as the single-engine craft. The two-engine helicopters aren't really safer, but are becoming increasingly popular because "manufacturers want to sell more expensive machines," he said.

The helicopter programs almost always are successful. "We have never started a program that became financially unfeasible," Helm said.

A helicopter that flies one mission per day usually is financially justifiable, said Washington Hospital Center's Dr. Champion.

Staffing for Hermann Hospital's five helicopters includes 16 pilots, 17 flight nurses, five mechanics, eight dispatchers, a program director, and three office staff members.

Last year, the five Hermann helicopters flew 3,670 missions, including 1,086 auto accident victims, 488 stabbing and gunshot cases, and 339 neonates. On any given day, 75 to 100 of the hospital's 625 patients came in by helicopter.

THE HELICOPTER program "has been a tremendous success for the hospital in terms of generation of patients," said Larry Bowermon, the hospital's chief financial officer.

The success is even richer than it appears, because the helicopter patients use more services than the average patient. In addition, the advertising mission of the helicopter brings in an unknown number of patients, Bowermon said.

The cost of the program is more than $3 million per year for the three helicopters stationed in Houston. The direct charges to the patient — $160 per lift-off, plus $8 per mile one way — pay for only a third of the program's cost.

Hermann also has begun a long-distance air transport program aptly called "Life Flight LD." The program rents jets from Houston's Hobby airport for an average of 16 flights a month, often to Mexico and South America.

"We are going all over the world," said Marguerite Badger, Hermann's director of flight operations.

Unlike the helicopter service, however, the long-distance patients pay the service's full costs. A round trip to Mexico City costs between $5,000 and $6,000.

Bowermon said that in Houston, helicopter overuse "is not an issue in the least. We're very selective about who can call in" for a helicopter.

As in other cities, police officers, firefighters, ambulance crews, hospitals, and physicians can request the helicopter, but ordinary citizens cannot.

ONLY A FEW helicopter programs have failed. One was shared by three Fresno, Calif., hospitals in a bid to make Fresno a major referral center for accident victims in the San Joaquin Valley.

"One of the primary motivations was to increase occupancy," said James Berg, administrator of Sierra Hospital, one of the three.

The helicopter was "a damn good thing for care," although "in some instances a ground ambulance or even the patient's car would have been good enough," he acknowledged.

The hospitals' program was wiped out primarily by the California Highway Patrol, which also had a helicopter in Fresno. Because the highway patrol controlled the ambulance dispatch system, its own chopper would be whirring to the scene before the hospitals had heard of the accident. The result was a paltry 15 to 30 runs per month for the hospitals' helicopter.

When the hospitals canceled the program, an enterprising television reporter came out to Berg's home, thrust a microphone in his face, and asked, "How many people are going to die as a result of your closing this service?" Berg replied that the other helicopters in the area would pick up the slack.

MORE DISQUIETING than the alleged overuse of helicopters is the number of crashes. On July 14, the U. of Massachusetts Medical Center in Worcester sent its twin-engine Messerschmitt to Martha's Vineyard to pick up a patient with a type of meningitis. On the return trip the helicopter's engines lost power over Rehoboth, Mass., and plummeted into some power lines. The pilot and a physician died; a flight attendant and the patient survived.

On Sept. 1, a brand new twin-engine Bell 222, just delivered to the U. of Tennessee's hospital in Knoxville, crashed on its maiden voyage and burst into flames. Luckily, all four aboard escaped, with only a flight nurse suffering second-degree burns.

"There is a serious crash every year," Dr. Champion acknowledged, "but, by and large, helicopters are pretty safe."

After both crashes, the hospitals immediately ordered replacement helicopters.

"We believe the benefits created by its use certainly outweigh the risk," said a spokeswoman for the U. of Massachusetts Medical Center.

—Doug Lefton

New form of arthritis drug approved

The Food and Drug Administration has approved the first suppository form of a non-steroidal anti-inflammatory drug, aiding patients who cannot take oral medication or who need a nighttime supplement.

The drug is a new formulation of Indocin, available in capsule form since 1965 and in sustained-release form since 1982. Called Suppositories Indocin (indomethacin), the product is available this month from Merck Sharp & Dohme.

The drug may be prescribed for the treatment of active stages of moderate to severe osteoarthritis and moderate to severe rheumatoid arthritis in patients who do not respond to aspirin and rest. It also is indicated for moderate to severe ankylosing spondylitis, acute painful shoulder, and acute gouty arthritis.

In a study of 175 patients with rheumatoid arthritis, the incidence of upper gastrointestinal adverse effects was comparable for the suppositories and capsules. Suppositories were found to create higher incidence of lower gastrointestinal effects, however.

A study of 45 healthy persons found that the number of gastric mucosal abnormalities was significantly lower among patients taking suppositories or a placebo than among those taking capsules of the medication.

Each suppository contains 50 mg. of indomethacin, and provides a more rapid rate of absorption than capsules.

Similar adverse reactions — headache, dizziness, nausea, and indigestion — have been noted in the use of both the capsule and suppository form.

The new form of Indocin should not be prescribed for patients with nasal polyps associated with angioedema, bronchospastic reaction to aspirin, a history of proctitis, or recent rectal bleeding.

Arizona denies aspartame request

The Arizona State Health Dept. again has denied a petition filed by an Arizona State U. professor to ban soft drinks containing the artificial sweetener aspartame, according to *Food Chemical News*.

The health department said the petition by Woodrow C. Monte, PhD, director of food services at the university and the Arizona Consumers Council, had failed to present sufficient data and evidence to establish their claim that aspartame is a harmful substance.

Aspartame, manufactured by G.D. Searle & Co. of Skokie, Ill., was approved for use in soft drinks by the Food and Drug Administration (FDA) in July, 1983. Since then, most major soft drink companies have included it in their drinks.

According to the health department, there are no indications that aspartame decomposes in beverages over time or because of higher temperatures.

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4652-41st Ave N E
Seattle, Wash. 98105
Jan 26, 1985

RECEIVED
JAN 28 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William J Justen Director
Dept. of Construction & Land Use
600 - 4th Ave. 98104

My dear Mr Justen:

This has been my home for twenty three years and I have enjoyed the quiet neighborhood except for the year or more when COH was expanding their building. Bulldozers would start roaring at 6:30 AM and continue until dark at night. COH has no consideration of the many elderly people who live in this area. The noise, dirt and dust in the air made it very unpleasant & unhealthful to live here. In the beginning COH promised this would be just a cottage hospital. It's anything but that now with all the additions they have made. They promise a limited number of flights. If they did not keep their promise to keep the hospital small why should we believe they will keep the number of flights to a minimum.

The danger of a helicopter crash in a densely populated area is another grave concern.

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I hope, Mr Juster, that you will consider our views and complaints and do what you can to keep this Helipad from being built here. I thank you for your consideration of the matter.

Very truly yours,
Ariel G Nelson

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Jan 25, 1985

Mr. William Justin
D. C. L. U.
600 4th Ave.
Seattle, WA 98104

RECEIVED
JAN 28 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. Justin:

Before the department proceeds without full investigation to approve the construction of the helipad by C.O.H. I wanted to voice my concerns. Of paramount importance is of course the issue of whether or not it is economically beneficial to the community to construct the helipad. Certainly the construction costs and possible purchase and maintenance of a helicopter would raise health care costs at C.O.H. I ask you, can you afford it?

Naturally, there are also the issues of noise creation to nearby residents and, not to be overlooked, the issue of whether or not the need for the helipad has been established.

Thank you for your consideration. I trust a complete E. I. S. will be forthcoming. Please keep me informed.

Sincerely,

John B. Martin
4315 N.E. 43rd
Seattle, WA 98105

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RECEIVED
JAN 28 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

6547-52nd N. E.
Seattle, Wa. 98115
January 25, 1985

Mr. William Justin, Dorector
Dept. of Construction & Land Use
600 - 4th Avenue
Seattle, Was.98104

Re: Helipad at Children's Orthopedic Hospital

Dear Mr. Justin:

We are writing to express our opposition to the helicopter landing pad on the Children's Orthopedic Hospital grounds. We own property in the Laurelon Terrace condominums.

It is hard to oppose something as humanitarian as a helipad on the grounds for the children. Especially is this true when you believe in the work and care which is performed there and support it each year.

However, when you analyze it you realize the current method works within a very short period to serve the same purpose. The child has to be handled the same number of times whether landing near the U of W baseball field or at the helipad. The exposure from potential helicopter difficulties is considerably reduced under the current program. The noise and disturbance to both neighbors and those at the hospital is much less now. Helicopters can be very noisy and dirty.

Respectively,

Charles R. Trzcinski M. Rea Trzcinski

Charles R. Trzcinski M. Rea Trzcinski

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41

RECEIVED
JAN 10 1995
Dept. of Construction and Land Use

ATTENTION: ANN ORUMSBY

I AM A CONCERNED RESIDENT IN LAURELHURST THAT IS HEREBY, FOR THE RECORD, VOICING MY OPPOSITION TO THE PROPOSED HELIPAD AT C.O.H.! MY FAMILY IS VERY PLEASED TO HAVE THE HOSPITAL AS A "NEIGHBOR", BUT WE REALLY FEEL THAT THE NOISE OF HELICOPTERS WOULD BE DEPLORABLE AND UNHEALTHY AND THAT THE SAFETY FACTOR OF THE NEIGHBORHOOD COULD BE IN JEOPARDY DUE TO HELICOPTERS APPROACHING THE HOSPITAL FROM ALL DIRECTIONS! I AM REGISTERING OUR OPINION THAT THE HOSPITAL CONTINUES TO RECEIVE PATIENTS VIA HELICOPTER EXACTLY LIKE THEY ARE DOING IT NOW.

SINCERELY,

BOB & JO CHATALAS
3906 - 50 NE
SEATTLE, WA. 98105
524-8624

P.S. PLEASE NOTIFY US OF THE HEARING BY DCLU!

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5011 - 45th Ave. N.E.
Seattle WA 98105
December 29, 1984

RECEIVED
JAN 4 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

William Justen, Director
Dep't of Construction and Land Use
600 4th Avenue
Seattle WA 98104

Dear Mr. Justen: RE: COHMC Helipad Proposal

I live near the Children's Orthopedic Hospital and I am very concerned about the proposal to build a helipad just outside the emergency entrance of the hospital. The noise of helicopters would be very disturbing to our neighborhood. I also question the safety of flying helicopters over such a heavily populated area as this area of Laurelhurst. The press always portrays Laurelhurst as an area of "posh" single family dwellings. Actually most of the residences near the hospital are apartment buildings and multiplex units with a low-income housing complex recently built at the northwest corner adjoining hospital property. There are a lot of people who would be disturbed by the noise of helicopters and the possibility of a crash over this neighborhood or into the hospital itself would be an ever-present danger.

I could understand COH being granted a helistop at the proposed site if that were the only alternative and really necessary to save lives. I have attended the public meetings in which the COH administrators have presented their case for the helipad and I have found their arguments completely unconvincing. From their own testimony it appears that the present arrangement of landing at the U of W intramural field is a satisfactory arrangement. If COH is granted this helipad, then the University of Washington Hospital, which is presently sharing helicopter service with COH, will have a much stronger argument for installing a helistop atop the new wing of their building. This will in turn promote competition between the two hospitals, increase the number of helicopter flights and also increase medical costs.

I doubt that the intent of the DCLU Major Institutions Land Use Code was to allow those institutions to ignore the concerns of the neighborhood. Yet I fear that that is the way COH is interpreting it.

Please keep me informed of developments in this case. Thank you.

Esther Branch
Esther Branch

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Appx.

January 7, 1985

RECEIVED
JAN 9 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ann Ormsby
DCLU City of Seattle
Municipal Building
Seattle, WA 98104

Re: COH Helipad - Laurelhurst Area

Gentlemen:

I am an owner and tax payer living in the Laurelhurst Community.

This letter is to protest the building of a Helipad at COH. I am against the idea absolutely. Helicopters are noisy and often unsafe to fly near a residential area. Just ask any Bellevue businessman near their Helipad. We had a business near there for several years and the noise is deafening.

Also when we first moved to Seattle we lived in View Ridge above Sand Point Naval Airport. The noise from planes and helicopters was very loud and rattled the dishes in the cupboards. As you probably know many of the planes crashed either on the runway or Lake Washington. We were lucky it was not on a home!

I am a supporter of COH and have been for many years but they are getting out of bounds for the area. Possibly they should think about a suburban location so they may expand like they propose to do.

If Washington Retirement Center is built--which I am also against--the complaints from them about the noise will really "burn your ears".

This letter is to register my vote against the Helipad at COH.

Very truly yours,

Ila M. Schulze

ILa M. Schulze
(Mrs. C. L.)
4303 50th Ave. NE
Seattle, WA 98105

s

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Seattle City Council

RECEIVED
JAN 10 1985
Dept. of Construction & Land Use

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

January 9, 1985

Dr. Marci Catanzaro
President
Laurelcrest Residential Park
4801 Terrace Drive Northeast
Seattle, Washington 98105

Dear Dr. Catanzaro:

Thank you for your letter of January 7, regarding the proposal to build a helipad at Children's Orthopedic Hospital.

The application is for a Council Conditional Use permit which, after review by the Department of Construction and Land Use and a public hearing conducted by the Hearing Examiner, will come to the Council's Land Use Committee for consideration. The Council's decision on the proposal will be made on the merits of the case contained in the official record.

So that your comments will be placed in the official record for consideration by the Councilmembers when the application comes before us, I am forwarding your letter to the Director of the Department of Construction and Land Use with the request that your name be added to the mailing list so that you will be kept informed of all hearings and meetings on this permit application.

I appreciate your concerns. Thank you for taking the time to forward them to me.

Respectfully,

PAUL KRAABEL, Member
Seattle City Council

PK:cm

Cc: William Justen, Director
D.C.L.U.

01-04-03
An equal employment opportunity—affirmative action employer
Eleventh Floor, Municipal Building, Seattle, Washington 98104

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Laurelcrest Residential Park
4801 Terrace Drive Northeast
Seattle, Washington 98105

January 7, 1985

RECEIVED
JAN 09 1985
PAUL KRAABEL
SEATTLE CITY COUNCIL

Paul Kraabel
Seattle City Council
600 Fourth Avenue
Seattle, WA 98104

Dear Councilman Kraabel:

As president the Board of Trustees for the Laurel Crest Residential Park, I am writing in opposition to the proposed Helipad at Childrens' Orthopedic Hospital. I represent the 82 home owners and residents of this condominium.

To our knowledge, Childrens' Orthopedic Hospital and Medical Center has not documented a need for a helipad. Dr. Michael Copass, Director of Northwest Airlift, has stated publicly that the present plan of landing the helicopter in the intramural field has created no problems. Concerns have been raised about the need to transport premature infants to the hospital in terms that make one wonder if the planned Helipad will be located in the neonatal intensive care unit. If the pad is located outside the building, the infants will still need to be transported into the building and to the special care unit. The neonatal intensive care unit is not located in the emergency department but in another area of the hospital. To my knowledge we have no data, only hearsay, that a helipad at the hospital would benefit any critically ill child.

There are environmental concerns related to noise and safety in the surrounding residential area. I believe that these have repeatedly been brought to your attention. We certainly share these concerns.

In this time of increasing social consciousness about rising costs of health care and local and federal efforts to contain these costs, the construction of new helipad raises many concerns. The American Medical Association News (21 Sept 1984) pointed out that the cost of operating a helicopter ambulance is upward of one million dollars per year. How can Childrens' Orthopedic Hospital and Medical Center justify such an ongoing expense, particularly in view of the fact that helicopter ambulance service is currently

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available. How will these costs compare with the current system? How will additional costs be covered? I am certain that many of the parents of children at the hospital could suggest many ways of spending the additional money to benefit more children.

If the statistics presented by the Hospital spokespersons are correct, the anticipated 15 landings per month will not result in a cost effective operation. Increasing those landings for sake of using fancy technology and making the operation "cost effective" when something less expensive would accomplish the same goal (safe, timely transport of critically ill children) is not justified. The cost of air lifting one patient to a hospital is in the thousands of dollars. How will this additional cost be managed?

Your role in approving the construction of a helipad is related to land use. I would hope, however, as an elected city official, you would be concerned with cost effective medical care in our community. I would appreciate your advice on who may be in a better position to be certain that cost issues are addressed before permission is granted for Childrens' Orthopedic Hospital and Medical Center to construct a helipad.

Sincerely,

Marci Catanzaro

(Dr.) Marci Catanzaro
President
Laurelcrest Residential Park

MC:eg

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Laurelcrest Residential Park
4801 Terrace Drive Northeast
Seattle, Washington 98105

January 7, 1985

JAN 9 1985
JIM STREET

Jim Street
Scattle City Council
600 Fourth Avenue
Seattle, WA 98104

Dear Councilman Street:

As president the Board of Trustees for the Laurel Crest Residential Park, I am writing in opposition to the proposed Helipad at Childrens' Orthopedic Hospital. I represent the 82 home owners and residents of this condominium.

To our knowledge, Childrens' Orthopedic Hospital and Medical Center has not documented a need for a helipad. Dr. Michael Copass, Director of Northwest Airlift, has stated publicly that the present plan of landing the helicopter in the intramural field has created no problems. Concerns have been raised about the need to transport premature infants to the hospital in terms that make one wonder if the planned Helipad will be located in the neonatal intensive care unit. If the pad is located outside the building, the infants will still need to be transported into the building and to the special care unit. The neonatal intensive care unit is not located in the emergency department but in another area of the hospital. To my knowledge we have no data, only hearsay, that a helipad at the hospital would benefit any critically ill child.

There are environmental concerns related to noise and safety in the surrounding residential area. I believe that these have repeatedly been brought to your attention. We certainly share these concerns.

In this time of increasing social consciousness about rising costs of health care and local and federal efforts to contain these costs, the construction of new helipad raises many concerns. The American Medical Association News (21 Sept 1984) pointed out that the cost of operating a helicopter ambulance is upward of one million dollars per year. How can Childrens' Orthopedic Hospital and Medical Center justify such an ongoing expense, particularly in view of the fact that helicopter ambulance service is currently

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Your role in approving the construction of a helipad is related to land use. I would hope, however, as an elected city official, you would be concerned with cost effective medical care in our community. I would appreciate your advice on who may be in a better position to be certain that cost issues are addressed before permission is granted for Childrens' Orthopedic Hospital and Medical Center to construct a helipad.

Sincerely,

Marci Catanzaro

(Dr.) Marci Catanzaro
President
Laurelcrest Residential Park

MC:eg

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Seattle City Council

January 10, 1985

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Dr. Marci Catanzaro
President
Laurelcrest Residential Park
4801 Terrace Drive Northeast
Seattle, Wa 98105

Dear Dr. Catanzaro:

Thank you for your letter and comments regarding the proposed helipad at Children's Orthopedic Hospital.

As the file is still open, I am forwarding your letter to Wm. Justen, Director of the Department of Construction and Land Use, for inclusion in the official file.

Again, thank you for writing.

Sincerely,

Dolores Sibonga

DOLORES SIBONGA
Seattle City Councilmember

DS:em

RECEIVED
JAN 14 1985
Dept. of Construction & Land Use

cc: Wm. Justen, Director
DCLU

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Yale still open for comment letters - send to DCLU.

Laurelcrest Residential Park
4801 Terrace Drive Northeast
Seattle, Washington 98105

January 7, 1985

RECEIVED
JAN -8 1985
DOLORES SIBONGA
SEATTLE CITY COUNCIL MEMBER

Dolores Sibonga
Seattle City Council
600 Fourth Avenue
Seattle, WA 98104

Dear Councilwoman Sibonga:

As president the Board of Trustees for the Laurel Crest Residential Park, I am writing in opposition to the proposed Helipad at Childrens' Orthopedic Hospital. I represent the 82 home owners and residents of this condominium.

To our knowledge, Childrens' Orthopedic Hospital and Medical Center has not documented a need for a helipad. Dr. Michael Copass, Director of Northwest Airlift, has stated publicly that the present plan of landing the helicopter in the intramural field has created no problems. Concerns have been raised about the need to transport premature infants to the hospital in terms that make one wonder if the planned Helipad will be located in the neonatal intensive care unit. If the pad is located outside the building, the infants will still need to be transported into the building and to the special care unit. The neonatal intensive care unit is not located in the emergency department but in another area of the hospital. To my knowledge we have no data, only hearsay, that a helipad at the hospital would benefit any critically ill child.

There are environmental concerns related to noise and safety in the surrounding residential area. I believe that these have repeatedly been brought to your attention. We certainly share these concerns.

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Sincerely,

Marci Catanzaro

(Dr.) Marci Catanzaro
President
Laurelcrest Residential Park

MC:eg

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Chaney/Armbrecht/ H.L. DCLU File 84-022

FYI

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

March 26, 1985

Anita Francis
Liz Anderson
Citizens Concerned About
Helicopter Transportation
5003 - 45th Avenue N.E.
Seattle, Washington 98105

Dear Ms. Francis and Ms. Anderson:

Thank you for your letter about the Children's Orthopedic Hospital application for a permit to install a helistop on the hospital grounds. Many people have called and written to mc and to the Department of Construction and Land Use (DCLU) to express their concern that the proposed helistop may adversely affect their neighborhood.

The Major Institutions Code has specific standards which limit the physical expansion allowed to occur before a master plan is required. These limitations should prevent the aggressive expansion you describe.

I asked DCLU Director William Justen to respond to your other specific concerns. If you have not already heard from him, I'm certain you will soon. I also asked him to provide me with a copy of his reply.

I appreciate your interest in the development and environment of your neighborhood and, again, thank you for taking the time to write.

Sincerely,

Charles Royer

Charles Royer

cc: William Justen, Director, Department of Construction and Land Use

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File CC 84.022

4700 N.E. 40th St.
Seattle, Washington
January 24, 1985

Dept. of Construction and Land Use
Room 400 Municipal Bldg.
600 - 4th Avenue
Seattle, Washington 98104

RECEIVED
JAN 28 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

RE: APPLICATION # CC 84-022

To Whom It May Concern:

We have been residents of the Laurelhurst Community for twenty-four years and I have been an active supporter and member of an Orthopedic Hospital Guild for twenty-three years. We feel strongly about the quality of care given at COH.

HOWEVER, we also feel strongly about the proposed helipad for the Hospital and we are OPPOSED to such a facility because of its negative impact on the community and the fact that a good landing pad is already available and in use on the UW field across from the Safeway on N.E. 45th.

Sincerely,

Rita T Gill Clark Gill

Rita T. Gill
Clark Gill

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HI Jan 5th 1985

RECEIVED

JAN 8 1985

DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

To Ann Ormsby

I am opposed to the helipad at the COH - the noise it makes will make it impossible for us to live in our appartments in Lorellon - we have had this experience long ago when an helipad did land at C.B.H.

I am a volunteer worker at the COH crafts 3711 5 - N.E. 46th Since 1972 -

Sincerely

Mrs Edith Taylor
4671 - 41st N.E
Seattle Wash
98105

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HT To notify

5041 Ivanhoe Pl NE
Seattle, WA 98105
7 January 1985

RECEIVED
JAN 11 1985
Dept. of Construction & Land Use

Ann Ormsby
DCLU
City of Seattle
Municipal Building
Seattle, WA 98104

Dear Ms. Ormsby:

As a resident of Laurelhurst Park and of the Children's Orthopedic Hospital, I am concerned about the hospital's need for a helipad. Please notify me of the DCLU hearing regarding this proposal. Thank you.

Yours truly,

Philip Fleckman

PF/ms

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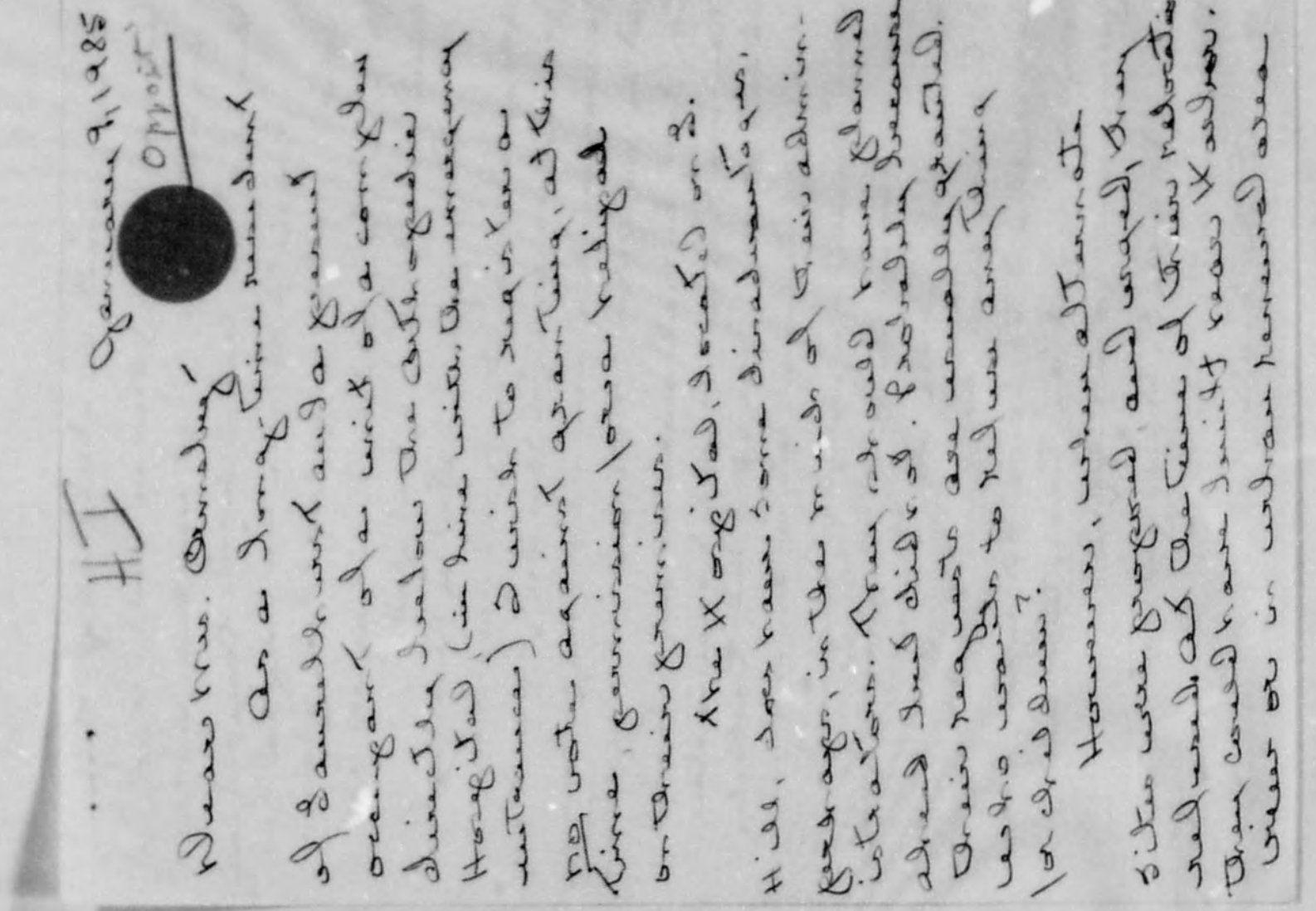

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CC84-022
221

File
Appeal

JOY SCOTT

MBA Programmes
The Chinese University of Hong Kong
Shatin, N.T.
Hong Kong

Business/Asia
4339 NE 45 Street
Seattle, WA 98105
USA

RECEIVED
JAN 22 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

January 19, 1985

Mr. William Justen, Director
Dept. of Construction and Land Use
600 4th Avenue
Seattle, WA 98104

Dear Mr. Justen,

The Children's Orthopedic Hospital has been my respected neighbor for more than 20 years. I strongly support the fine health care given there.

I wrote to you on November 30, 1984 concerning the projected helipad at COH and am writing again on the appearance of the sign at the hospital indicating the 14-day period before your group decides on the necessity of an EIS for the project.

Mr. Justen, I strongly believe that helicopters flying over your home or my home, with the imminent hazard, noise, and air pollution that helicopters provide, do create a need for an environmental impact study.

But there are additional questions:

1. Why is COH in such a hurry?

2. Why are they not in favor of an EIS?

3. Why aren't they willing to proceed in a cooperative manner when they must realize how much concern their actions have caused?

I believe that COH wants to get its helipad in before other hospitals (University and Swedish) complete theirs and before citywide (not just Laurelhurst) concern prevents the building of any more such helipads.

I will continue to support the fine health care presently given at COH, but I believe that the attitude of the current administration must be considered separately. If there is an actual need for a helipad at COH, a need overriding obvious environmental concerns, then such a helipad will ultimately be established. But, in the meantime, the hospital must be willing to take the steps required of any other business that wishes to impact an area. And one of the first steps that must be required on the COH helipad project is an Environmental Impact Study. I hope that your group will support this view.

Sincerely,
Joy Scott
Joy Scott

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CC 84-022

Seattle City Council

RECEIVED
JAN 17 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
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Environmental Management
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Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

January 14, 1985

Dr. Marci Catanzaro, President
Laurelcrest Residential Park
4801 Terrace Drive Northeast
Seattle, Washington 98105

Dear Dr. Catanzaro:

Thank you for your recent letter in which you forward the opposition of the Laurelcrest Residential Park to the proposed helipad at Children's Orthopedic Hospital. I understand that your opposition is based on environmental grounds and concern with the increasing costs of health care.

When considering a specific land use issue, the City Council sits as a quasi-judicial body. Because the Council will be involved in the decision on COH's application for a helipad, the Councilmembers must be very careful to maintain an appearance of fairness to all parties. We must limit our review of the issue to the official record and testimony received at open, public meetings. For this reason, I am not able to discuss the merits of this helipad application with you.

The City's Department of Construction and Land Use (DCLU) is currently conducting an environmental review of the helipad application. Once their review is completed, a public hearing will be scheduled on the helipad application before the City's Hearing Examiner. A sign will be placed at the proposed helipad site, and notice will be sent to those who reside 300 feet from the Hospital boundaries 30 days prior to the public hearing. The community is encouraged to participate in the hearing because the testimony received will comprise a portion of the official record. I am forwarding a copy of your letter to Mr. William Justen, Director of the Department of Construction and Land Use, to ensure it is included in the record and a hearing notice is sent to you.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Thank you again for taking the time to forward the views of the Laurelcrest Residential Park.

Sincerely,

Jeanette Williams
Seattle City Council

JW:lm
cc: William Justen, Director
Department of Construction and Land Use

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Laurelcrest Residential Park
4801 Terrace Drive Northeast
Seattle, Washington 98105

January 7, 1985

JAN 9 1985

Jeanette Williams
Seattle City Council
600 Fourth Avenue
Seattle, WA 98104

Dear Councilwoman Williams:

As president the Board of Trustees for the Laurel Crest Residential Park, I am writing in opposition to the proposed Helipad at Childrens' Orthopedic Hospital. I represent the 82 home owners and residents of this condominium.

To our knowledge, Childrens' Orthopedic Hospital and Medical Center has not documented a need for a helipad. Dr. Michael Copass, Director of Northwest Airlift, has stated publicly that the present plan of landing the helicopter in the intramural field has created no problems. Concerns have been raised about the need to transport premature infants to the hospital in terms that make one wonder if the planned Helipad will be located in the neonatal intensive care unit. If the pad is located outside the building, the infants will still need to be transported into the building and to the special care unit. The neonatal intensive care unit is not located in the emergency department but in another area of the hospital. To my knowledge we have no data, only hearsay, that a helipad at the hospital would benefit any critically ill child.

There are environmental concerns related to noise and safety in the surrounding residential area. I believe that these have repeatedly been brought to your attention. We certainly share these concerns.

In this time of increasing social consciousness about rising costs of health care and local and federal efforts to contain these costs, the construction of new helipad raises many concerns. The American Medical Association News (21 Sept 1984) pointed out that the cost of operating a helicopter ambulance is upward of one million dollars per year. How can Childrens' Orthopedic Hospital and Medical Center justify such an ongoing expense, particularly in view of the fact that helicopter ambulance service is currently

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available. How will these costs compare with the current system? How will additional costs be covered? I am certain that many of the parents of children at the hospital could suggest many ways of spending the additional money to benefit more children.

If the statistics presented by the Hospital spokespersons are correct, the anticipated 15 landings per month will not result in a cost effective operation. Increasing those landings for sake of using fancy technology and making the operation "cost effective" when something less expensive would accomplish the same goal (safe, timely transport of critically ill children) is not justified. The cost of air lifting one patient to a hospital is in the thousands of dollars. How will this additional cost be managed?

Your role in approving the construction of a helipad is related to land use. I would hope, however, as an elected city official, you would be concerned with cost effective medical care in our community. I would appreciate your advice on who may be in a better position to be certain that cost issues are addressed before permission is granted for Childrens' Orthopedic Hospital and Medical Center to construct a helipad.

Sincerely,

Marci Catanzaro

(Dr.) Marci Catanzaro
President
Laurelcrest Residential Park

MC:eg

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Dupl.

4300 N.E. 44th Street
Seattle, Washington
January 5, 1985

RECEIVED
JAN 10 1985
Dept. of Construction & Land Use

Dept. of Const.&Land Use
408 Municipal Building
Seattle

Dear Hermia Ip:

In December (1984) I telephoned requesting to be notified of the date of the hearing: Childrens' Orthopedic Hospital heli,ad project. As of today I have not yet heard from the Department of Construction & Land Use.

My home is situated one block south of Northeast 45th, and is therefore in a position to be affected negatively by helicopter noise.

I am writing to register opposition as my opinion in the choice of location for this proposal: a helipad at C.O.H.

Sincerely,

Dorothy Peterson

Dorothy Peterson

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RECEIVED

JAN 30 1985

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Jan 28, 1985

Dear Mr. Justin,

We are yet more neighbors very concerned with the proposed construction of a helipad by Childrens Orthopedic Hospital right in our neighborhood.

We are even more concerned by the rumor that COH may not even be required to file an environmental impact statement. This seems absurd considering the enormous number of residences they would be affecting. COH seems to already have a workable system for transporting ill patients to the hospital, but if they feel they need to change the existing arrangement, they should at least be required to prove the need is great. A large, influential organization should not be able to adversely affect a large neighborhood without at least proving a need and answering the communities questions. This is the least that should be required.

Thank you for your attention. We hope the community will be listened to by your department.

Sincerely,

Brian & Marla Fenske
4625-41st NE
Seattle, Wa. 98105.

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cc 84022 file

Mrs. Leo Hirschorn
4517 - 46th Ave. N. E.
Seattle, Washington 98105

RECEIVED
JAN 22 1985
DEPT OF CONSTRUCTION & LAND USE

January 20 - 1985

Dear Mr. Juster:

I am writing to express my opposition to the proposed Helipad at Children's Orthopedic Hospital.

Many many of us are long-time neighbors who fear for the safety of the area as well as the accompanying air pollution which could well be a health hazard. Surely an environmental Impact Statement will be needed in regard to these matters.

Your understanding will be much appreciated.

Sincerely,

(Mrs.) Oline Rees Hirschorn

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JAN 22 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justen, Director
Department of Construction and Land Use
600 4th Avenue
Seattle, WA 98104

SUBJECT: Application No. CC-84-022
Children's Orthopedic Hospital Helipad

Dear Mr. Justen,

We are very concerned about the adverse impact of this helipad upon the health, safety, and welfare of the residential neighborhood surrounding Children's Orthopedic Hospital. We are writing to request that COH be required to submit a full Environmental Impact Statement which addresses the following questions:

(1) The noise and vibration levels of helicopter overflights upon nearby residences.

(2) Will large and exceptionally noisy helicopters (e.g. military MAST helicopters) be turned away from the proposed COH helipad even if they are carrying patients requiring emergency care?

(3) The health effects of the noise and vibrations from helicopter overflights on nearby children and elderly residents, especially nighttime flights which could disrupt sleep.

(4) The danger of helicopter crashes in the surrounding residential areas.

(5) What proportion of helicopter flights to COH will handle non-emergency cases, including patients already stabilized in the field or at other medical facilities?

(6) Has COH fully explored all other alternative landing sites, including the possibility of improving the present landing site at the University athletic field?

Thank you very much for your concern. Please keep us informed of this application process.

Sincerely,

Michael D. Perlman
Dorothy D. Perlman

Michael and Dorothy Perlman
4500 NE 50th
Seattle, WA 98105
527-4537

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3650 42nd Avenue, N.E.
Seattle, WA 98105

RECEIVED
JAN 30 1985
DEPT OF CONSTRUCTION AND
LAND USE SERVICES

Mr. William Justin
Department of Construction and Land Use
600 4th Avenue
Seattle, WA 98104

Dear Mr. Justin:

I write concerning the proposal by Children's Orthopedic Hospital to establish helicopter service to the hospital. I am deeply concerned that no Environmental Impact Report has been prepared in connection with this proposal, as I believe that there will be a very significant impact on the area. I request that you require COH to prepare an EIR in connection with this proposal, so that the community can properly understand the impact of the action.

Sincerely,

Bruce Margon

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3656 42nd Ave NE.
Seattle. WA. 98105.
January 26, 1985.

RECEIVED
JAN 30 1985
DEPT OF CONSTRUCTION

Dear Mr Justin, We would like to register our opposition to the proposed helicopter service at COH hospital in Lauralhurst. We feel the main reasons for the service is public relations and patient recruiting, and that there is no need for permanent helicopter facilities at a hospital in a residential neighborhood. We are opposed to the installation at COH because of the adverse impact on the environment and insist that an environmental impact statement be filed by COH.

Sincerely,

. Marilyn Morrow

. Jim Morrow

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1-29-85

RECEIVED

FEB 1 1985

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. Justin.

I would like to express my opposition to the helipad proposal for the Children's Orthopedic Hospital.

I have tried to imagine my own grandchild being transported to the hospital and I really can't believe that the three minute ride in an ambulance (well equipped) would be the difference between surviving or not surviving.

I really feel a helipad would be a grave mistake in a residential area. The residents have been very patient with the expansion of the hospital but this proposal is unacceptable.

Sincerely,

Joan F. King

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H1

Jan 29, 1985

Dear Mr Justin

My husband and I are very much opposed to the proposed helicopter pad at COH. There are many reasons it is unjustifyable.

Jane Kippenhan
3908 NE 38
Seattle, 9

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FEB
Dept. of Community Development



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RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE

4701- 45th Ave NE.
Seattle, Wa 98105
Jan 29, 1985

To whom it may concern:-
Re proposed binding of helipad by CoH
as the owner of a home immediately abutting the C.O.H. I am very concerned about this proposal. We are in a first residence zone and feel the property values in this neighborhood should be protected as such.

This proposal should certainly be submitted for an environmental impact evaluation.

Yours truly,
Bart Waddingham

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SCOTT COBB
4654 - 41ST AVENUE N. E.
SEATTLE, WASHINGTON 98105

January 29, 1985

RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. Justin,

I am writing to protest the proposed construction by Children's Orthopedic Hospital of a helipad.

As a nearby resident, I am distressed by changes in the surrounding neighborhood: office construction, the Burke-Gilman housing project, Ronald McDonald House, as well as other COH construction, all of which add to traffic congestion, noise and a shift away from quiet single-family residences.

COH has failed, in my opinion, to demonstrate a clear need for the helipad on the proposed site.

Please do all you can to protect the homeowners in our neighborhood by denying C.O.H. the construction permit.

May I hear from you? Thank you.

Sincerely,

Scott Cobb

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Jan. 29, 1985

Mr. William J. Justen, Director
Dept. of Construction and Land Use
600 4th Avenue
Seattle WA 98104

RECEIVED
JAN 30 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. Justen:

I do not want a helicopter landing outside the emergency entrance of Children's Osthopedic Hospital. I do not feel it is really necessary, when at present there is a landing site located in the U of W. intramural field just opposite the Safeway store on N. E. 45th

The noise and safety factors in a densely populated residental neighborhood where I live, is a concern to all the people living in this area. I feel we have the same right to peace and quiet that residents of any other neighborhood enjoy.

Very truly yours,
Iola Grue Sells

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Hermia Ip Copy

Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

January 15, 1985

Re: Children's Orthopedic Hospital
Application CC 84-022

Dr. Marci Catanzaro, President
Laurelcrest Residential Park
4801 Terrace Drive Northeast
Seattle, Washington 98105

Dear Dr. Catanzaro:

Thank you for your recent letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. I agree that providing emergency care for children is a City-wide concern, but there have been numerous phone calls and letters from COH neighbors who are concerned about the particular location of the helistop, which they feel may adversely affect their neighborhood.

You are right that, while the City of Seattle has the responsibility to address the land use implications of hospital helipads, the role of assessing the need and "cost effectiveness" of such facilities in medical practices is beyond the function of the City government. The Puget Sound Health Systems Agency is the appropriate agency to address and set policies on these issues. Their contact person and address is: Larry Thompson, Executive Director, Puget Sound Health Systems Agency, 601 Valley Street, Seattle, Washington 98109; phone number 464-6143.

Further, you may contact the State Department of Social and Health Services regarding the requirement of a Certificate of Need for the proposal. We understand this agency is in the process of determining whether a Certificate is necessary or not. The contact person is: Christiana Sparks, Certificate of Need Program, State Department of Social and Health Services, Mail Stop FT-33, Olympia, Washington 98504; phone number (206)753-5857.

Your letter and letters of other citizens of the community are included in the official file (CC 84-022), and you will be notified of future public hearing schedules and decisions. I appreciate your interest, and I am glad you took the time to write. If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Very truly yours,

Katy Chaney

for WILLIAM J. JUSTEN, P. E.
Director

HI:11d

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4516 NE 38th Street
Seattle, WA 98105

January 30, 1985

RECEIVED
FEB 1 1985
Dept. of Construction & Land Use

DCLU
Room 400, Municipal Building
600 4th Avenue
Seattle, WA 98104

To Whom It May Concern:

Children's Orthopedic Hospital has requested permission to land helicopters on their property at NE 45th Street and Sand Point Way. Please deny that permission.

To permit landings on the hospital grounds is to force unrestricted aural blight on a neighborhood of at least 2,000 single family homes. COHMC is presently landing helicopters a scant 2-3 minutes from the hospital, a short distance from the surrounding homes. Please disallow landings on the hospital grounds.

Sincerely,

Jenny and Eric Carlson

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FEB 1 1985
Dept. of Construction & Land Use

January 31, 1985

William J. Justen, Director
Department of Construction and Land Use
600 4th Avenue
Seattle, Washington 98104

Re: COH Helipad

Dear Mr. Justen:

I am writing to you to advise you that I think it is important that Children's Orthopedic Hospital be required to file an Environmental Impact Statement in regards to their desires to place a helipad, about 300 feet from my living quarters.

The hospital is a definite drawback for anyone living nearby. I bought my property before they put in their unsightly parking garage and spoiled the view from my front window. We hear sirens at all hours of the day and night and now they want to put a (89 decibels at 200ft.) noisy helipad just outside the emergency entrance to the hospital.

Needless to say I would hope the residents are given some consideration in the present situation.

Yours truly,

Mrs Patricia Lundquist

Mrs. Patricia Lundquist
4685 41st N.E.
Seattle, Wa 98105

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Mrs. C. William Frankland
4811 Northeast Forty-third
Seattle, Washington 98105

RECEIVED
JAN 31 1985
Dept. of Construction & Land Use

January 31, 1985

Mr William Gaston, Director
Dept of Construction & Land Use
600 - 4th Avenue
Seattle, Washington 98104

Dear Sir

Mr. Frankland and I are residents and homeowners in the Laurelhurst area as well as property owners in the large Laurelon Condominium complex located adjacent to the Orthopedic Hospital garage and grounds.

We are deeply concerned first about the Noise level and safety of the proposed Helipad. Secondly the property values of the Condominium will be threatened.

The Hospital has become an arrogant neighbor unresponsive to the desires of public minded citizens who are working to preserve the quality of life in this fine residential neighborhood of our beautiful city.

As the Forest Service has acknowledged Helicopters disrupt the "Native Habitat."

Please discourage this expansion.

Thank You

Mrs. C. William Frankland

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E25

MULLAVEY, PROUT, GRENLEY, SONKIN, FOE & LAWLESS

attorneys and counselors at law

2401 N.W. SIXTY-FIFTH SEATTLE, WASHINGTON 98117
P.O. Box 70567 98107
(206) 789-2511

RECEIVED
FEB 1 1985
Dept. of Construction & Land Use

CHARLES N. MULLAVEY
*RICHARD L. PROUT, P.C.
**HENRY W. GRENLEY
***IRVING A. SONKIN
ALAN K. FOE
GREGORY J. LAWLESS

LAURIE J. NORNES
THERESA SCHREMPP
JEFFREY E. BROWN

January 30, 1985

Mr. William Justen, Director
Department of Construction and Land Use
600 Fourth Avenue
Seattle, Washington 98104

Re: Children's Orthopedic Hospital Helipad

Dear Mr. Justen:

My family and I live at 4324 N. E. 44th Street, Seattle, Washington, just one block away from Children's Orthopedic Hospital. Everything that is done by COH affects the neighborhood and my family.

My understanding is that there are currently hearings concerning having a helipad at the Hospital. To say the least, we are very concerned regarding the helicopter traffic and strongly feel that an environmental impact study is needed because of the affect the helicopter traffic would have upon the environmental health.

My major areas of concern are as follows:

1. Noise. Helicopters make a lot of noise. There would be a lot of stress on my family and my neighbors as well as children in the hospital.

2. Safety. There is always a possibility and fear of helicopter crashes.

3. Polution. There will be emissions from the helicopter and the effect on air quality needs to be determined.

4. Traffic. The flight pattern noise and visual distraction caused by the helicopter will tend to tie up traffic in the area.

I am not sure of exactly what goes into an invironmental impact statement, but of concern to me is the fact that they are currently using helicopter

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facilities provided at the playing fields of the University of Washington. Other than institutional ego, there does not seem to be any reason why this cannot continue. The landing area at the University is not surrounded by residential properties and the landing area at the University is further away from any arterials.

Due to an ordinance passed by the City Council, it is my understanding that large institutions are basically exempt from zoning concerns. This should not mean that they are also exempt from environmental concerns. Given the proposed frequency of flights that will be coming into the Hospital, an environmental impact statement is definitely needed.

I would appreciate being notified as to any hearings regarding this matter.

Very truly,

MULLAVEY, PROUT, GRENLEY, SONKIN, FOE & LAWLESS

Irving A. Sonkin

IAS:sjm

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January 30, 1985

RECEIVED
FEB 1 1985
Dept. of Construction & Land Use

Mr. Wm. Justin
Dept. of Construction & Land Use.
City of Seattle
600 Fourth Avenue
Seattle, Washington 98104

Dear Mr. Justin,

As a resident of the area surrounding Childrens' Orthopedic Hospital, I am writing to express my concern and opposition to the proposed construction of a helipad on the hospital grounds. Noise pollution from automobile traffic is already a significant problem in the area due to the existence of two major arterials in the neighborhood (N.E. 45th Street and Sandpoint Way). The takeoff and landing of helicopters would only add to the decibel level for the residents whose homes are within range of the helicopter route.

I <u>strongly oppose</u> the new COH landing site, and I urge you to consider recommending that the hospital find an alternative method for transporting patients. As a private citizen, I plan to do all that I can to prevent the helipad from being built.

Thank you for your consideration.

Sincerely,

Gail J. Gordon
4002 N.E. 45th St.

cc: Mayor Charles Royer

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Mr. Michael M. Cochran
3838 Suburban Drive NE
Seattle, WA 98105
January 31, 1985

RECEIVED
FEB 6 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

DCLU
Publ. No. CC84-022
Room 400
Municipal Building
600 Fourth Avenue
Seattle, WA 98104

Subject: Children's Orthopedic Helipad

Gentlemen:

As residents of the westernmost portion of Laurelhurst, we are well acquainted with the comings and goings of helicopters from the U.W. soccer fields.

Many approach and departure paths are nearly overhead and within a few hundred feet of ground level.

Nearly all craft are of the heavier Huey type verses the lighter "traffic copter" variety.

I would honestly call their landings and takeoffs a spectlacle of noise . . . "WHOP, WHOP, WHOP, WHOP." All ordinary nome activity ceases. No conversation can be exchanged without mental distr tion.

Allowing C.O.H. this additional service will routinely permit the total disruption of residential solitude to an even greater number of people.

Keep helicopters for very critical cases and keep them at the soccer fields. The good of mankind is not served by the total interruption of hundreds of people in their homes in trade for the two to three minutes saved in transport time.

Sincerely,

M Cochran

Michael M. Cochran

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RECEIVED
FEB 4 1985
Dept. of Construction & Land Use

January 24, 1985

Dept. of Construction & Land Use
Rm. 400
Municipal Bldg.
600 4th Avenue
Seattle, WA 98104

re: #cc84022

To Whom It May Concern:

COH does not need a helicopter pad.

First, ambulance sirens can be turned off so as not to disturb hospital patients but the noise of the helicopters cannot be controlled. Thus noise will affect both patients and neighborhood residents.

Second, there is no data to support COH'S claim that in emergency situations particular patients are or, have been, endangered by being transported by ambulance from the UW parking area now used.

Apparently it is a matter of convenience for COH to have a helicopter land at the hospital, since no information has been disseminated to the community which proves that without a doubt the pad is necessary.

If COH is concerned about its community relations and hopes to continue to receive community support it should continue to rely on ambulance service.

Judith J. Platt
4526-45th Ave. NE
Seattle, WA 98105

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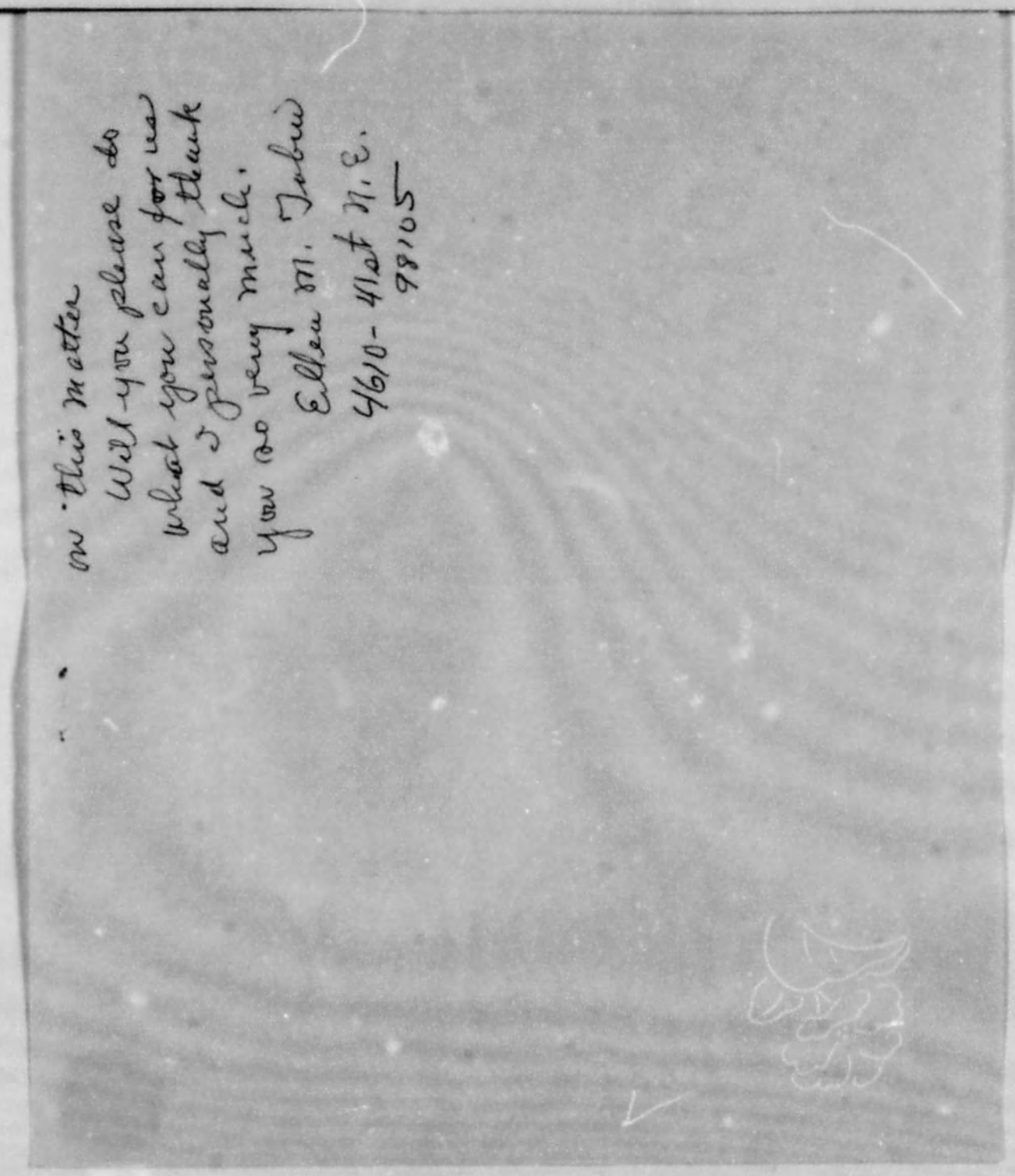

on this matter
Will you please do
what you can for us
and I personally thank
you so very much.
Ellen M. Jakus
4610 - 41st N.E.
98105

Jan 29-85

RECEIVED
JAN 30 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justyn;

Dear Sir:

I am an owner of a condominium in Landhurst and am definately against building a heliport on the Orthopedic property.

I am an elderly lady and we have many more here (where the heliport will be built). It will be right on our back doors, and as you know the noise will be very, very, bad.

It seems to me that we older people as well as others in the Terrace deserve consideration

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4609 41st Avenue North East
Seattle, Washington 98105
January 29, 1985

RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justin
Dept. of Construction and Land Use
600 Fourth Avenue
Seattle, Washington 98104

Dear Mr. Justin:

You undoubtedly know that recently the Children's Orthopedic Hospital announced a plan to build a helicopter pad on the hospital grounds. I wish to register my disapproval of this proposal.

Helicopters would be noisy and possibly even dangerous to the people in the neighborhood. Many residents of Laurelon Terrace think that there should be further study of this proposal and we are contributing to a fund to prevent the construction of a helipad.

We are sure that you will give this matter careful consideration. The decision is very important to all of us.

Sincerely yours,

Herdis Benediktson

Herdis Benediktson

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Jan. 30/85

To Whom It may Concern:

My husband and I are against a helicopter pad at the Children's Orthopedic Hospital.

RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Bea Sharpe
Stan Sharpe
5013 Sand Pt Pl NE
Seattle 98105

Application
#CC 84-022

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Bill-C-C84-022-

Seattle Wn
Jan 29-85

RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION AND LAND USE DIVISION

Dear Sir,

I object to the helicopter pad being put at the hospital. Please consider the price drop in property, the noise, the danger to us and patients, yes the noise, they aren't going to sleep there that either. Thank you for considering these things.

Sincerely,
Marvel Wickersham
4705 - 45th N.E.

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5043 Sand Point Place N. E.
Seattle, Wa 98105
January 29, 1985

Department of Construction and Land Use
Room 408 Municipal Building
600 4th Avenue
Seattle, Wa 98104

RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Gentlemen:

Please enter this letter as a protest against the construction of a Heliport for the Childrens' Orthopedic Hospital CC 84.022.

We feel that:

1. The need for such construction has not been established satisfactorily.

2. A Heliport does not belong in a residential neighborhood.

3. The Orthopedic originally got into this area by agreeing to retain the decor and atmosphere of a residential neighborhood, which it has not done.

   A. The addition of a Heliport is contrary to their original stated intent and should not be allowed.

Thank you.

Very truly yours,

W. H. Kurtz

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January 29, 1985

1788 Grevelia St.
South Pasadena, CA 91030

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JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justin, Director
Dept. of Construction & Land Use
600 - 4th Avenue
Seattle, WA 98104

Dear Mr. Royer:

I love children.

For 20 years I taught 4 & 5 yr. olds in Sunday School.

When I retire to my condo in Seattle in two years I intend to volunteer at the Children's Orthopedic Hospital.

I am in favor of doing things to promote the wellbeing of our children.

I am not in favor of building a helipad at CHO because:

1. There is already a helipad in the U of W intramural field just three minutes from CHO.

2. I think the millions of dollars it will cost to build and operate the helicopter service to decrease the children's arrival time by just a couple of minutes could be put to much better use doing other things for the children.

3. It is not fair to submit us homeowners and residents to the disruption and dangers of helicopters flying overhead in our retirement years when the children already have their helipad 3 minutes away.

Before making your decision, will you please pray and ask God what His will is in this matter.

With prayers that your
hearts will help you
make the right decision,

Nancy J. Philips

Nancy J. Philips
Homeowner
4635 - 41st N.E.
Seattle, WA 98105

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January 29, 1985

Dept. of Construction and Land Use
Room 400 - Municipal Bldg.
600 - 4th Ave.
Seattle, WA 98104

RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Re. Application # VC 84-022

Dear Sirs:

I oppose the above application and am against the building of the COH Helipad until there has been a thorough study and Environmental Impact Statement made public.

Sincerely,

Barbara L. Carver

4305 - 43rd NE
Seattle, WA 98105

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RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

January 29, 1985

William J. Justen, Director
Dept. of Construction and Land Use
600 4th Avenue
Seattle, WA 98104

Dear Mr. Justen:

I am against the building of the heliport on the grounds of The Children's Orthopedic Hospital as it would be a noisy intrusion of my privacy and disturbing to me constantly with its 15 minimal and unknown and limitless maximal flights a month.

I live below the hill which the hospital built up to make the entrance to the new hospital. I have experienced the noise and glare and turmoil that is involved with a helicopter flight and landing and want none of it.

A carefully prepared impact statement of the facts from all points of view should be prepared and it will show that old people are human beings too and need to be protected as well as babies. There are six neighbors door to door all between 84 to 90 years of age who are concerned. I am 89 years old.

Sincerely,

Dept. Gertrud J. Siqueland

Gjertrud J. Siqueland

cc: Councilmembers

Mrs. Robert (Peggy) Habegger
Pres., Board of Trustees of
The Children's Orthopedic Hospital

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Hermia Ip Copy

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

March 20, 1985

Anita Francis
Liz Anderson
Citizens Concerned About
Helicopter Transportation
5003 45th N. E.
Seattle, Washington 98105

Dear Ms. Francis and Ms. Anderson:

Thank you for your letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. There have been numerous phone calls and letters to me and to the Department of Construction and Land Use (DCLU) from COH neighbors who are concerned that the proposed helistop may adversely affect their neighborhood.

I have asked William Justen, Director of DCLU, to respond to your specific concerns, and if you have not already heard from him, I'm certain you will soon. I have also asked Mr. Justen to provide me with a copy of his reply. I am sure your suggestions will be taken into careful consideration.

I appreciate your interest in the development and environment of your neighborhood and, again, thank you for taking the time to write.

Sincerely,

Charles Royer

CR:hid

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8511.4 3/

RECEIVED
MAR 11 1985
Dept. of Construction & Land Use

Log #
CLU-Mayor's resp - due 3/19

5003 45th N.E.
Seattle, WA 98105
March 7, 1985

RECEIVED
MAR 8 1985
MAYOR'S OFFICE

AK-FYI

Charles Royer, Mayor
City of Seattle
1200 Municipal Building
Seattle, Washington 98104

Dear Mayor Royer:

As you may know, the neighbors of Children's Orthopedic Hospital (COH) and many others in adjacent areas are quite upset by the hospital's intentions to expand. Your successful effort to get the major institutions code passed has largely stripped us of the zoning protection we used to have. The code encourages an institution to prepare a master plan but a master plan is not a requirement. COH has indicated that it has no intention of preparing a master plan although we know it wants to expand until it rivals the nationally known children's hospitals in Boston, Philadelphia and other places.

We have recently become aware of the fact that you have created an advisory committee to work with COH on its plans for developing a 5-acre parcel at N.E. 70th and Sand Point Way. We understand that this committee consists of north end representatives, city employees, and city council members as well. We are astonished and discouraged that a piece of property for which there are no current plans for development is given this type of attention by elected officials while our overwhelming and immediate problems with COH go unaddressed. Our requests for assistance from DCD employees in dealing with COH have met with no success. Our efforts to communicate with city council members about these problems have been cut off by their incorrect interpretation of the "fairness doctrine". Consequently we have had to spend precious time researching this doctrine and educating the council members about their responsibilities as representatives of Seattle citizens.

We feel that our problems with COH deserve your close attention and that a city staff person should be assigned to help us as a committee to deal with COH. This committee should consist of persons representing all the residential areas immediately adjacent to the coh campus. A major task of this group would be to work with COH to prepare a master plan that would (hopefully) lead to a reduction of friction between COH and its impacted community. This is an urgent need and we ask for swift action on your part.

We appreciated your request to the Puget Sound Health Systems Agency for a policy guidance study of helicopter transportation to hospitals in Seattle. We were quite disappointed that you did not respond to Larry Thompson's letter of January 7 asking for some resources to do a proper study of this issue. You now have a brief report from the PSHSA that indicates that much more work needs to be done on this city-wide topic.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

We urge you to follow up on this beginning with a more comprehensive, in-depth investigation of this emerging issue. A formal public policy study that will establish definitive criteria (as suggested by Larry Thompson) is urgently needed.

If you should decide to initiate an effort to repeal the major institutions code, be assured that you would have our support. Your interest in this issue would be greatly appreciated.

In summary, we ask that you:

1. Assign a city staff person to help us work with COH in preparing a master plan.

2. Follow up on the PSHSA brief report by conducting a comprehensive, in-depth investigation of the role of hospital helicopters in Seattle--to result in a public policy which establishes definitive criteria for their use.

3. Amend the major institutions code to include:
   --a requirement for a master plan
   --community participation in decision-making

Sincerely,

Anita Francis

Anita Francis
Liz Anderson
(for Citizens Concerned
About Helicopter Transportation)

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Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

March 20, 1985

Anita Francis
Liz Anderson
Citizens Concerned About
Helicopter Transportation
5003 45th N. E.
Seattle, Washington 98105

Dear Ms. Francis and Ms. Anderson:

Thank you for your letter and suggestions on the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on hospital grounds. I appreciate your taking the time to write.

Under the existing Land Use Code, the COH is not required to prepare a Master Plan (Section 23.80.30). We are, therefore, not able to form a citizen advisory committee to function as a planning committee, as you suggested. However, I have assigned Mrs. Hermia Ip, Land Use Specialist of our Land Use Division, to be the project manager for the permit review of COH's proposal. She will continue to keep you informed of the progress of the permit review, and your suggestions will be given careful consideration. If you wish to pursue an amendment to the Land Use Code regarding the circumstances where a Master Plan is required, you may file a petition for Council consideration pursuant to Section 23.94.10. The text amendment procedures involve public notification and a hearing before City Council. Mrs. Ip will be able to explain the process if you have further questions on this matter.

As you are aware, the development of helicopter transport programs and policies requires a regional approach, which should also involve relevant expertise in the medical field. We believe that while the City of Seattle has the responsibility to address the land use implications of hospital helipads, the role of assessing the need and cost effectiveness of such facilities in medical practices is beyond the function of the City government. Therefore, we cannot undertake a comprehensive indepth investigation of these regional issues, as you requested. The staff position paper of the Puget Sound Health Systems Agency dated February 21, 1985 is helpful in providing us with some preliminary guidance. We are also coordinating with the State Department of Social and Welfare Services regarding their Certificate of Need requirement. We understand a determination will be made in about 10 days on whether COH is required to obtain a certificate or not. We believe that particular process will provide further guidance on our permit review process.

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Thank you again for your interests and concern with hospital helicopter transportation. If you have any other questions, please do not hesitate to call Mrs. Ip at 625-4509. She will be glad to help you.

Very truly yours,

WILLIAM J. JUSTEN, P. E.
Director

HI:11d

cc: Mayor Charles Royer
Tom Byers, Office of the Mayor

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Chief Clerk/Comptroller 41.6 DCLU

FYI

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

March 26, 1985

Anita Francis
Liz Anderson
Citizens Concerned About
Helicopter Transportation
5003 - 45th Avenue N.E.
Seattle, Washington 98105

Dear Ms. Francis and Ms. Anderson:

Thank you for your letter about the Children's Orthopedic Hospital application for a permit to install a helistop on the hospital grounds. Many people have called and written to me and to the Department of Construction and Land Use (DCLU) to express their concern that the proposed helistop may adversely affect their neighborhood.

The Major Institutions Code has specific standards which limit the physical expansion allowed to occur before a master plan is required. These limitations should prevent the aggressive expansion you describe.

I asked DCLU Director William Justen to respond to your other specific concerns. If you have not already heard from him, I'm certain you will soon. I also asked him to provide me with a copy of his reply.

I appreciate your interest in the development and environment of your neighborhood and, again, thank you for taking the time to write.

Sincerely,

Charles Royer

Charles Royer

cc: William Justen, Director, Department of Construction and Land Use

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RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

January 28, 1985

Mr. William Justin, Director
Dept. of Construction & Land Use
600 - 4th Avenue
Seattle, Washington 98104

Dear Mr. Justin:

This letter is in regard to the proposed helicopter landing pad on the Children's Orthopedic Hospital grounds.

As residents of Laurelhurst, as well as sharing ownership of two condominiums in Laurelon Terrace, we oppose this latest attempt at Children's Orthopedic Hospital in forcing something on the community that is not in the community's best interest.

We realize this is a touchy subject when it involves children's care. We, however, have heard nothing to convince us that the present use of the University of Washington by the helicopters is that big a problem in the transport of patients to the hospital. We are certainly aware of the problems that this is going to cause to the immediate homeowners. Having recently had the experience of having helicopters pass over at low altitude (during last Spring's gypsy moth spraying), we having experienced the very high decibel noise level created. Even with the present landing site at the University of Washington, we are still subjected to very high noise levels. We can only imagine what the impact would be to the price of real estate within the near vicinity of the proposed hospital landing site.

The hospital, over the years, has certainly not been honest with the community. The parking garage that "was not going to be visible" is the latest example of their less-than-honest relationship with their neighbors!

We have a fine neighborhood and very civic-minded residents, and this further encroachment on the residential nature of the area is not desirable or justified.

Sincerely,

Bob + Phyllis Swenson

Mr. and Mrs. Robert D. Swenson
3808 - 42nd Avenue N. E.
Seattle, WA 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

S Kenneth Pai
4331 NE 45 ST
Seattle, Wa 98105

Mr. William Justen
Dept. of Construction & Land Use
City of Seattle

RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr Justen

I am concerned about the proposed Helipad for the Children's Orthopedic Hospital in Laurelhurst.

I believe the notion of a helipad in a residential neighborhood, be it for a hospital or any other noble and worthy use, is indeed outlandish and far-fetched. I do not wish a helipad in anyone's residential neighborhood, yours, mine, the medical doctors', the patients'. Esp. When one is available at the nearby U.W. field in Union Bay. The marginal convenience of an on-site pad cannot be justified by the real risk of crashes, and the inevitable noise, air pollution & stressful disturbances a hovering chopper will cause.

Surely an EIS should be prepared to demonstrate the need is justifiable.

Skenneth Pai

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4204 N.E. 50th St.
Seattle, WA. 98105
January 27, 1985

RECEIVED
JAN 31 1985
DEPT OF COMMUNITY DEVELOPMENT
LAND USE DIVISION

Dear Mr. Justin:

I am writing to express my concern about the proposal to implement helicopter service at the Children's Orthopedic Hospital.

Our home is located directly opposite the parking garage on the north side of the hospital. Therefore we anticipate experiencing rather fully the impact of such service. We are particularly apprehensive about the noise level to which we may be subjected.

We sincerely hope that an environmental impact statement will be required of COH in order to address our concern and the concern of others.

Sincerely yours,

Cynthia McFalls

Cynthia McFalls

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JG

Kathleen McHugh Johnston
4200 N. E. 50
Seattle, Washington 98105

December 12, 1985

Mr. Cliff Portman
Dept of Constr. Land Use
400 Municipal Bldg.
Seattle, Wa 98104

DEC 16 1985

Dear Mr. Portman:

This letter is being written to protest the noise and house shaking vibrations caused by helicopters approaching and landing at the Childrens Orthopedic Hospital.

We do understand the life saving efforts to serve young children. Perhaps some steps may be taken to alleviate the stress of tormenting noise and vibrations for residents in the vicinity.

Yours Sincerely,
Kathleen McHugh Johnston

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File CC 84-022

Seattle City Council

RECEIVED
MAR 11 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

March 8, 1985

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Nancy J. Philips
4635 - 41st NE
Seattle, WA 98105

Dear Ms. Philips:

Thank you for expressing your views on the proposed construction of a helicopter landing pad at Children's Orthopedic Hospital.

I have read your letter and will take your views under advisement. The Council's Land Use Committee will be meeting sometime in 1985 to consider this permit request. I have forwarded your letter to the Department of Construction and Land Use, along with my acknowledgement that I have personally reviewed it, according to the dictates of the Appearance of Fairness Doctrine. It will now become part of the official record on file.

Sincerely,

Norman B. Rice
President
Seattle City Council

NBR:gm

cc: William Justen, DCLU

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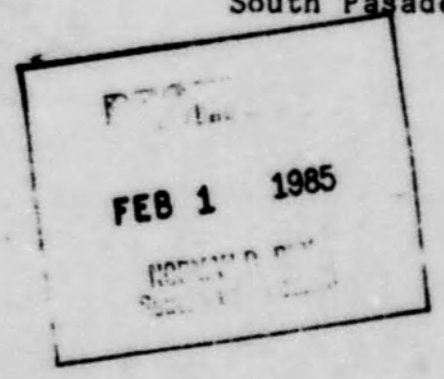
January 29, 1985

1788 Grevelia St.
South Pasadena, CA 91030



Councilman Norm Rice
Seattle City Council
600 - 4th Avenue
Seattle, WA 98104

Dear Mr. Rice:

I love children.

For 20 years I taught 4 & 5 yr. olds in Sunday School.

When I retire to my condo in Seattle in two years I intend to volunteer at the Children's Orthopedic Hospital.

I am in favor of doing things to promote the wellbeing of our children.

I am not in favor of building a helipad at COH because:

1. There is already a helipad in the U of W intramural field just three minutes from COH.

2. I think the millions of dollars it will cost to build and operate the helicopter service to decrease the children's arrival time by just a couple of minutes could be put to much better use doing other things for the children.

3. It is not fair to submit us homeowners and residents to the disruption and dangers of helicopters flying overhead in our retirement years when the children already have their helipad 3 minutes away.

Before making your decision, will you please pray and ask God what His will is in this matter.

With prayers that your
hearts will help you
make the right decision,

Nancy J. Philips

Nancy J. Philips
Homeowner
4635 - 41st N.E.
Seattle, WA 98105

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March 11, 1985
F/c CC84-022

Dear Ann Ormsby,

I'm writing to protest the proposed helipad at Children's Orthopedic Hospital.

Reason #1 - it is not needed. The present facility at the UW soccer field works just fine. I know: I work at the University Hospital in Neonatal Intensive Care. We share admissions with COH & receive them the same way, from the same landing spot, & we are the same distance from it as COH. There are no problems with the ambulance part of the transport. The real problem is with the helicopter flight itself - the noise prevents the doctor from being able to monitor the child's heart rate & breath sounds. Both are crucial to the child's safety, though I realize that's not pertinent to the issue here.

Reason #2 - COH proposes to have its helipad in an area where there is considerable pedestrian & vehicular traffic on all sides. I simply can't believe it would be safe. Add to that the fact that helicopters crash far more frequently than other aircraft (look how often Ch. 7's alone has crashed) - & to allow them to fly frequently over a heavily populated area is not sensible, to my way of thinking. I understand the COH environmental impact statement says that the copters would not be panicking wild animals or some such thing - are the large numbers of pets residing here any less sensitive?

Reason #3 - directly below COH is a large condo

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complex. They are old converted apartments & far from soundproof. They are mainly populated by middle aged & elderly people. Many of them are former Laurelhurst residents who have become widowed, or who can no longer keep up a big house but who want to be near old friends & neighbors. Older people find it quite difficult to get back to sleep after being wakened in the night. I can only imagine that having helicopters coming & going would make life miserable for those residents. I doubt that many could relocate for comparable prices & it seems unfair that they might be forced to do so.

COH asked to insert itself into this neighborhood, promising to keep a low profile, & the neighborhood generously consented. The low profile has been discarded. The real reason they want the helipad is because, after a too-ambitious expansion, they have empty beds & need to generate revenues. Publicity helps - have you heard the commercial that begins "A helicopter hovers over Valley General Medical Center, bearing a critically injured man"? Very effective. Hospitals are not benevolent institutions no matter what they say - they are big businesses & the competition for bucks is fierce.

Probably this protest is useless & they will get their helipad through. But after a day of dealing with the stresses of intensive care, with critically or chronically ill babies, with their deaths & their families who are hurting so badly, I want to retreat to my home & restore myself with peace & quiet. I think everyone deserves that chance.

Sincerely,
Mary L. Vaneck
3524 W. Laurelhurst Drive N.E.

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Seattle City Council

Norman B. Rice
President of the City Council
625-2436

George E. Benson
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Committee
625-2445

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Paul Kraabel
Chair
Urban Redevelopment
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Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

March 19, 1985

RECEIVED
MAR 21 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Gjertrud J. Siqueland
4702 41st Avenue N. E.
Seattle, Washington 98105

Dear Mrs. Siqueland:

Thank you for your letter in opposition to the proposed helipad at Children's Orthopedic Hospital (COH).

The City Council will be involved in the decision on COH's application for a helipad. When considering specific land use issues, the City Council sits as a quasi-judicial body. The Councilmembers must be very careful to maintain an appearance of fairness to all parties. Our review of the issue must be limited to the official record and testimony received at open, public meetings. For this reason, I am not able to discuss the merits of this helipad application with you.

The City's Department of Construction and Land Use (DCLU) is currently conducting an environmental review of the helipad application. The Department is waiting for additional information on the use of the helipad. It is possible the Director of DCLU will make a Threshold Determination within the month. The Director may decide the proposed project could have such a significant impact on the environment to warrant the preparation of an Environmental Impact Statement (EIS). If the Director feels the project will not have a significant impact, he may determine an EIS is not necessary. The Director's decision may be appealed to the City's Hearing Examiner.

A copy of your letter has been forwarded to William Justen, Director of DCLU, to insure it is included in the record and available for his consideration. I will also request that you be notified of any public hearings on the helipad application submitted by Children's Orthopedic Hospital.

An equal employment opportunity—affirmative action employer

#I
CC84-022

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Thank you again for taking the time to write.

Sincerely,

Jeanette Williams

Jeanette Williams
Seattle City Council

JW:lm
cc: William Justen, Director
Department of Construction and Land Use

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JAN 3 1 1985

January 29, 1985

William J. Justen, Director
Dept. of Construction and Land Use
600 4th Avenue
Seattle, WA 98104

Dear Mr. Justen:

I am against the building of the heliport on the grounds of The Children's Orthopedic Hospital as it would be a noisy intrusion of my privacy and disturbing to me constantly with its 15 minimal and unknown and limitless maximal flights a month.

I live below the hill which the hospital built up to make the entrance to the new hospital. I have experienced the noise and glare and turmoil that is involved with a helicopter flight and landing and want none of it.

A carefully prepared impact statement of the facts from all points of view should be prepared and it will show that old people are human beings too and need to be protected as well as babies. There are six neighbors door to door all between 84 to 90 years of age who are concerned. I am 89 years old.

Sincerely,

Gjertrud J. Siqueland

Gjertrud J. Siqueland

cc: Councilmembers

Mrs. Robert (Peggy) Habegger
Pres., Board of Trustees of
The Children's Orthopedic Hospital

Mrs. Sverre Siqueland
4702 41st Avenue NE
Seattle, Wash. 98105

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January 29, 1985

1788 Grevelia St.
South Pasadena, CA 91030

JAN 2 1 1985

Councilwoman Jeanette Williams
Seattle City Council
600 - 4th Avenue
Seattle, WA 98104

Dear Ms. Williams:

I love children.

For 20 years I taught 4 & 5 yr. olds in Sunday School

When I retire to my condo in Seattle in two years I intend to volunteer at the Children's Orthopedic Hospital.

I am in favor of doing things to promote the wellbeing of our children.

I am not in favor of building a helipad at COH because:

1. There is already a helipad in the U of W intramural field just three minutes from COH.

2. I think the millions of dollars it will cost to build and operate the helicopter service to decrease the children's arrival time by just a couple of minutes could be put to much better use doing other things for the children.

3. It is not fair to submit us homeowners and residents to the disruption and dangers of helicopters flying overhead in our retirement years when the children already have their helipad 3 minutes away.

Before making your decision, will you please pray and ask God what His will is in this matter.

With prayers that your
hearts will help you
make the right decision,

Nancy J. Philips

Nancy J. Philips
Homeowner
4635 - 41st N.E.
Seattle, WA 98105

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3335 W. Laurelhurst Dr. N.E.
Seattle, 98105

January 24, 1985

JAN 30 1985

Mr. William Justen
Department of Construction and Land Use
600 - 4th Avenue
Seattle, Washington 98104

Dear Mr. Justen: Re: COH Helipad

We, as members of the Marian Blethen Mesdag Orthopedic Guild, wish to communicate to you our continued opposition to the construction of a helipad at Children's Orthopedic Hospital, Seattle, Washington. In the Spring of 1983 we wrote objecting to the Institutional Zoning Ordinance as the helipad was in the Hospital administration's plans at that time.

All of our members live in communities immediate to or adjoining the hospital, and we have lived there for many years. The group has given thousands of hours of volunteer service and thousands of dollars over the past twenty-plus years in support of good medicine.

The decision to oppose the helipad construction has not been made casually. We have studied information for and against the project. We urge the DCLU to require an EIS on this project. An EIS is a necessity, not a choice. Our information indicates there are plans in the immediate future for COH to develope a Trauma Center. These and many other factors lead us to write and express our strong opposition to the construction of a helipad at COH.

Sincerely,

CC: Mayor Charles Royer
Members of the Seattle City Council

Shirley McQuell 2930 NE Bryon 98105
Helen A. Senseney 3335 W. Laurelhurst Dr N.E. 98105
Beverly Lycette 88 Virginia 98101
Gloria M. Hennings 4314 54th NE. 98105
Patricia O. Wright 3925 48th Ave NE 98105
Betty Ann Christman 4350 54th ave. N.E. 98105
Martha F Kane 3386 46th N.E. 98105
Pauline J. Westlund 5150 NE Latimer Pl. Seattle 98105
Elizabeth W. Wood 3863-42nd N.E. Seattle 98105
Eileen Fellows [illegible] Seattle 98115

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Mrs. Elaine Ebbesmeyer 3355 Ea. Arm Hurst Dr. NE.
Mrs John Comer 5115 NE45
Dorothy Elvern 4326 NE 41ST
Ruth L. Martin 4303 NE 35th
Lavina Carson 3854 42 NE
Jane M. Miller 3500 46th Ave NE
Peggy Hill Demarest 3323 43rd N.E.
Peter E. Hill 4700 N.E. 46th

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

The Siqueland Partnership
Attorneys at Law
1200 Westlake Avenue N., Suite 801
Seattle, Washington 98109
Telephone (206) 283-6069
Telex 32-0266

Partners
J. Byron Holcomb
Peter LeSourd
Herman S. Siqueland

FEB 14 1985

February 13, 1985

Mr. William J. Justen, Director
Department of Construction & Land Use
600 4th Avenue
Seattle, WA 98104

Re: Children's Orthopedic Hospital Helicopter Pad Application dated November 13, 1984

Dear Mr. Justen:

I am writing this letter both to express my opposition to the Children's Orthopedic Hospital's November 13, 1984 application for operation of a helicopter pad on the hospital grounds, and also to express the reasons for my opposition.

I am not a resident of Laurelhurst, nor even of Seattle, yet I have a real and vital interest in opposing the hospital's helicopter pad application. Quite simply, that interest is the continued health and well being of my 89 year old mother who is a resident of the Laurelon Terrace Condominiums, and would be one of the nearest residents to the proposed helicopter pad. There are at least six other residents of Laurelon who are in their late eighties and early nineties, and who would likewise be adversely affected by the proposed helicopter operations.

The available information indicates that operation of the pad on the hospital ground would add very little benefit to children in emergency situations over the present operation from the pad on the University of Washington playfields. The possibility of that slight additional benefit must be balanced against the clearly detrimental affect which operation of a hospital ground pad would have on the health and comfort of my mother and the other nearby residents of Laurelon who are of a similar age.

As a result of my past military service, I am familiar with the noise levels generated by helicopter pad operations. I also experienced, approximately 15 years ago, the noise level generated by a commuter helicopter operation which was operated, on a trial basis, on the roof of a downtown Seattle office building. The noise during landing and takeoff operations totally disturbed work in all offices in the surrounding buildings within an area

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of several blocks, and my recollection is that the helicopter service was discontinued because of that severe noise interference.

In the case of the Children's Orthopedic Hospital's proposed pad, the noise level would be especially detrimental to the health and well being of the nearby residents in the eighty and ninety year old bracket.

I can understand why direct operation of the helicopters to the hospital would result in a cost savings over the present operation, as the ambulance service from the university playfield to the hospital would be eliminated. If that cost savings is a motivating factor in the hospital's pending application, then I am especially critical of the hospital having submitted that application. I am not interested in the hospital saving money at the expense of my mother's health and well being, nor at the expense of the other elderly residents near the proposed pad. I would appreciate your department inquiring into the significance to the hospital of possible cost savings as a motivating factor in their present application. Assuming it is not such a factor, then the objections stated above are nevertheless applicable and the application should be denied.

Very truly yours

H S Siqueland

Herman S. Siqueland

HSS/ms

cc: Councilmembers

Mrs. Robert (Peggy) Habegger
Pres., Board of Trustees of
The Children's Orthopedic Hospital

Mayor Charles Royer

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Seattle City Council

January 11, 1985

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Dr. Marci Catanzaro, President
Laurelcrest Residential Park
4801 Terrace Drive NE
Seattle, WA 98105

Dear Dr. Catanzaro:

Thank you for expressing your views on the proposed construction of a helicopter landing pad at Children's Orthopedic Hospital.

I have read your letter and will take your views under advisement. The Council's Land Use Committee will be meeting sometime in 1985 to consider this permit request. I have forwarded your letter to the Department of Construction and Land Use, along with my acknowledgement that I have personally reviewed it, according to the dictates of the Appearness of Fairness Doctrine. It will now become part of the official record on file.

Sincerely,

Norman B. Rice
President
Seattle City Council

NBR:gm

cc: William Justen, DCLU

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Laurelcrest Residential Park
4801 Terrace Drive Northeast
Seattle, Washington 98105

RECEIVED
JAN 9 1985
NORMAN B. RICE
Seattle City Council

January 7, 1985

Norm Rice
Seattle City Council
600 Fourth Avenue
Seattle, WA 98104

Dear Councilman Rice:

As president the Board of Trustees for the Laurel Crest Residential Park, I am writing in opposition to the proposed Helipad at Childrens' Orthopedic Hospital. I represent the 82 home owners and residents of this condominium.

To our knowledge, Childrens' Orthopedic Hospital and Medical Center has not documented a need for a helipad. Dr. Michael Copass, Director of Northwest Airlift, has stated publicly that the present plan of landing the helicopter in the intramural field has created no problems. Concerns have been raised about the need to transport premature infants to the hospital in terms that make one wonder if the planned Helipad will be located in the neonatal intensive care unit. If the pad is located outside the building, the infants will still need to be transported into the building and to the special care unit. The neonatal intensive care unit is not located in the emergency department but in another area of the hospital. To my knowledge we have no data, only hearsay, that a helipad at the hospital would benefit any critically ill child.

There are environmental concerns related to noise and safety in the surrounding residential area. I believe that these have repeatedly been brought to your attention. We certainly share these concerns.

In this time of increasing social consciousness about rising costs of health care and local and federal efforts to contain these costs, the construction of new helipad raises many concerns. The American Medical Association News (21 Sept 1984) pointed out that the cost of operating a helicopter ambulance is upward of one million dollars per year. How can Childrens' Orthopedic Hospital and Medical Center justify such an ongoing expense, particularly in view of the fact that helicopter ambulance service is currently

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available. How will these costs compare with the current system? How will additional costs be covered? I am certain that many of the parents of children at the hospital could suggest many ways of spending the additional money to benefit more children.

If the statistics presented by the Hospital spokespersons are correct, the anticipated 15 landings per month will not result in a cost effective operation. Increasing those landings for sake of using fancy technology and making the operation "cost effective" when something less expensive would accomplish the same goal (safe, timely transport of critically ill children) is not justified. The cost of air lifting one patient to a hospital is in the thousands of dollars. How will this additional cost be managed?

Your role in approving the construction of a helipad is related to land use. I would hope, however, as an elected city official, you would be concerned with cost effective medical care in our community. I would appreciate your advice on who may be in a better position to be certain that cost issues are addressed before permission is granted for Childrens' Orthopedic Hospital and Medical Center to construct a helipad.

Sincerely,

Marci Catanzaro

(Dr.) Marci Catanzaro
President
Laurelcrest Residential Park

MC:eg

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Seattle City Council

January 11, 1985

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President of the City Council
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Human Services Committee
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Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Elizabeth L. Morrison
3643 - 42nd NE Avenue
Seattle, WA 98105

Dear Ms. Morrison:

Thank you for expressing your views on the proposed construction of a helicopter landing pad at Children's Orthopedic Hospital.

I have read your letter and will take your views under advisement. The Council's Land Use Committee will be meeting sometime in 1985 to consider this permit request. I have forwarded your letter to the Department of Construction and Land Use, along with my acknowledgement that I have personally reviewed it, according to the dictates of the Appearness of Fairness Doctrine. It will now become part of the official record on file.

Sincerely,

Norman B. Rice
President
Seattle City Council

NBR:gm

cc: William Justen, DCLU

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RE
DEC 10 1984
NF
Sea

December 3, 1984

Councilmember Norm Rice
Seattle City Council
600 4th Avenue
Seattle, Washington 98104

Dear Councilmember Rice,

Please add the following letter to the comments you have received reccommending further study, analysis, and consideration of alternate options for the Helipad requested by Children's Orthopedic Hospital. Since COH is such a vital and commendable institution in our community I want to acknowledge my respect for the services they deliver, but I am also anxious to urge you as a councilmember to remember that any strong, viable community is the result of more than one institution. To you goes the unenviable task of keeping a harmonious balance between all the elements that make Seattle the desirous community it is at present, and I plead with you to keep that balance in mind as you consider this request from COH.

When you make your decision on this helipad, I ask for analysis of its impact in four different categories: will this facility significantly improve the life-saving emergency care over the current procedure; will its influence on the surrounding residential neighborhood be acceptable; will the logistics, safety, and coordination of several helipads within one and a half miles of one another (one projected at the University Hospital and one at Sandpoint) be in conflict with the city's published desire to limit congestion in the University/Northend areas, as well as the desire to promote balanced growth in other parts of the city; and will the installation of a helipad at COH further concentrate care at that hospital to the exclusion and detriment of other hospitals whose facillities would be that much less than COH and less capable of attracting research monies and staff?

As an amateur in all these categories, I can do nothing more than speculate that the answers will corroborate the feeling I have that the request for the helipad is more a luxury than a necessity. No doubt each of us would like all the latest conveniences at our doorsteps, but would forego those for which the pricetag comes in irreversible, environmental damage. The challenge that tests all of us is striking the "quality of life" balance that will preserve our community.

Sincerely,
Elizabeth L. Morrison
3643 42nd N.E. Ave.
Seattle, Washington 98105

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Seattle City Council

January 11, 1985

Norman B. Rice
President of the City Council
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Housing, Recreation &
Human Services Committee
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Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Ramy Hardwick
4714 - 44th Avenue NE
Seattle, WA 98105

Dear Ms. Hardwick:

Thank you for expressing your views on the proposed construction of a helicopter landing pad at Children's Orthopedic Hospital.

I have read your letter and will take your views under advisement. The Council's Land Use Committee will be meeting sometime in 1985 to consider this permit request. I have forwarded your letter to the Department of Construction and Land Use, along with my acknowledgement that I have personally reviewed it, according to the dictates of the Appearness of Fairness Doctrine. It will now become part of the official record on file.

Sincerely,

Norman B. Rice
President
Seattle City Council

NBR:gm

cc: William Justen, DCLU

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Held w/ Helipad Ltr

4714 - 44th Avenue NE
Seattle, Washington 98105
December 3, 1984

Councilmember Norm Rice
Seattle City Council
600 - 4th Avenue
Seattle, Washington 98104

RECEIVED
DEC 6 1984
NORMAN B. RICE
Seattle City Council

Dear Mr. Rice:

I am writing to let you know of my opposition to the proposed helipad at the Children's Orthopedic Hospital. I can't believe the administration of this hospital is asking our community to be subjected to such an unjust ordeal.

I feel there are other sternatives that are satisfactory. There are homes not more than 200 feet from the proposed landing site to the east, and a large group of condominiums one block west. These condominiums are occupied by a majority of senior citizens. I have enclosed a copy of a booklet published by the Environmental Protection Agency which states the health hazard noise can be to the elderly.

I have seen all of COH's slides of these tiny infants and have heard their same, rehearsed speeches. I find this an insult. As if one of our community would not want those children to live. I myself have suffered the loss of my seven day old daughter. To say I am not sympathetic and understanding of these babies and their families is ridiculous. But, because of money and politics this hospital is determined to disrupt our lives, destroy the character of our neighborhood, inflict possible health hazards to the elderly, and cause unknown havoc to the residents of Laurelhurst. Children's made a promise in the 1940's to be a small cottage hospital, with lots of lawn and flowering cherry trees. They have continuously lied to the community of their intentions of growth and will continue to do so.

I can only hope that you will see your way clear to deny them the helipad. I can't believe COH is asking this of the community. There are viable options that they refuse to even consider. I also find it interesting the Mr. Katz, Dr. Coppas, and the other proponents of the helipad are neatly tucked away as residents of Mercer Island and the like.

Please read the enclosed literature. It contains only a small portion of the booklet put out by the EPA. I did not include the portions of the booklet detailing the effects noise has on the unborn, learning in young children, and the effects disrupted sleep has on the physical and emotional well being of all age groups. This helipad is definately not meant for a neighborhood surrounded by homes, filled with aged, sick, young, and so varied residents.

Sincerely,

Ramy Hardwick
527-1610

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Seattle City Council

January 11, 1985

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Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Patricia Ann Wood
4036 NE 45th Street
Seattle, WA 98105

Dear Ms. Wood:

Thank you for expressing your views on the proposed construction of a helicopter landing pad at Children's Orthopedic Hospital.

I have read your letter and will take your views under advisement. The Council's Land Use Committee will be meeting sometime in 1985 to consider this permit request. I have forwarded your letter to the Department of Construction and Land Use, along with my acknowledgement that I have personally reviewed it, according to the dictates of the Appearness of Fairness Doctrine. It will now become part of the official record on file.

Sincerely,

Norman B. Rice
President
Seattle City Council

NBR:gm

cc: William Justen, DCLU

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RECEIVED
NOV 2 0 1984
NORMAN B. RICE
Seattle City Council

4036 N.E. 45th Street
Seattle, Washington 98105
November 18, 1984

Mrs. Robert J. (Peggy) Habegger
President, Board of Trustees
Children's Orthopedic Hospital
4530 32nd. N.E.
Seattle, Washington 98105

Dear Mrs. Habegger,

I am writing to you about a deep concern I share with many other COH neighbors---the apparent decision of Children's Orthopedic Hospital to install a helipad.

As a resident of Laurelon Terrace since 1955, as a present condominium owner, the immediate past-president of the Laurelon Terrace Homeowner's Board of Directors, and as an individual, I have been aware of the history, mission and growth of the hospital since it moved into our area. During some of the heavy construction phases, which had significant impact on our lives, I felt that the hospital tried to be a good neighbor, to keep us informed of plans and developments. As recently as the June '84 meeting to inform the community of the latest expansion plans (which recently, I hear, have been at least temporarily abandoned) I was impressed with your personal interest in complaints of noise on the walkway just to the west of the hospital. I felt that you were responsive to reasonable requests.

At the same meeting, however, I asked publicly for Mr. Truman Katz to tell us what further plans they had for a helipad which we had first heard mentioned several years ago. Mr. Katz stated at that public meeting that they had no plans for a helipad at the moment. Such answers to direct questions in June----and the imminence of a helipad in mid-November-does not build cred bility. I feel betrayed!

If you have looked at the map showing the plans for the helipad, you will note that Laurelon Terrace---three blocks and 136 residences---will be the most severely impacted by both approach and return of helicopters whose noise level is only 3 decibels below that of a Huey.

We feel that 15 trips (which will be 30 'single' trips) a month---in the beginning----is totally unacceptable. Once the helipad is in place it will undoubtedly be used for emergency and non-emergency alike. Those of us who live in the area will pay for it in noise pollution, lack of safety, lowering of property values, erosion of our living climate. This is a residential area---it was a totally residential area when Children's Orthopedic elected to relocate here.

I have worked at the University of Washington for 35 years, both in medical research and, most recently, as a supervisor in the clinical laboratory. I do not believe that COH has proven the need for this helipad. At present, truly emergency flights can(and do) land in the University of Washington playfield at "5 Corners". The patient can be transported from helicopter to emergency entrance in less than 5 minutes. (I have seen this happen!) I do not believe the patient would be transferred from helicopter to emergency room from the helipad significantly faster.

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It is hard to address this subject because we not only love children, we're proud of the total facility and the wonderful care that COH provides. We want to be good neighbors. But we think the hospital should seriously consider the impact this request will have on all its neighbors and ask themselves "Is it worth the trip?"

I am well aware of the turmoil currently going on in medical centers in response to DRG's, the Deficit Reduction Act of 1984 and the real struggle of hospitals to survive as we know them. I attended a meeting in September in Nashville with 800 other clinical laboratory directors and I know there are tough times ahead that call for creative strategies. But a helipad should not be used as a marketing tool.

To summarize:

1. COH chose to relocate in a residential area. They should abide with compatible use of our common space.
2. COH's neighbors have been very supportive of the hospital and its mission.
3. We are concerned about the number of trips, the noise pollution, the hazards and the undoubted proliferation of use.
4. Who is going to assume responsibility and reimbursement for property damage? (They do crash!)
5. Who will compensate Laurelon Terrace and other close neighbors for diminished property value? You should be aware that Laurelon has many owners who are not affluent, who would be seriously affected if they lost their investment. Many have worked all their lives to acquire their modest home and do not have the luxury to walk away and relocate.
6. We do not feel that the hospital has proven that a helipad is necessary to survival of any type of patient.
7. There will be a helipad at the University Hospital on its new building which will be finished next spring. We don't need helipads a mile apart.
8. COH has access to a "helipad" within 5 minutes of its door.

I invite your comments on my concerns and would be happy to discuss any of these points with you in depth. Laurelon is my home, which I have worked for many years to secure. I don't want to see its peaceful, liveable climate vanish through unnecessary "progress".

Sincerely

Patricia Ann Wood

Patricia Ann Wood
Home phone 524-272
Work phone 545-006

cc: William Justen, Director
Department of Construction and Land Use

Jeannette Williams
George Benson
Michael Hildt
Paul Kraabel
Virginia Galle
Norm Rice
Jim Street
Delores Sibonga
Sam Smith

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Seattle City Council

January 11, 1985

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625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Mrs. Maryann E. Spangler
4013 NE 46th Street
Seattle, WA 98105

Dear Mrs. Spangler:

Thank you for expressing your views on the proposed construction of a helicopter landing pad at Children's Orthopedic Hospital.

I have read your letter and will take your views under advisement. The Council's Land Use Committee will be meeting sometime in 1985 to consider this permit request. I have forwarded your letter to the Department of Construction and Land Use, along with my acknowledgement that I have personally reviewed it, according to the dictates of the Appearness of Fairness Doctrine. It will now become part of the official record on file.

Sincerely,

Norman B. Rice
President
Seattle City Council

NBR:gm

cc: William Justen, DCLU

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November 15, 1984

To: Norm Rice, Council Member

From: Maryann E. Spangler

Re: Proposed plan for helipad at Children's Orthopedic Hospital

---

1. Attached is copy of my letter to the president of the Board of Trustees COH.

2. Please read and consider it carefully.

3. I appeal to you as my elected representative to use the power of your office to stop this further institutional encroachment in our neighborhood.

4. Please file an injunction--or whatever other legal recourse you have available--to halt proceedings of this ill-conceived plan immediately.

5. Thank you.

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

524-4151

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Chair
City Operations Committee
625-2453

Mr. and Mrs. Dorman
3305 - 43rd NE
Seattle, WA 98105

Dear Mr. and Mrs. Dorman:

Thank you for expressing your views on the proposed construction of a helicopter landing pad at Children's Orthopedic Hospital.

I have read your letter and will take your views under advisement. The Council's Land Use Committee will be meeting sometime in 1985 to consider this permit request. I have forwarded your letter to the Department of Construction and Land Use, along with my acknowledgement that I have personally reviewed it, according to the dictates of the Appearness of Fairness Doctrine. It will now become part of the official record on file.

Sincerely,

Norman B. Rice
President
Seattle City Council

NBR:gm

cc: William Justen, DCLU

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January 11, 1985

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Dr. and Mrs. Wayne J. Timberlake
3335 - 43rd NE
Seattle, WA 98105

Dear Dr. and Mrs. Timberlake:

Thank you for expressing your views on the proposed construction of a helicopter landing pad at Children's Orthopedic Hospital.

I have read your letter and will take your views under advisement. The Council's Land Use Committee will be meeting sometime in 1985 to consider this permit request. I have forwarded your letter to the Department of Construction and Land Use, along with my acknowledgement that I have personally reviewed it, according to the dictates of the Appearness of Fairness Doctrine. It will now become part of the official record on file.

Sincerely,

Norman B. Rice
President
Seattle City Council

NBR:gm

cc: William Justen, DCLU

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Please do not allow Children's Orthopedic Hospital to build a helicopter landing pad near their entrance. The existing site, 3 minutes away, is adequate! COH already has impacted Laurelhurst greatly. But the noise & potential danger of helicopters is too much! We ask to you to share our neighborhood & community concerns & to vote against the landing pad. Thank you,

Mrs. Wayne J. Timberlake

(Christy M

Dr. & Mrs. Wayne J. Timberlake
3335-43 N. E.
Seattle, WA 98105

11-24-84

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4338 N. E. 44th
Seattle, 98105
Jan. 21, 1985

Mr. Wm. Justen, Dir.,
Dept. of Construction + Land Use,
600 - 4th Ave.,
Seattle, 98104

Dear Mr. Justen,

I have been a COH neigabour for 16 years, & I understand that it is considering a helipad to be installed on the hospital grounds.

A project such as this must be preceded by an EIS. I have good reason to believe that no such study has been made.

In view of the fact that the quality of life in this neigabourhood will be greatly jeopardized by a helipad, with respect to safety, noise + air pollution, I feel very strongly that an EIS must be made before COH can be allowed to consider such a project.

I offer this to your most serious consideration.

Sincerely yours,

Linda Giddens

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RECEIVED
JAN 24 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

4656 - 41st Ave. N.E.
Seattle, Wa 98105

Jan. 23, 1985

Dept. of Construction & Land Use
Room 400
Municipal Building
600 4th Ave.
Seattle Wa 98104

Re: Application No. CC 84-022

Gentlemen:

I would like to be on record as opposing the proposed helipad at Childrens Orthopedic Hospital.

I live in a condominium complex just below the hospital and feel the construction is not only unnecessary but also dangerous. The hospital has an adequate helicopter landing strip only a few blocks from the hospital.

The residents of this area should be given some consideration.

Thank you,
Lucille A. Conrad

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COPY

F/n CC84-02

January 22. 1985

RECEIVED
JAN 23 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mayor Charles Royer
600 4th Avenue - Floor 12
Seattle, WA. 98104

Dear Mayor Royer:

After years of support for and cooperation with Children's Orthopedic Hospital (COH), after months of anguished thought, and after weeks of research, the residents of Seattle--especially those who live within a few feet of the proposed site and whose lives will feel the impact--have reached the decision that a helipad ought not be built at COH. The following facts are basic to this decision:

1. A helipad is extremely unwise and unsafe in a densely populated residential area -- made up of condominiums, apartments, senior citizen housing, elementary school, and single family residences. No one can guarantee against helicopter malfunction and crash. Proposed location allows for no margin of error. For the residents living in the 136 units of Laurelon Terrace Condominiums--including a high percentage of senior citizens--the helicopter quite literally would be landing on their roof top or in their yard. Are they considered to be expendable? Will COH pay for loss of life and property in case of crash? Who will really pay?

2. The two-engine helicopter sought by COH would be noisy. It would produce negative environmental impact. The noise would be in addition to ambulance and truck traffic already endured. Emergencies can occur anytime during day or night. The noise would be disturbing at any hour to COH patients and personnel as well as to neighbors . Would you want this in your neighborhood -- day and night?

3. Alternative landing sites are available and workable. The proponents have conceded that the present landings in the UW soccer field (3 minutes from COH by ambulance) have been safe, satisfactory and no problem. Another site is available at Sand Point Naval Station (6 minutes away). A helipad at University Hospital (5 minutes from COH) will be ready for use by Spring, 1985.

4. Does every hospital in Seattle need a helipad? Why this sudden proliferation--helicopters have been available for decades. Has it become a status symbol to have a helipad? Has a helipad become a marketing tool of the medical profession/hospital administration? Do you know that hospitals in other cities USA have stopped their helicopter service because of the high risk safety and expense factors measured against negligible benefits observed for patients. Millions of dollars are being spent on each--aircraft, landing pad, maintenance of both, pilot salary and insurance. This is horrendous and excessive duplicationof expenditures. This causes costs at hospitals to rise and rise and rise!

5. The reasons given by COH for justification of helicopter service sound good--to a point--and are emotionally charged. However, one crucial point has been overlooked and/or omitted: COH located by choice in a densely populated residential neighborhood. The projected total of 30-40 flights a month (15-20 in and 15-20 out) would be detrimental and dangerous to the residents who live within a few feet from the landing pad. Since COH chose to live in this location, it has a responsibility for the safety and well-being of these residents. IF COH wishes to continue in its present location,

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we believe it must abide by the rules for a quiet and safe residential neighborhood.

Is this additional institutional encroachment in a densely populated residential neighborhood right? Is endangerment of life, property, and environment right? Is duplication of excessive expenditures right? Is it right and is it fair that the rights of the residents living next door to COH are abridged and ignored? The opponents of the helipad are concerned.

This is a city-wide concern which demands our attention. Study of how many helicopters are needed in our city, and closeness of location of helicopter service/helipads (e.g., University Hospital and COH) demands high priority planning.

In the meantime, PLEASE:

1. Visit site at Laurelon Terrace Condominiums.
2. Formulate a public statement policy for quality of life and community values for the City of Seattle.
3. Act now to prevent tragedy from helicopter accidents before they occur.
4. Stop building plans for a helipad at COH.

THANK YOU.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

524-4151

cc: Members - City Council
Dept. Construction & Land Use

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RITA · PARAGAS

File
cc 84-022

22 January 85

RECEIVED
JAN 23 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. Duston,

This letter is written with the intent to let you know that our family is <u>strictly</u> opposed to the helipad at COH.

We are already in the early morning flight path of jets which sound as if they will go through our roof. We are also in the flight path of the small aircraft by Union Bay. We are in the path of numerous helicopters reporting traffic not to mention the ones used to bring emergencies to the soccer field at UW.

I feel if you allow unrestricted helicopter use at COH, you will undermine the fragile tranquility of an area already bounded by traffic, boats and planes.

Sincerely,
Rita P.G. Paragas
3367 46th Ave NE
Seattle 98105

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Seattle
Jan. 23

RECEIVED
JAN 24 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Sir:
This is to let you know that I am
my family object strenuously to the
building of a Helicopter Pad for the
Hospital, in Laurelhurst.
We has been free for a long time -
by all means let us have things the way
they are - for a while

Sincerely,
Hilde Hansen.

4101 - 55th NE. 98105

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January 22, 1985,
4720 47th Ave. N.E.,
Seattle, 98105

RECEIVED
JAN 24 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Department of Construction and Land Use,
Seattle Municipal Building,
Seattle, WA 98104

Gentlemen and Ladies,

I wish to express my unrelenting opposition to the application before your department by the Children's Orthopedic Hospital to build a helicopter pad. Ref: CC84-022.

In transferring its operations from its site on Queen Anne Hill to the Laurelhurst area years ago, the hospital's management faithfully assured the Laurelhurst residents that the hospital would remain a "cottage" hospital. Look at it now! It is an enormous establishment far in excess of any impression of a "cottage" hospital. To the huge building, enlarged several times, has been added a big concrete garage, all of which dominate a quiet residential area, and would endanger the community further with frequent helicopter service, which can only grow in volume as time goes by.

It is chic now for a hospital to have its own helicopter service, whether it needs it or not. Still, once the hospital has it, the pressure will be strong from every medical side to use it, regardless of the effect of the noisy helicopter on the residential community.

When Mayor Royer campaigned for office as mayor, his concern was for the maintenance of neighborhoods as places where residents might enjoy life. Believe me, enticing helicopters into this community violates the mayor's promise!

I have lived in my house at this address more than 31 years, and have lived in other houses in this neighborhood with an exception or two since 1947. I do therefore take strenuous exception to anyone or anything that tries to deteriorate my enjoyment of my home, as I am positive this intrusion by helicopters would do.

A number of years ago I was one of a group from the northeast area of the city -- I believe the mayor was one of this group -- that fought the installation of a civilian airport on the site of the present Warren Magnuson Park when the Navy gave up its airfield there. The basic reason we fought that civilian use was because of the enormous amount of airplane noise that we expected from it. The COH's helicopter would be closer and might be a lot noisier, especially at night.

If it keeps on this way, that hospital will render this area unliveable. But why should its directors care? They don't live here.

Most sincerely yours,
Richard S. Moody
Richard S. Moody

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Lucille H. Rowley
5040 - 44th Avenue N. E., Seattle, Washington 98105

January 23, 1985

Dept. of Construction
and Land Use
City of Seattle
Room 400
Municipal Bldg.
Seattle, Wa. 98104

RECEIVED
JAN 24 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Gentlemen -

I wish to go on record as opposing Application #C84-0xx, Construction of a heliopad at the Children's Orthopedic Hospital.

Sincerely,

Lucille H. Rowley

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January 28, 1985

RECEIVED
JAN 30 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justin, Director
Department of Construction & Land Use
600 - Fourth Avenue
Seattle, WA 98104

Dear Sir:

As an owner of a condominium in the Laurelon complex directly below the Children's Orthopedic Hospital, I am writing to express my view regarding the proposed helipad on the grounds of COH.

It would be difficult to find anyone in the city of Seattle who is not aware of the wonderful work done by COH in caring for sick children, not only from our city, but also from the entire northwest and Alaska. Because of this, it is extremely difficult to oppose the administration of the hospital; it is tantamount to opposing home and motherhood.

However, I think it is time to consider the people who live in the area around the hospital. The hospital has expanded its facility several times over, and most recently the construction of an enormous parking garage has had a very negative visual impact on the neighborhood. COH's latest proposal, the construction of a helipad on COH grounds, will impact even more negatively on the neighborhood. Helicopter noise is extremely loud, the helicopter will have to come in low to land, and the result will be very unpleasant for people living in the area.

I understand that it has been shown that it takes around two minutes to bring a patient from the present 5-corners (Union Bay) landing place to COH. Does this small amount of time justify inflicting noise and stress on the neighborhood? In addition, many residents are concerned about the safety of such an operation. It cannot be guaranteed.

No one would wish to put a deterant in the way of a child receiving medical treatment, but it would not appear that a helipad on COH grounds would make enough difference in this way to warrant inflicting the stress of noise and a safety hazard on the neighborhood. It is time that the rights and feelings of the residents be considered. It is, after all, a residential neighborhood and a helipad has no place there.

I hope that those who will make this decision will seriously consider the rights and wishes of the community, realizing that it has the best interests of the children at COH at heart. The helipad is <u>not</u> necessary; it is a bad idea.

Sincerely,

Eugenia Neubert

(Mrs. Joseph W. Neubert)

4714-41st Ave. N. E.
Seattle, WA 98105

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DAVID S. BELVIN
4757 - 45th Northeast
Seattle, Washington 98105

1-23-85

TO DCLU
Room 400
Municipal Bldg
Seattle 98104

Ref. application CC 84022

Dear Sirs:

I wish to join the group against the helipad at COH. After reading pro and con statements the past several weeks, I do not feel the facility is cost effective for the service provided above that which now exists. The service proposed becomes a prestige trip rather than medical necessity.

News services have shot photos of similar service at other sites, and that type of helicopter is noisy. The noise is a pollution to the neighborhood.

Thank you
David S Belvin

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HELEN B. BELVIN
4757 - 45th NORTHEAST
SEATTLE, WASHINGTON 98105

1-23-85

To: DCLU
Rm 400
Municipal Bldg.
Seattle Wn 98104

Ref: application CC84022

Dear Sirs,

I strongly oppose a helipad at COH for the following reasons:

1) It is not necessary. The most cost effective would be COH purchase of its own ambulances

2) Noise & disturbance to patients in the hospital and to adjacent elderly housing would be totally unacceptable

3) Environmental impact study has not been done

Sincerely yours,
Helen B. Belvin

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RECEIVED
JAN 30 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Seattle January 25, 1985

Dept of Construction and Land Use
c/o Mr William Justin
600 4th Ave
Seattle, WA 98104

I hereby respectfully request that Childrens Orthopedic Hospital file an Environmental Impact Statement for its planned construction of a helipad. As a home-owner in Laurelhurst, I am deeply disturbed about both the risks and the noise resulting from helicopter landings within a residential area and feel that the small benefits (saving of a couple of minutes over using the University playfield as is presently being done) do not justify the clear disadvantages. I am myself an MD (as is my wife) but can still not accept the "medical expertise" telling about what great advantages would be gained by bringing the helicopters about a mile closer to the hospital than where they can land now.

Yours sincerely,

K E Hellström

Karl Erik Hellström, MD
Professor of Pathology, University of Washington
3925 NE Surber Drive
Seattle, WA 98105

525-9968 (home); 624-4800 (office)

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RECEIVED
JAN 30 1985
DEPT OF CONSTRUCTION &
LAND USE DIVISION

1614- 41ST Ave NE
Seattle Wash 98105
29 January '985

Mr William Justin, Director
Department of Constructions and Land Use
600- 4th Ave
Seattle WA 98104
Dear Mr. Justin,

This letter is to urge you not to grant a Conditional permission to build a Helipad on the hospital grounds.

There are two other suitable landing areas in close proximity to the hospital which have been used without harm to patients and others to be built at the Port of Seattle Both helicopters have been transporting patients from these areas to both safely smoothly, successfully and swiftly. Their skills are constantly being upgraded Helicopters are known to navigate readily.

Recent studies done by the Port of Seattle have proven the noise of an overhead helicopter is very, very stressful That type of stress contributes to a myriad of illnesses, not the least of which is hypertension. That type of stress would deprive many older people living here, peace and tranquility they deserve to enjoy

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To compound the stress of noise would be the stress of fear of a helicopter crash into this densely populated residential area, the prospect of killing many people, including patients and crew, the destruction of property.

Soon Cottage will begin their fund drive to collect this year, $9 million+ to pay for just one part-year. This in addition to the $1 million plus they'll need for this helipad. There must be an end or at least a slowing down of these constant requests to pay for all the sky-rocketing costs each year.

I urge you to deny permission to build a helipad at Cottage because it would be unsafely, it would duplicate an existing facility and would not enhance the safe transport of patients in an appreciable manner.

Sincerely

Anna Hyatt

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FISHMONGER

IMPORTS
EXPORTS
DOMESTIC

DALE E. SHERROW, JR.
[illegible] - 1ST AVENUE SOUTH
P.O. BOX 80181
SEATTLE, WASHINGTON 98108

AREA CODE 206
OFFICE 323-9008
HOME 523-4430

3/12

Hand Delivered

RECEIVED
FEB 11 1985
Dept. of Construction & Land Use

January 23, 1985

William Justen
%DCLU
600 Fourth Ave South
Seattle, Wn. 98104

Dear Mr Justen,

It is with great concern that i am writting about the proposed helipad at Childrens Orthepedic Hospital. There are numerous unanswered questions regarding the environmental impact of bring a commercial aircraft into a residential neighborhood on a daily basis. This issue needs some indepth study.

Therefore I request that you deem this proposal by Childrends Orthepedic Hospital to have "significant impact" to warrent an environmental inpact study.

Please advise me of your decision.

Sincerely,

Dale E Sherrow, Jr.

P.S. My home is located within four blocks of the proposed sight.
4715 47 Ave. NE.

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1-

1/23/85

RECEIVED
JAN 24 1985
DEPT OF CONSTRUCTION AND USE
LAND USE DIVISION

Dear Hermia,

I am writing you this letter to again express concern about C.O.H.'s plans to build a helipad on their property. When I met with you in December at the Dept. of Construction and Land Use you were very helpful in outlining and explaining the process through which C.O.H. must go in order to obtain a permit to build such a facility. At that time I related to you some of my initial concerns about the construction of this proposed helipad. Since that meeting I have written the enclosed letter to the orthopedic guilds of Childrens Hospital which addresses some of those some issues and raises additional questions that as of this date remain unanswered.

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Please take the time to read it so that you will have a better understanding of why so many Seattle citizens are opposed to these plans and are hoping that at the very <u>least</u> the D.C.L.U. will require C.O.E to file an environmental impact statement. Your decision will effect the quality of our lives here in Seattle for many years to come. Please consider the issue carefully.

Thank you again for your time, efforts and cooperation.

Sincerely,

Elizabeth Anderson
4746 45th N.E.
Sea. Wa. 98105
522-2944

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CC 84-92

Ann Ormsby
DCLU - City of Seattle
Municipal Building
Seattle, Washington
98104

Jan. 4th, 1985

RECEIVED
JAN 25 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

As long time residents of the Laurelhurst Community, we would oppose a helipad at Children's Orthopedic Hospital, as well as any furthur expansion such as office towers or more buildings.

When the Hospital first came to the community in the early 1950's, many promises were made by the Board and Administration that they wanted to be more than accommodating to their neighbors who were there first. Such promises as no blocking the view of the neighbors to the east, no entrances on N.E. 45th, all parking on-site, and low or no noise problems that might adversely affect the neighborhood.

As administrators and board members have come and gone, it seems that the main emphasis now is how big can the Hospital be made, and damn the neighborhood.

The community has been ignored, mislead, abused, and frankly lied to regarding the Hospital's plans, and the City of Seattle should support the community's wishes in attempting to avoid furthur deterioration.

The Laurelhurst community has been a great supporter of the Hospital in the past, both in money and donated hours, and its high time that the Hospital administration and board recognize its responsibilities to the community that so graciously welcomed them in originally.

Very truly yours,

Norman and Pauline Heartland
5150 N.E. Latimer Pl.
98105

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Marilyn Smith Layton
4412 - 43rd Avenue Northeast
Seattle, Washington 98105

RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

January 28, 1985

Mr. William Justen
Director, Department of Construction and Land Use
600 Fourth Avenue
Seattle, Washington 98104

Dear Mr. Justen:

Please help! Our neighborhood has a monster living in it. That monster is called Children's Orthopedic Hospital. No one would say the beast is all bad, and many would praise the work it does. I would too in medical terms. The problem is the way, like a nasty parent behind closed doors, it maltreats those closest to it, its neighbors. We have lived from one misrepresentation to the next. Our streets have been turned into hospital parking lots until we fought boldly for other arrangements. Our lives are disturbed by ambulances careening through the night, and our eyes are sore from the sprawling buildings which were in the beginning supposed to be a small neighborly hospital. At night we suffer the fumes of whatever they burn; many times my husband has awakened convinced that something was on fire in our house. The one thing of value which the hospital has not destroyed in its path is a luscious wild blackberry patch beyond its parking lot.

This unreliable association has destroyed the affection and the faith of those close to this hospital whose administration has a record of saying whatever the neighbors want to hear and then of doing whatever the hospital's leaders want to do. Their request for a helipad terrifies us, and this letter is a plea to you to provide us with an environmental impact statement on this dastardly possibility. No one, not even the doctors I've talked to, believe that the helipad already nearby at the University is not sufficiently close. The noise pollution and further insult of a helipad in our neighbor-hood is more than we should have to face.

Will you please help us?

With hope and gratitude for any efforts you can make,

Marilyn S. Layton

Marilyn Smith Layton

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Hermia Ip Copy

Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

January 15, 1985

Re: Children's Orthopedic Hospital
Application CC 84-022

Dr. Marci Catanzaro, President
Laurelcrest Residential Park
4801 Terrace Drive Northeast
Seattle, Washington 98105

Dear Dr. Catanzaro:

Thank you for your recent letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. I agree that providing emergency care for children is a City-wide concern, but there have been numerous phone calls and letters from COH neighbors who are concerned about the particular location of the helistop, which they feel may adversely affect their neighborhood.

You are right that, while the City of Seattle has the responsibility to address the land use implications of hospital helipads, the role of assessing the need and "cost effectiveness" of such facilities in medical practices is beyond the function of the City government. The Puget Sound Health Systems Agency is the appropriate agency to address and set policies on these issues. Their contact person and address is: Larry Thompson, Executive Director, Puget Sound Health Systems Agency, 601 Valley Street, Seattle, Washington 98109; phone number 464-6143.

Further, you may contact the State Department of Social and Health Services regarding the requirement of a Certificate of Need for the proposal. We understand this agency is in the process of determining whether a Certificate is necessary or not. The contact person is: Christiana Sparks, Certificate of Need Program, State Department of Social and Health Services, Mail Stop ET-33, Olympia, Washington 98504; phone number (206)753-5857.

Your letter and letters of other citizens of the community are included in the official file (CC 84-022), and you will be notified of future public hearing schedules and decisions. I appreciate your interest, and I am glad you took the time to write. If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Very truly yours,

Katy Chaney

for WILLIAM J. JUSTEN, P. E.
Director

HI:11d

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Laurelcrest Residential Park
4801 Terrace Drive Northeast
Seattle, Washington 98105

December 15, 1984

RECEIVED
JAN 9 1985
Dept. of Construction & Land Use

William J. Justen, Director
Dept. of Construction and Land Use
600 4th Ave.
Seattle, WA 98104

Mr. Justen:

As president the Board of Trustees for the Laurel Crest Residential Park, I am writing in opposition to the proposed Helipad at Childrens' Orthopedic Hospital. .. represent the 82 home owners and residents of this condominium.

To our knowledge, Childrens' Orthopedic Hospital and Medical Center has not documented a need for a helipad. Dr. Michael Copass, Director of Northwest Airlift, has stated publicly that the present plan of landing the helicopter in the intramural field has created no problems. Concerns have been raised about the need to transport premature infants to the hospital in terms that make one wonder if the planned Helipad will be located in the neonatal intensive care unit. If the pad is located outside the building, the infants will still need to be transported into the building and to the special care unit. The neonatal intensive care unit is not located in the emergency department but in another area of the hospital. To my knowledge we have no data, only hearsay, that a helipad at the hospital would benefit any critically ill child.

There are environmental concerns related to noise and safety in the surrounding residential area. I believe that these have repeatedly been brought to your attention. We certainly share these concerns.

In this time of increasing social consciousness about rising costs of health care and local and federal efforts to contain these costs, the construction of new helipad raises many concerns. The American Medical Association News (21 Sept 1984) pointed out that the cost of operating a helicopter ambulance is upward of one million dollars per year. How can Childrens' Orthopedic Hospital and Medical Center justify such an ongoing expense, particularly in view of the fact that helicopter ambulance service is currently

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available. How will these costs compare with the current system? How will additional costs be covered? I am certain that many of the parents of children at the hospital could suggest many ways of spending the additional money to benefit more children.

If the statistics presented by the Hospital spokespersons are correct, the anticipated 15 landings per month will not result in a cost effective operation. Increasing those landings for sake of using fancy technology and making the operation "cost effective" when something less expensive would accomplish the same goal (safe, timely transport of critically ill children) is not justified. The cost of air lifting one patient to a hospital is in the thousands of dollars. How will this additional cost be managed?

I suspect that your office is not one that is concerned with cost effective medical care. I would appreciate your advice on who may be in a better position to be certain that these concerns are addressed before permission is granted for Childrens' Orthopedic Hospital and Medical Center to construct a helipad.

Sincerely,

Marci Catanzaro

(Dr.) Marci Catanzaro
President
Laurelcrest Residential Park

cc: Mrs. Robert (Peggy) Habegger
City Council

MC:eg

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Seattle City Council

RECEIVED
FEB 4 1985
Dept. of Construction & Land Use

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

February 1, 1985

Nancy J. Philips
4635 41st N.E.
Seattle, WA 98105

Dear Ms. Philips:

Our office received your letter concerning the proposed plan for a helipad at Children's Orthopedic Hospital.

This is a Council Conditional Use question and presents an "Appearance of Fairness" issue. All letters concerning this subject are being sent to William Justen, Director of the Department of Construction and Land Use to be made part of the permanent record.

Thank you for taking the time to write.

Sincerely,

Benita Staadecker
Administrative Assistant for
Councilmember George Benson

BMS/s

cc: William Justen

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DCCO received
on
already

January 29, 1985

1788 Grevelia St.
South Pasadena, CA 91030

RECEIVED
JAN 31 1985
CITY CLERK

Councilman George Benson
Seattle City Council
600 - 4th Avenue
Seattle, WA 98104

Dear Mr. Benson:

I love children.

For 20 years I taught 4 & 5 yr. olds in Sunday School.

When I retire to my condo in Seattle in two years I intend to volunteer at the Children's Orthopedic Hospital.

I am in favor of doing things to promote the wellbeing of our children.

I am not in favor of building a helipad at COH because:

1. There is already a helipad in the U of W intramural field just three minutes from COH.

2. I think the millions of dollars it will cost to build and operate the helicopter service to decrease the children's arrival time by just a couple of minutes could be put to much better use doing other things for the children.

3. It is not fair to submit us homeowners and residents to the disruption and dangers of helicopters flying overhead in our retirement years when the children already have their helipad 3 minutes away.

Before making your decision, will you please pray and ask God what His will is in this matter.

With prayers that your
hearts will help you
make the right decision,

Nancy J. Philips

Nancy J. Philips
Homeowner
4635 - 41st N.E.
Seattle, WA 98105

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Seattle City Council

RECEIVED
FEB 4 1985
Dept. of Construction & Land Use

Norman B. Rice
President of the City Council
625-2436

George E. Benson
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Transportation Committee
625-2441

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625-2445

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Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

February 1, 1985

(Dr.) Marci Catanzaro, President
Laurelcrest Residential Park
4801 Terrace Drive N.E.
Seattle, WA 98105

Dear Dr. Catanzaro:

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This is a Council Conditional Use question and presents an "Appearance of Fairness" issue. All letters concerning this subject are being sent to William Justen, Director of the Department of Construction and Land Use to be made part of the permanent record.

Thank you for taking the time to write.

Sincerely,

Benita Staadecker
Administrative Assistant for
Councilmember George Benson

BMS/s

cc: William Justen

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Laurelcrest Residential Park
4801 Terrace Drive Northeast
Seattle, Washington 98105

RECEIVED
JAN 9 1985
GEORGE E. BENSON

January 7, 1985

George Benson
Seattle City Council
600 Fourth Avenue
Seattle, WA 98104

Dear Councilman Benson:

As president the Board of Trustees for the Laurel Crest Residential Park, I am writing in opposition to the proposed Helipad at Childrens' Orthopedic Hospital. I represent the 82 home owners and residents of this condominium.

To our knowledge, Childrens' Orthopedic Hospital and Medical Center has not documented a need for a helipad. Dr. Michael Copass, Director of Northwest Airlift, has stated publicly that the present plan of landing the helicopter in the intramural field has created no problems. Concerns have been raised about the need to transport premature infants to the hospital in terms that make one wonder if the planned Helipad will be located in the neonatal intensive care unit. If the pad is located outside the building, the infants will still need to be transported into the building and to the special care unit. The neonatal intensive care unit is not located in the emergency department but in another area of the hospital. To my knowledge we have no data, only hearsay, that a helipad at the hospital would benefit any critically ill child.

There are environmental concerns related to noise and safety in the surrounding residential area. I believe that these have repeatedly been brought to your attention. We certainly share these concerns.

In this time of increasing social consciousness about rising costs of health care and local and federal efforts to contain these costs, the construction of new helipad raises many concerns. The American Medical Association News (21 Sept 1984) pointed out that the cost of <u>operating</u> a helicopter ambulance is upward of one million dollars per year. How can Childrens' Orthopedic Hospital and Medical Center justify such an ongoing expense, particularly in view of the fact that helicopter ambulance service is currently

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available. How will these costs compare with the current system? How will additional costs be covered? I am certain that many of the parents of children at the hospital could suggest many ways of spending the additional money to benefit more children.

If the statistics presented by the Hospital spokespersons are correct, the anticipated 15 landings per month will not result in a cost effective operation. Increasing those landings for sake of using fancy technology and making the operation "cost effective" when something less expensive would accomplish the same goal (safe, timely transport of critically ill children) is not justified. The cost of air lifting one patient to a hospital is in the thousands of dollars. How will this additional cost be managed?

Your role in approving the construction of a helipad is related to land use. I would hope, however, as an elected city official, you would be concerned with cost effective medical care in our community. I would appreciate your advice on who may be in a better position to be certain that cost issues are addressed before permission is granted for Childrens' Orthopedic Hospital and Medical Center to construct a helipad.

Sincerely,

Marci Catanzaro

(Dr.) Marci Catanzaro
President
Laurelcrest Residential Park

MC:eg

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January 29, 1985

William J. Justen, Director
Dept. of Construction and Land Use
600 4th Avenue
Seattle, WA 98104

Dear Mr. Justen:

I am against the building of the heliport on the grounds of The Children's Orthopedic Hospital as it would be a noisy intrusion of my privacy and disturbing to me constantly with its 15 minimal and unknown and limitless maximal flights a month.

I live below the hill which the hospital built up to make the entrance to the new hospital. I have experienced the noise and glare and turmoil that is involved with a helicopter flight and landing and want none of it.

A carefully prepared impact statement of the facts from all points of view should be prepared and it will show that old people are human beings too and need to be protected as well as babies. There are six neighbors door to door all between 84 to 90 years of age who are concerned. I am 89 years old.

Sincerely,

Gjertrud J. Siqueland

Gjertrud J. Siqueland

cc: Councilmembers

Mrs. Robert (Peggy) Habegger
Pres., Board of Trustees of
The Children's Orthopedic Hospital

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DUANE BERENTSON
Secretary

RECEIVED
DEC 18 1985
DEPT. OF CONST. & LAND USE

STATE OF WASHINGTON

DEPARTMENT OF TRANSPORTATION

Division of Aeronautics • 8600 Perimeter Road, King County Int'l Airport
Seattle, Washington 98108 • (206) 764-4131 • (Toll Free) 1-800-552-0666

File only
TB
MB
OIR
Health
CR
CL
DCLU
MS
GNM
response?

December 16, 1985

RECEIVED
DEC 18 1985
MAYOR'S OFFICE

The Honorable Charles Royer
Mayor of Seattle
Municipal Building
Seattle, WA 98104

Re: Heliport
Children's Orthopedic Hospital

Dear Mayor Royer:

The Washington State Department of Transportation is concerned that emotional and irrational statements are being put forward by the Citizens Concerned About Helicopter Transport (CCAHT) to defeat a proposal by Children's Orthopedc Hospital (COH) to establish a heliport on their property.

In a letter to the Department of Construction and Land Use (DCLU) dated November 15, CCAHT has attacked several aspects of a study done for COH by Shapiro and Associates. As an example of some of their misleading statements relating to the use of the helicopter they state:

1) That the noise monitoring locations do not measure the noise in the residential areas they are concerned with. They fail, however, to recognize that the helicopter noise will be higher at these monitoring sites and will diminish to lower readings in a measureable amount (similar to the stated background noises) in the residential areas of concern.

2) They question a one landing test and accuse Airlift Northwest of causing false results because a patient was not onboard and full fuel "may" not have been used. Their weight calculations are wrong because an Agusta does not use aviation gas and normally would not operate with full fuel. The difference in noise measurement at any weight would be negligible.

3) MAST helicopters are noisier, but their use is limited, by statute, to critical life threatening emergencies where no alternative exists. Their criticism of their occasional use completely ignores the concern for patient survival.

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4) Their criticism of future expansions of COH does not logically relate to the helicopter proposal since they will occur even if no heliport is provided. They should be disregarded in your decision.

5) CCAHT criticizes the use of air taxi accident figures from the National Transportation Safety Board, but Airlift Northwest is a Part 135 air taxi operation. For this reason the rest of their argument , especially relating to search and rescue is non-sensical. They obviously have no knowledge of what is involved in search and rescue operation versus Airlift Northwest's operation.

6) CCAHT states that the FAA only monitors the safety of Airlift Northwest operations on a "limited basis". This is totally untrue. The FAA aggressively monitors the safety, training and maintenance of Part 135 operators.

7) CCAHT illogically states that the insurers required $20,000,000 insurance. As everyone who has bought insurance knows, it is the insured that sets the limit to be purchased. An examination of relative premiums charged would be the only basis for assessing risk.

Throughout the narrative supplied by CCAHT, there is a constant thread of accusation that ignores common sense and demonstrates no concern for the needs of children in need of critical transport. Helicopter transport services have gained nationwide popularity because they have demonstrated their worth in saving lives.

Children's Orthopedic should be supported in its decision to provide this vital service at a very small cost to the local residents.

Sincerely,

Bernice Stern

Bernice Stern, Chairman
Transportation Commission

BS:bw

GC17

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December 16, 1985

RECEIVED
DEC 17 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Beatrice F. Ryan
Interim Director
Dept. of Construction & Land Use
City of Seattle
400 Municipal Bldg.
600 Fourth Avenue
Seattle, Washington 98104

Re: Helicopter - COH

Dear Ms Ryan et al:

I write to voice deep concern over the following:

1. On 12-6-85 at 10:17 a.m. a low-flying (approximately 200 feet) MAST helicopter circled several times over the Laurelhurst area, the Laurelon Terrace Condominium area, and the Laurelhurst Elementary School. School was in session. Hundreds of children's lives were endangered as well as hundreds of residents' lives.

   The MAST helicopter could not land on site repeatedly used by other helicopters at Children's Orthopedic Hospital because of inadequate space; therefore, it landed in the parking area after circling several times. Time was lost and extra transfer of patient required.

2. Please refer to article with picture, entitled "Pilot and doctor killed in crash of emergency medical copter" which appeared in The Seattle Times, December 11, 1985. This emergency medical helicopter ended in tragedy just short of its destination.

3. On Friday evening, 12-13, 1985 at 10:45 p.m., a helicopter landed at COH. Within fifteen minutes it left. The take-off flight upon leaving was unusually low, diagonally over condominiums in Laurelon Terrace; it was so low that residents involuntarily ducked, its bright lights shone through shades; it was terrible and gave us the feeling it might come right through our windows; it barely missed the rooftop. Our safety and peace of mind was in total jeopardy.

PLEASE do all within your power to stop this madness before tragedy strikes here. Thank you.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105
524-4151

cc: Mayor Charles Royer & Mr. Tom Byers
Dr. R. M. Nicola
Mr. Frank Chestnut
Mr. Cliff Portman
Mr. Larry Thompson
City Councilmember - Mrs. Jeanette Williams

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Seattle City Council

RECEIVED
FEB 5 1985
Dept. of Construction & Land Use

February 4, 1985

Dept.

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Nancy J. Philips
4635 41st N.E.
Seattle, Wa 98105

Dear Ms. Philips:

Thank you for your letter of concern regarding the proposed helipad at Children's Orthopedic Hospital.

Your letter has been forwarded to Wm. Justen, Director of the Department of Construction and Land Use, for inclusion in the official file.

Again, thank you for taking the time to write.

Sincerely,

Dolores Sibonga

DOLORES SIBONGA
Seattle City Councilmember

DS:em

cc: Wm. Justen, Director
DCLU

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Duplicate

January 29, 1985

1788 Grevelia St.
South Pasadena, CA 91030

Councilwoman Dolores Sibonga
Seattle City Council
600 - 4th Avenue
Seattle, WA 98104

Dear Ms. Sibonga:

I love children.

For 20 years I taught 4 & 5 yr. olds in Sunday School.

When I retire to my condo in Seattle in two years I intend to volunteer at the Children's Orthopedic Hospital.

I am in favor of doing things to promote the wellbeing of our children.

I am not in favor of building a helipad at COH because:

1. There is already a helipad in the U of W intramural field just three minutes from COH.

2. I think the millions of dollars it will cost to build and operate the helicopter service to decrease the children's arrival time by just a couple of minutes could be put to much better use doing other things for the children.

3. It is not fair to submit us homeowners and residents to the disruption and dangers of helicopters flying overhead in our retirement years when the children already have their helipad 3 minutes away.

Before making your decision, will you please pray and ask God what His will is in this matter.

With prayers that your
hearts will help you
make the right decision,

Nancy J. Philips

Nancy J. Philips
Homeowner
4635 - 41st N.E.
Seattle, WA 98105

RECEIVED
JAN 31 1985
DOLORES SIBONGA
SEATTLE CITY COUNCIL MEMBER

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Seattle City Council

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Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

February 1, 1985

Mrs. Sverre Siqueland
4702 41st Avenue N.E.
Seattle, WA 98105

Dear Mrs. Siqueland:

Our office received your letter concerning the proposed plan for a helipad at Children's Orthopedic Hospital.

This is a Council Conditional Use question and presents an "Appearance of Fairness" issue. All letters concerning this subject are being sent to William Justen, Director of the Department of Construction and Land Use to be made part of the permanent record.

Thank you for taking the time to write.

Sincerely,

Benita Staadecker
Administrative Assistant for
Councilmember George Benson

BMS/s

cc: William Justen

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Mrs. Sverre Siqueland
4702 41st Avenue N.E.
Seattle 98105

January 29, 1985

William J. Justen, Director
Dept. of Construction and Land Use
600 4th Avenue
Seattle, WA 98104

Dear Mr. Justen:

I am against the building of the heliport on the grounds of The Children's Orthopedic Hospital as it would be a noisy intrusion of my privacy and disturbing to me constantly with its 15 minimal and unknown and limitless maximal flights a month.

I live below the hill which the hospital built up to make the entrance to the new hospital. I have experienced the noise and glare and turmoil that is involved with a helicopter flight and landing and want none of it.

A carefully prepared impact statement of the facts from all points of view should be prepared and it will show that old people are human beings too and need to be protected as well as babies. There are six neighbors door to door all between 84 to 90 years of age who are concerned. I am 89 years old.

Sincerely,

Gjertrud J. Siqueland

Gjertrud J. Siqueland

cc: Councilmembers

Mrs. Robert (Peggy) Habegger
Pres., Board of Trustees of
The Children's Orthopedic Hospital

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Seattle City Council

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Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

February 1, 1985

Jean Phillips
4728 41st N.E.
Seattle, WA 98105

Dear Ms. Phillips:

Our office received your letter concerning the proposed plan for a helipad at Children's Orthopedic Hospital.

This is a Council Conditional Use question and presents an "Appearance of Fairness" issue. All letters concerning this subject are being sent to William Justen, Director of the Department of Construction and Land Use to be made part of the permanent record.

Thank you for taking the time to write.

Sincerely,

Benita Staadecker
Administrative Assistant for
Councilmember George Benson

BMS/s

cc: William Justen

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RECEIVED
JAN 28

JAnuary 25,1985

Council member George Benson
Seattle, City Council
600 4th Avenue
Seattle, Washington 98104

Dear Mr. Benson:

As a person who will be greatly affected by the proposed helipad for Children's Orto. Hospital, I hasten to write to you to object. I live in the condos just below the hospital and on Sand Point Way.

I have a son who is a Doctor and mans a helicopter at nite for emergency work. He has told me about the whole operation and he certainly advised me to write to anyone I could and object. The noise is terrific and although they say, do not know when the flights will occur, that will make it worse. I do believe that we have a right to peace and quiet. There are many older residents in that complex who will be really stressed by the advent of this helipad.

I plead with you for the safety and peace and quiet of the residents in this neighborhood that you scrap any thoughts of this pad. If there were no alternatives then perhaps that would shed a different light on the situation.

Thank you for your time.

Sincerely,

Jean Phillips

Jean B. Phillips

JP/p

4728 - 41st NE
Seattle, Washington 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Hermia
CC84.022
File 2

Seattle
Department of Construction and Land Use

Charles Royer, Mayor

October 2, 1985

Frank Chestnut, Director
Certificate of Need Program
Department of Social and Health Services
Olympia, Washington 98504

Dear Mr. Chestnut:

Earlier this year, Children's Orthopedic Hospital applied to the City of Seattle for a permit to build a helipad on hospital grounds. The helipad is to be used for landing ambulance-type helicopters. In Seattle, this is a Council Conditional Use Permit; and the permit application must meet three tests, the first being that there is an established medical need.

At the time of application, we understood that your department would be requiring a Certificate of Need for such a use, and we delayed the processing of the permit to allow time for the review and action by the State. Later we received a letter from you that stated that a Certificate of Need would not be required for such a use.

Since the City must still make a finding of medical need, we have asked Dr. Bud Nicola of the Seattle-King County Health Department to give us an opinion on this question. To receive public comment, a hearing has been scheduled for October 24.

Yesterday morning we heard that you may be reconsidering the decision on whether a Certificate of Medical Need is required. When I called you today to ask if this was correct, you said you were considering making the Certificate of Need determination for the helicopter only, but not for the air ambulance service to COH. Bud Nicola and I need to have confirmation of this in writing this week so that we can decide whether or not to cancel our October 24 hearing. We have a permit application before us, so we have an obligation to process it and an obligation to the citizens living near the hospital to resolve this issue and not to let it continue to remain open.

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Our preference is for you to make the decision on medical need because the Mayor has consistently supported the concept of comprehensive health care planning and believes that the Health Systems Agency is the proper forum to decide issues of medical need.

Please confirm your decision in writing immediately.

Sincerely,

BEATRICE FARRAR RYAN
Interim Director

BFR:db

cc: Dr. Bud Nicola, Seattle-King County Health Department
Tom Byers, Mayor's Office

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Kelley / Hermia File CC 84-022
KT File #2

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

October 7, 1985

Albert Feldmann
4873 Terrace Drive N.E.
Seattle, Washington 98105

Dear Mr. Feldmann:

I was disappointed that the State declined to consider the merits of a helipad at Children's Orthopedic Hospital (COH) through the Certificate of Need process. As a result, the City's Department of Construction and Land Use (DCLU) is now reviewing the environmental impact of the proposed facility. DCLU is also responsible for enforcement of code violations.

According to Beatrice Ryan, Interim DCLU Director, DCLU issued a Notice of Violation to COH on August 30 because COH has been using its facility for a helipad without a permit. DCLU included your letter as a supportive document for its code enforcement in this case.

The City's Land Use Code requires a finding that COH needs the helipad to save lives. DCLU has asked Dr. R. M. Nicola, Director of the Seattle-King County Department of Public Health, for his advice as to whether that level of medical need exists. Dr. Nicola will hold a public hearing on this issue, and his findings will form the basis for DCLU's recommendation to the City Council.

I appreciate your writing me to share your concerns. If you have any questions, please call Hermia Ip, the Land Use Specialist assigned to this case, at 625-4509.

Sincerely,

Charles Royer

cc: Beatrice Ryan, Interim Director, Department of Construction and Land Use
Hermia Ip, Department of Construction and Land Use
Dr. R. M. Nicola, Director, Seattle-King County Department of Public Health

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8511.9 8/30

CLU- MAYOR'S RESPONSE DUE 9/12 LOG 2429
OD 9/16
BFD 9/20

ALBERT A. FELDMANN
P. O. BOX 85568 UNIVERSITY STATION
SEATTLE, WASHINGTON 98105

Aug. 30. 1985

RECEIVED
SEP 3 1985
MAYOR'S OFFICE
AK
TB

The Hon. Charles Royer, Mayor
Seattle Municipal Building
Seattle, WA 98101

Dear Mr. Royer ,

Several months ago I wrote to you , protesting against the planned landing of helicopters at Childrens Orthopedic Hospital without an investigation of the merits of a claimed need that would turn one of Seattle's finest neighborhoods into an airport environment. Your reply , that COH would indeed be asked to show such a need, was indeed satisfactory. In the meantime COH appears to have taken advantage of a legal loophole to avoid having to show this need and , continuing its policy of bad faith and duplicity towards the residents of this neighborhood , has started to land helicopters on its grounds even before a helipad has been constructed. The history of COH's encroachment on this neighborhood is a matter of record and so are its broken promises to respect the quality of living here. After the latest violation of both the peace and safety of local residents I have protested to Ms Ormsby of the D.C.L.U. and am enclosing a copy of my letter.

Sincerely yours
Albert A. Feldmann

Albert A. Feldmann

4873 Terrace Drive NE
Seattle, WA 98105

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ALBERT A. FELDMANN
P. O. BOX 85568 UNIVERSITY STATION
SEATTLE, WASHINGTON 98105

Aug. 30. 1985

Ms Anne Ormsby
Dept. of Cost and Land Use
Municipal Building
Seattle, WA 98101

Subject: COH Helicopter Landings

Dear Ms Ormsby,

Further to our telephone conversation of Aug. 28. I want to reiterate my protest against the violation, by the Childrens Orthopedic Hospital, of the safety of the many residents of this densely populated area in flying helicopters at low altitude over their homes and landing them on the hospital grounds. I also want to protest against the environmental pollution caused by the engin noise of these helicopters, which is about to turn one of this city most quiet neigborhoods int a heliport area.

With regard to the specific instance of this week's landing I hear the noise but was not an eye witness. However, I have spoken with eye witnesses and given them your name and address so that they ca send you written affidavits of their observations for potential appearance as witnesses in Court. Let me add that as Vice Presiden of the Laurel Crest Condominium Owners Association, I represent 79 families in addition to myself in this protest. The administration of Mayor Royer has done a creditable job of keeping Seattle a very liveable city and your handling of this violation by an institutio whose motto appears to be " the public be damned ", will be a good indication whether this administration is capable of protecting us against such encroachments in the future or not.

Sincerely yours

Albert A. Feldmann

cc. Mayor Charles Royer

Albert A. Feldmann

4873 Terrace Drive NE
Seattle, WA 98105

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Office Of The Mayor
City of Seattle

Charles Royer, Mayor

September 25, 1985

Albert Feldmann
4873 Terrace Drive N. E.
Seattle, Washington 98105

Dear Mr. Feldmann:

Thank you for your letter stating your objection to the landing of a helicopter at Children's Orthopedic Hospital (COH) campus. The Department of Construction and Land Use (DCLU) is responsible for reviewing the environmental impacts of the proposed helipad facilities as well as enforcing against code violations. Beatrice Ryan, Interim Director of DCLU, tells me that a Notice of Violation was given to COH on August 30, 1985, because COH has been using their premises as a helicopter landing pad without a permit. Your letter will serve as a supportive document for our code enforcement.

The City's Land Use Code also requires a finding that the helipad is needed to save lives. To make that determination, DCLU has asked the City's Health Officer, Dr. Nicola, for advice on the question of medical need. Dr. Nicola will hold a public hearing in the next few weeks, and his findings will form the basis for DCLU's recommendation to the City Council.

Thank you again for taking the time to write to me. If you have questions, please do not hesitate to call Mrs. Hermia Ip, the DCLU Land Use Specialist assigned to this case. She can be reached at 625-4509.

Sincerely,

Charles Royer

CR:hig

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

File
CC-84-022

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

April 18, 1985

Albert A. Feldmann
4873 Terrace Drive N.E.
Seattle, Washington 98105

Dear Mr. Feldmann:

I'm sorry for my delay in responding to your letter.

Many people in Seattle feel the loss of Victor Steinbrueck personally, almost as if they had been friends with him. As a result, many offered suggestions to both the City Council and me about the best way for the City to honor him.

Because of Victor's special relationship with the Pike Place Market and his role in designing Market Park, I asked the Park Naming Committee to rename Market Park to celebrate Victor's memory. They are currently considering the request.

The City is working with Children's Orthopedic Hospital--and the community--to determine the appropriateness of a helipad. We are asking for the hospital's request to be considered in the context of the need for such a facility, whether Children's Orthopedic Hospital is the best location, or whether another hospital might be more appropriate. If you are interested in the review process, please call Hermia Ip in the City's Department of Construction and Land Use, at 625-4509.

Thank you for writing.

Sincerely,

Charles Royer

Charles Royer

cc: William Justen, Director, Department of Construction and Land Use
Hermia Ip, Department of Construction and Land Use

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Hermia IP Copy

Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

April 18, 1985

Anita Francis
Liz Anderson
Citizens Concerned About Helicopter Transport
5003 45th N. E.
Seattle, Washington 98105

Dear Ms. Francis and Ms. Anderson:

Thank you for your letter of March 28, 1985, about the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on hospital grounds (CC 84-022).

In your letter, you asked why a citizen committee was formed for the five-acre site which COH acquired recently, and why is it not possible for our Department to establish a similar committee for the existing COH campus. Enclosed please find a copy of the COH-CARE and City Agreement which explains the specific terms and functions of the committee. As stated in the agreement, that committee was formed as a stipulation for the property transaction to provide community input and coordination on the future development of that particular site. With the helipad proposal, the SEPA Ordinance and Land Use Code provide for a different format of citizen participation, which involves public notices, comments, hearings and appeal processes. However, we will encourage COH to discuss their helipad proposal with the community as well as to consider preparation of a Master Plan. We are hopeful that they will initiate the process.

You also recommend that this Department conduct an in-depth investigation on medical needs, cost, environmental impacts and alternative sites for the helipad. We must find that the Code requirements are fully met before we can recommend approval of the permit. However, we do not necessarily involve staff in the gathering and research of medical and other data necessary to support the proposal. The burden of proof is on the applicant to satisfy the Code requirements. We review and evaluate the information provided in making our recommendation. The information and our analysis is also subject to review and comment before the Hearing Examiner at the required public hearing. At this stage, COH is still working on preparation of the environmental checklist information which we required in February. We have recently reminded them that, in addition to SEPA review, they must thoroughly address the merits of the proposal based on the Council Conditional Use criteria for the helipad (see letter attached). We will keep you informed of responses from COH.

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Your suggestion to send copies of our correspondence to Frank Chestnut of the Department of Social and Health Services (DSHS) and to Larry Thompson of the Puget Sound Health Systems Agency (PSHSA) is well taken. We will do so. If you have further questions, please do not hesitate to call Mrs. Hermia Ip at 625-4509.

Very truly yours,

Katy Chaney

FOR WILLIAM J. JUSTEN, P. E.
Director

HI:lld

Enclosures

cc: Treuman Katz, COH
Frank Chestnut, DSHS
Larry Thompson, PSHSA
Tom Byers, Office of the Mayor

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Hermia Ip Copy

Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

April 17, 1985

Re: Helipad Proposal

Dorothy F. Teeter
Director of Planning
Children's Orthopedic Hospital
P. O. Box C5371
4800 Sand Point Way N. E.
Seattle, Washington 98105

Dear Ms. Teeter:

Pursuant to our letters to you on February 20 and March 12, 1985, we understand you are in process of hiring an environmental consultant (Shapiro & Associates) to prepare the environmental impact information which we requested on the proposed helipad. As we explained, the environmental review (SEPA) process must be completed before we can schedule any hearing date for the Council Conditional Use permit. This first step includes an appeal hearing on our threshold determination (if there is an appeal), and the decision of the Hearing Examiner on the appeal.

While the environmental review process will undoubtedly disclose helpful information for our consideration on the helipad permit, you must also thoroughly address the merits of the proposal based on the Council Conditional Use criteria for the helipad (see enclosed Section 23.48.05 of the Code). I am also enclosing a copy of the "Attachment for Application Requirements for Council Approval" which you submitted earlier, for you to expand with more information. As required by Section 23.48.05, the medical need for the helipad facility must be justified, as well as the cost/effectiveness of its usage and development and potential alternative locations for the helipad and services must be discussed. As you know, we are concerned about the proliferation of such facilities resulting from competitive pressures currently at work within the health care industry. This proliferation could create undesirable environmental impacts for neighborhoods with medical facilities nearby. Therefore, in order for our review to proceed, your analysis must include a discussion of how the proposed facility meets the goals and objectives of the Puget Sound Health Systems Agency and State Department of Social and Health Services Certificate of Need Program. We would like to review, in the near future, how you propose to conduct the analysis to ensure your approach will meet our needs.

If you have further questions, please do not hesitate to contact Hermia Ip at 625-4509. She will call you soon to arrange a meeting to discuss our requirements.

Very truly yours,

WILLIAM J. JUSTEN, P. E.
Director

By Katy Chaney
KATY CHANEY, Director
Land Use Division

HI:lld

Enc.

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Hermia Sp -
for our 1:30 mtg.
tomorrow.

May 2, 1985

SHAPIRO & ASSOCIATES

The Smith Tower
Suite 1812
506 Second Avenue
Seattle
Washington 98104
206/624-9190

RECEIVED
MAY 9 - 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. Russ Altermatt
Seton, Johnson & Odell
133 S.W. Second
Portland, Oregon 97204

Dear Mr. Altermatt:

Glenn and I have visited and reviewed the area around the Children's Orthopedic Hospital's helipad and its flight path to determine what we believe to be the best locations for noise monitoring. We looked at sites within the line of sight of the facility, as well as sites along the flight path. We also looked at the land use in the vicinity.

We have tentatively selected the following four sites (see attached map):

1. The east side of 44th Avenue N.E. between N.E. 47th Street and N.E. 50th Street. The approximate address of the site is ~~4420~~ 4720 44th Avenue N.E. Shrubbery and the slope of the hill provide a limited visual buffer. The grade rises from 122 feet at the helipad to 150 feet along 44th Avenue N.E. These are single family houses along this street.

2. A multiple-family housing complex (yellow/cream-colored buildings) across from COH on the west side of Sand Point Way, directly south of N.E. 50th Street. As you can see from the map, these residences are both along the flight path and within the sight range of the helipad. The ground floor of the complex is approximately at 54 feet while the helipad is due east at 122 feet.

3. A highrise, south of Site 2, located on the east side of Sand Point Way, southwest of 40th Avenue N.E. This is the tallest building in the area and, although a residence, is also located in a commercial area along Sand Point Way. This building is located along the flight path.

4. A lowrise, multiple-family complex located west, adjacent to the COH property. This complex caters primarily to the elderly and residents have voiced unified opposition to the project. The noise monitoring should be done on the northeast portion of the complex, the portion that would both experience the flight noise as well as the landing. The complex is between 40th and 42nd Avenues N.E., north of N.E. 45th Street.

After reviewing the proposed sites for your concurrence and prior to finalizing the noise monitoring locations and considerations, you should contact Curt Horner with the City of Seattle Environmental Health Department at (206) 587-2722. He is familiar with the project and is on the Mayor's noise committee. He will also, in all likelihood, review the project for DCLU regarding noise. His perspective on the site selection, as well as his viewpoint on the issues and concerns to be addressed, are important.

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As soon as we have defined the monitoring locations, please call me so we can draw up the scope of services and contract, and get approval from the City's Land Use Department (which is overseeing the City's Land Use requirements). If you have any questions, please don't hesitate to call.

Sincerely,

SHAPIRO AND ASSOCIATES, INC.

Susan Killen, Project Manager

SK:pg
Enclosure

cc: Glenn Bachman

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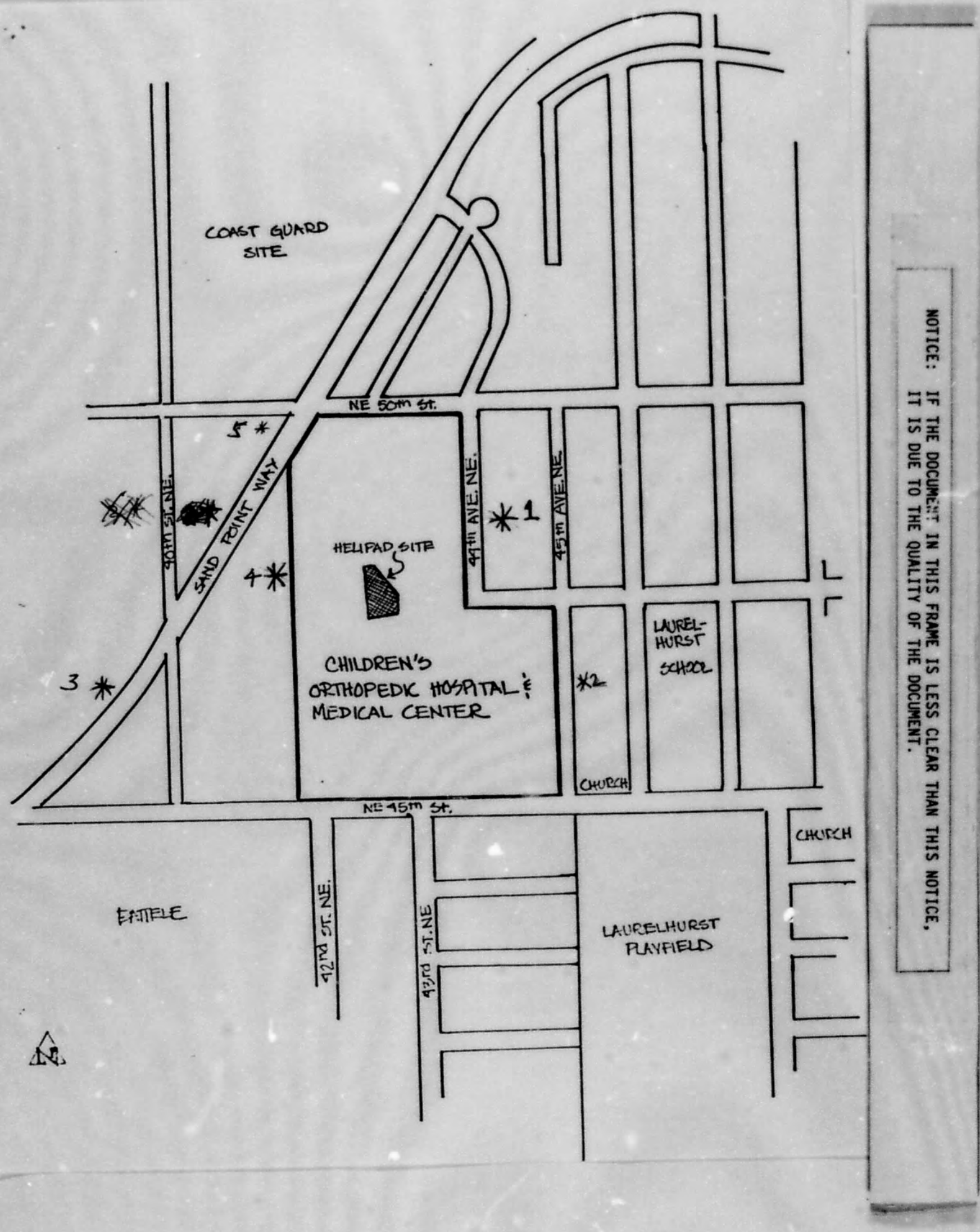

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Ann Armstrong
Herman

File 84-012
DCLU

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

April 29, 1985

RECEIVED
MAY 1 - 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Anita Francis
5003 - 45th Avenue N.E.
Seattle, Washington 98105

Dear Ms. Francis:

Thank you for sending me a copy of Ms. Greenawalt's letter to legislators concerning the helicopter transport facility planned for Children's Orthopedic Hospital. I spoke to the hospital director, Treuman Katz, about this matter on April 24, and I understand that he has since sent a letter to each legislator explaining that Mayor Royer and the Puget Sound Health Systems Agency have not endorsed the helipad, and that Ms. Greenawalt's letter was in error.

I have also been informed by Frank Chestnut of the Department of Social and Health Services that the creation of hospital-based helipads will be subject to Certificate of Need review. This will provide an opportunity for a full, public discussion of the issues through the Puget Sound Health Systems Agency's formal review process. I believe that approach is most appropriate. It will allow a thorough examination of the medical issues associated with helicopter transport in the context of health system planning, rather than the land use process.

The Mayor has long been a supporter of cooperative health planning as a means of reducing duplication and costs, and assuring access to care for those who have been without that access in the past. His position concerning the helipad at Children's will be predicated in large measure on the evidence presented to the Health Systems Agency on the following issues:

- Will the proposed service have a demonstrable medical benefit to patients?
- If so, are there alternative methods which could be employed to achieve equal benefit at lower cost or with less community impact?

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- Will those who face economic, social, and geographic barriers to care have greater access to needed services because this project is approved?

I believe the community has similar concerns, and I hope you and your neighbors will take part in the Health Systems Agency's review so that we can achieve the best possible result for all concerned.

Since these issues will be reviewed within the context of the health planning process, it might be appropriate to postpone the meeting I had offered to convene between the community council and the hospital administration. However, I am certainly willing to convene such a meeting at any time if the parties feel it would be useful.

I appreciate the effort you have made to keep the Mayor fully aware of your views on this matter, and I look forward to working with you until it is resolved.

Sincerely,

Tom Byers
Assistant to the Mayor

cc: Mayor Charles Royer
Councilmember Jim Street, Land Use Chair, City Council
Treuman Katz, Director, Children's Orthopedic Hospital
Mary Jane Anderson, President of the Board, Children's Orthopedic Hospital
Ann Ormsby, Department of Construction and Land Use
Cindy Maisel, Health Department
Frank Chestnut, Department of Social and Health Services
Larry Thompson, Puget Sound Health Systems Agency

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File
CC 84-022
Put on mailg
list

SEATTLE PUBLIC SCHOOLS

PROPERTY SYSTEMS DEPARTMENT • 810 Dexter Avenue North • Seattle, Washington 98109

RECEIVED
AUG 29 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

August 27, 1985

Ms. Hermia Ip
Land Use Division
Department of Construction
and Land Use
Fourth Floor
Seattle Municipal Building
Seattle, Washington 98104

Re: Proposed Helicopter Pad - Children's Orthopedic Hospital

Dear Ms. Ip:

The Seattle School District is interested in action the City of Seattle is considering in regard to the application by Children's Orthopedic Hospital to locate a helicopter pad at their facility. Please put us on your mailing list for this matter.

Thank you for your assistance and cooperation.

Sincerely,

John J. Richmond
Real Estate Manager

JJR:ns
6:LT.86

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CC# 8X022

Hernia

BUICK

GMC TRUCKS

OPEL

WARREN WESTLUND BUICK-OPEL-GMC, INC.
9600 First Avenue N.E. (206) 524-6969
SEATTLE, WA 98115

RECEIVED
JUL 26 1985
Dept. of Construction & Land Use

City of Seattle
Dept of Construction - Land Use - Zoning
600 - 4th Ave.
Seattle, Wash

re: Orthopedic Hospital
Helipad

As a longtime resident of Laurelhurst I object strongly to the proposed Helipad at Orthopedic Hospital.

The residential community was in place long before the Hospital, and further disruption to that community is wrong — particularly since the real need is highly suspect, and perhaps the Helipad is to be used to promote public relations and to try to be competitive to those hospitals that already are so served by helicoptor

Thank You

Warren Westlund - 5150 N.E. Latimer PLACE — 98105

GM

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Not'g cc14027

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

July 24, 1985

RECEIVED
JUL
Dept. of Construction & Land Use

John Kehoe
5208 Northeast 50th
Seattle, Washington 98105

Dear Mr. Kehoe:

A while ago I met with the Laurelhurst Community Club Board and discussed the issues facing your neighborhood. During the meeting I agreed to provide a status report on the problems that were mentioned, and that report is enclosed.

I have asked Beatrice Ryan, Interim Director of the Department of Construction and Land Use, to notify your community club when the department expects to make additional revisions to the zoning code. Cliff Portman, Senior Land Use Specialist, supervises staff who work on projects in the Laurelhurst area. Please call him, 625-4509, to discuss ways the City can make it easier for the community to stay informed.

I have also written a letter (enclosed) to Treuman Katz, Administrator of Children's Orthopedic Hospital, stressing the need for COH to provide opportunities for neighborhood residents and hospital staff to share information and views on a regular basis. I believe such a mechanism is essential for maintaining a healthy and strong neighborhood, as well as a first rate children's medical institution.

I look forward to meeting with you again and enjoying another delicious pot luck dinner.

Sincerely,

Charles Royer

Charles Royer

enclosure

cc: Laurelhurst Community Club Board Members
Beatrice Ryan, Interim Director, Department of Construction and Land Use
Cliff Portman, Department of Construction and Land Use

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Institution Issues

University of Washington Stadium Expansion

The City Council approved, with conditions, the UW's Master Plan on June 10. One of the conditions clearly states that Master Plan approval does not constitute approval of the stadium expansion project. That project will require City Council approval of a parking management program.

Katy Chaney and Patrick Doherty have met with U.W. Campus Planning Director H. S. Thomson regarding the scope of the environmental impact statement and transportation management plan for the stadium expansion. Issues discussed included: increased vehicular and bus traffic and parking, increased police enforcement of restricted parking areas, increased METRO transit coordination, increased used of private buses, and contractual parking arrangements with other nearby facilities, possibly requiring shuttles. All members of the U.W. Interdepartmental Task Force were requested to offer suggestions regarding the scope of the DEIS and TMP at our last monthly meeting (6-17-85). These concerns and issues were presented to Mr. Thomson and discussed at the City-University meeting held on July 1, 1985.

Children's Orthopedic Hospital

- Helipad. COH has hired an environmental consultant, Shapiro Associates, to conduct a technical study on noise impact and other checklist items. An actual helicopter demonstration was conducted in May to gather noise measurements. The results of the study may be available in a few weeks. The State has also reversed its earlier decision to require a Certificate of Need.

- Short Stay Clinic. DCLU has completed its environmental review, and the project received a Declaration of Non-significance.

- Transportation Management Program pursuant to an earlier permit for the garage. The Seattle Engineering Department Ridesharing Office has been working with COH to enforce the conditions of an earlier permit (X-81-069) for the garage construction. Under that permit, COH was required to provide incentive and reward for their carpool employees with reduced parking fees and guaranteed preferential

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parking spaces. After extensive negotiation, it appears COH is becoming more cooperative and we will be able to develop an acceptable program in compliance with the earlier permit conditions.

Neighborhood Commercial Area Policies

Sand Point Shopping Center

The current zoning is Community Business (BC) which has a 60 foot height limit and no maximum size limit for business establishments. The Mayor recommended NC2/40 feet. NC2 limits grocery stores to 25,000 square feet; all other uses are limited to 15,000 square feet unless an expansion (up to 25,000 square feet) is approved through a conditional use process. Billboards are prohibited in NC2 areas.

The 40 foot height along Sand Point Way is appropriate due to the location along a major arterial, the function of the zone as a shopping area for surrounding neighborhoods, and the scale of the surrounding single family area. While a significant topographic break exists between the commercial area and the single family residential area to the north (Burke-Gilman Trail) and south, the 40 foot height is more appropriate than the existing 60 foot limit.

Laurelhurst Business Area

A narrow strip of single family land has been proposed for Lowrise 2/Residential Commercial (L2/RC). This designation recognizes the existing commercial parking lots which were developed in the single family zone under the transition rule of the old residential zoning code (Title 24). The L2/RC zone is a residential zone with a 30 foot height limit (same as single family zoning), which allows limited commercial development at the ground level of a residential structure. Single purpose commercial development and parking structures are prohibited. Accessory commerical parking lots may be allowed in an RC zone, but only through a conditional use process. If approved, substantial screening and landscaping would be required. A minimum of 15 percent of the lot area must be landscaped, including specific requirements for landscaped setbacks along all property lines, and screening when abutting and across the street from a residential zone.

The restrictive heights and the combination of residential and limited commercial activity of the L2/RC provide a transition between the commercial area along Sand Point Way and the single family area to the south. Northeast 44th

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provides a better zone boundary than the property line which currently separates the SF 5000 from the BC along Sand Point Way.

30th and Blakeley

The Mayor recommended a 40 foot height limit for this area. Judging by the surrounding zoning and development and the Land Use Committee's general direction in terms of designating heights, it is not likely that the Committee will recommend the 65 foot height limit.

Land Use Issues

Washington Retirement Park

The City recognized the need for this facility and imposed substantial conditions to mitigate impacts to the neighborhood. DCLU will very closely monitor the development to ensure compliance with the conditions, including the changes required to Nicklas Place N.E., which were initiated by DCLU and confirmed by the Council.

The hospital beds/nursing care facility will require a Certificate of Need.

DCLU will be the major agency involved with subsequent reviews, such as Certificate of Compliance, Master Use and Building Permits. The project does not require any further Council review.

4017 Northeast 45th Street (15-unit building)

The plans for this proposal have been specially routed to Engineering for review regarding traffic, parking and drainage. The referral comments have been received. The proponent's architect has been apprised of the neighborhood's concerns. DCLU will invite the developer and neighborhood representatives to meet, with DCLU acting as a mediator, to attempt to deal with the major concerns.

St. Bridget

St. Bridget's PUD is in for building permits. The applicants have recently contacted DCLU to discuss reducing the project by one center townhouse unit (the end units sell better). All PUD approvals have been finalized and construction and grading of the site is expected to start soon. The appli-

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cants are coming in for separate building permits on each building.

Traffic and Transportation Issues

Sand Point Way Boulevard Project

Phase I is more than 50 percent complete and includes the following improvements:

- Sidewalks, curbs, street trees and underground wiring on the west side of Sand Point Way from Northeast 50th Street to 45th Avenue Northeast. This is the former Coast Guard property being rehabilitated as Burke Gilman Place.

- A signal light at 41st Northeast at the entrance to Children's Orthopedic Hospital. The light will be operated by sensors in the street, as well as pedestrian-actuated.

- A landscaped median with street trees and ground covering, replacing the asphalt center strip from 40th Avenue Northeast to Northeast 65th Street and upgrading the existing street lighting.

- Replacement of broken concrete panels on Sand Point Way Northeast.

- A portion of the project from 55th Avenue Northeast to 57th Avenue Northeast will be omitted from this contract. This section will be constructed in conjunction with a combined sewer overflow control facility during 1985.

Sand Point Way Northeast is a State highway. Washington State Department of Transportation funding which had been earmarked for maintenance has been provided to the City for the Phase I project now under construction. The availability of the WSDOT funding, which amounts to approximately 50 percent of the Phase I costs, is the primary reason the Phase I project is underway. There is currently no funding available for future project phases.

Navy Development

In its comments on the draft EIS, the City argued that the Navy should locate its support facilities closer to Everett, rather than at Sand Point. However, we don't expect the Navy to agree with us since they already own the land at Sand Point, plus existing support facilities that will be

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expanded. The Navy has already told us that Paine Field is too small for these facilities.

In an attempt to secure funding for necessary road improvements to accommodate increased traffic at Sand Point, the City has requested a minimum of $35 million from the Federal Defense Access Roads Program (Department of Transportation).

Before any specific improvements are made, we will carry out a community planning process to determine the best solution to the problem.

The City will be coordinating a community review of the Navy's Draft Master Plan for the Sand Point expansion. The Sand Point Community Liaison Committee, with representatives from Laurelhurst, will be included in the community review body.

Our latest information is that the Navy plans to brief the City and the community in August or September on the development of the plans. The final draft plan is expected to be released near the end of the year.

Bond Issue Issues

The Seattle 1,2,3 Bond Issue has provided $52,000 and $172,000 has been allocated from the Cumulative Reserve Fund for a total of $224,000 to provide for basic renovation of the community center. An architect has been selected, and a contract for an investigative design phase will be approved in the next couple of weeks. The architect will investigate all conditions and provide updated cost estimates. The community can anticipate a design presentation and discussion in late summer/early fall, with construction anticipated to begin in early 1986.

Unspent Bond Monies

(Please see report attached)

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Seattle's Unexpended Capital Project Funds

As of December 31, 1984, the City had 13 active bond funds, with a total fund balance of $121.8 million. Nine of the bond funds have a balance of over $1 million. These are:

	Fund Balance December 31, 1984 (millions)
1960 Street Improvement Bonds	$ 14.3
Sewer Improvement Fund	31.4
Arterial Development Fund	6.3
Park Acquisition Development Fund	5.7
Neighborhood Improvement Fund	1.9
Seattle Center Improvement Fund	3.1
Police Precinct Station Fund	4.1
West Seattle Bridge Fund	35.5
Low Income Elderly and Handicapped Housing	19.4

Approximately $97 million of the $121.8 million total fund balance are reserved for "continuing appropriations." That is, these funds have been legislatively committed to specific projects. Of the remaining $24.9 million, $21.2 million of the unreserved fund balance are in two funds -- Sewer Improvement Fund and the Low Income Elderly and Handicapped Housing Fund. With the exception of approximately $5 million in the Low Income Elderly and Handicapped Housing Fund, the unreserved funds have been committed to specific projects in the 1985-1990 CIP. For example, the West Seattle Bridge Fund is dedicated to the construction of a lower level bridge in the West Seattle Freeway corridor. In addition, over $15 million from the Sewer Improvement Fund are committed to correcting continued sewer overflow problems on Lake Washington and Puget Sound swimming beaches.

Legally, bond funds may be used only for their stated purpose. For example, Senior Housing Bonds must be used for purposes identified in the Senior Housing Bond ordinance, which restricts the funds use to the provision of elderly housing and housing for special populations. That is, Senior Housing Bond Fund money cannot be used for street resurfacing.

However, bond funds can be reprogrammed within the limits of the original legislation. For example, the City recently went through a major reprogramming of the 1960 Street Bond Fund money, for bridge rehabilitation projects not identified in the original legislation. The 1985 CIP identifies the projects financed by these bond funds.

If these funds earn interest above our projections, or if projects are delayed or come in under budget, then additional funds may be available for projects eligible within the limitations of the respective fund. Those funds are then programmed in the Capital Improvement Program process each year. In order to redirect the use of those funds, projects currently funded must be unfunded and funds reprogrammed, again within the constraints of the original bond legislation.

KB/lbb
5/16/85

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Use of Existing Bond Funds
1985-1990 CIP
Major Projects Only

	($000's)
1960 Street Bonds	
Used to match $27.4 mil in other bridge funds	$ 1,486
Alaskan Way Seawall (Madison to Bay)	3,845
S.W. Spokane Street viaduct extension rails	3,314
Bascule bridge rehabilitation	2,838
Beach Drive Southwest seawall	1,250
Beach Drive Southwest retaining wall	1,250
Sewer Improvement Fund	
Used to match $26,645 in other funds for CSO projects	26,646
Used to match $10,075 for I-90 utility relocation	285
Combined Sewer Backup Program	3,395
Queen Anne West sewer separation	4,576
Arterial Development Fund	
Arterial signal modernization	4,989
Alaskan Way seawall (matches $4.6 million in grants)	1,170
CBD signal system (matches $4,150,000 in grants)	2,301
Park Acquisition and Development Fund	
Westlake Parks	1,700
Eckstein Community Center	2,409
Mount Baker Rowing and Sailing Center	748
Seattle Center Improvement Fund	
Amusement Park Project	1,714
Police Precinct Station Fund	
East-Central Precinct	3,500

KB/db
5/17/85

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July 24, 1985

Treuman Katz, Director
Children's Orthopedic Hospital
P.O. Box C-5371
Seattle, Washington 98105

Dear Treuman:

Not long ago, I met with the Laurelhurst Community Council and discussed their concerns for the future of their neighborhood. I want to share some of my impressions with you, in the hope that we can work together to improve the relationship between Children's Orthopedic Hospital (COH) and the neighborhood.

Community Council members feel they are being confronted by a host of external threats, ranging from residential zoning issues to commercial development along Sand Point Way N.E. I share their concerns. I've been to more than 70 community council meetings during the past year, and I have rarely seen so many issues confront a single community at the same time. I do not agree with their assessment on every issue, but I can certainly understand why they view the actions of the City, COH, the University, and other institutional actors with great concern.

Against this background, their relationship with COH seems particularly frustrating. Many of the members said there needs to be much more open communication between the hospital administration and the community. They felt past meetings with hospital officials had been one sided, with full presentations of the hospital's good works, but little exploration of community concerns. They also voiced considerable concern about the implications of your decision to appeal the state's decision regarding the applicability of the Certificate of Need process to the helipad.

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In light of all the issues they are dealing with, I think we've just got to do a better job of communicating with the neighborhood. These are smart, dedicated people. Their interests will not always coincide with those of COH or the City, but I sense there is more basis for cooperation than has been recognized. For example, when I visited the Medical Center in April, you described to me your strategy of decentralization and cooperative relationships with other health providers as an alternative to further intensive development on campus. That course of action would seem to be exactly what the community wants to support. You also described to me the circumstances in which helicopter transport would be used, and the limits COH is prepared to set on the use of that resource. This seems exactly what the community wants to explore through the Certificate of Need process.

In summary, we need to find some better ways to communicate, resolve differences, and move forward together. I suspect the Community Council would welcome Children's Orthopedic Hospital as an ally in some of the other battles they are waging. I would like to help in that process in any way I can. I offer the resources of my office to help establish this kind of dialogue, and I will make the same offer to the Community Council.

I think we have a good chance to establish a more solid working relationship, and I'll look forward to that result.

Sincerely,

Charles Royer

CR:tbn

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Hermia

Seattle
Department of Construction and Land Use

Charles Royer, Mayor

June 5, 1985

Re: Childrens Orthopedic Hospital's Proposed Helistop
CC84-022

Anita Francis
Liz Anderson
Citizens Concerned About
Helicopter Transport
5003 45th N. E.
Seattle, Washington 98105

Dear Ms. Francis and Ms. Anderson:

Thank you for your letter of May 15, 1985, regarding the proposal of Childrens Orthopedic Hospital (COH) for a helistop. We appreciate your concerns, and we have also reviewed your previous letters and suggestions to Mr. Justen on helistop development.

You should have, by now, received a copy of our letter to Dorothy Teeter, Director of Planning of COH, which discussed the standard of our permit review pursuant to the Council Conditional Use criteria (Section 23.48.05 of the Land Use Code), and the City's SEPA Ordinance. As you know, COH has hired an environmental consultant, Shapiro & Associates, to conduct their technical studies. We will be glad to notify you when the results of their studies are completed and available for public review.

If you have further questions, please contact Hermia Ip, Land Use Specialist, of our office at 625-4509.

Sincerely,

Katy Chaney

KATY CHANEY
Acting Director

HI:vg

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RECEIVED
MAY 17 1985
Dept. of Construction & Land Use

5003 45th N.E.
Seattle, WA 98105
May 15, 1985

Beatrice Ryan
Acting Director
Dept. of Construction and Land Use
Municipal Building
Seattle, WA 98104

RECEIVED
MAY 20 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Ms. Ryan:

We have reviewed the DCLU file on the helipad proposal by Childrens Orthopedic Hospital recently and have noted the letter to Katy Chaney from Dorothy Teeter of COH dated April 29, 1985. This letter raises several questions regarding the way in which section 23.48.05 of the land use code should be interpreted. Since this is the first time that this section of the code will be implemented, it seems particularly important that the factions involved be given some guidance from you regarding its interpretation. We have written several letters to William Justen on this topic that outlines some of our thoughts about what information the city should require from a helipad applicant. In our view, the cosideration of alternatives should not be limited to only alternative helipad sites but should also include an analysis of current ground transportation services compared with the proposed helicopter service. Another important issue concerns the referral decision, normally made by a local physician, sometimes with help on the telephone from medical emergency experts at MEDCON at the University of Washington. What is unique about the services provided by Childrens Orthopedic Hospital? What other hospitals offer many or all of the services offered by Children's? We know that Mary Bridge Hospital in Tacoma, Valley General in Renton, Evergreen Hospital in Kirkland and Everett General in Everett all provide pediatric facilities and services. All of these hospitals either have a helipad now or are planning to acquire such a service. In addition, St. Luke's in Bellingham and Island Hospital in Anacortes are currently trying to obtain a helicopter service. Finally, Harborview, the major trauma center for the region has had an active helipad in operation for several years. How are the referral decisions made and what referral pattern alternatives should be included in the DCLU review?

We ask that you review our previous letters to Mr. Justen in the files on this issue and provide us with some guidance on how DCLU intends to interpret this untested section of the code. We look forward to hearing from you in the near future.

Yours sincerely,

Anita Francis

Anita Francis
Liz Anderson
Citizens Concerned About
Helicopter Transport

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Seattle
Department of Construction and Land Use

June 5, 1985

Re: Proposed Helipad (CC 84-022)

Dorothy F. Teeter
Director of Planning
Children's Orthopedic Hospital
P. O. Box C5371
4800 Sand Point Way N. E.
Seattle, Washington 98105

Dear Ms. Teeter:

As you requested, we will amplify our earlier comments on the standards for the City's review on COH's application for a Council Conditional Use permit for the helipad facility.

As stated in Sections 23.48.05.A.1.a. and c. of the Land Use Code, a helistop may be permitted if the Council finds that the helistop is needed to save life and that its use will be restricted to occurrences involving life-threatening emergencies. The intent of the Code is to ensure that the heli pad facility is used not for mere convenience purposes, but for absolute necessity. It is therefore, important for COH to document the medical need and circumstances under which the helipad facility will be used. The analysis should discuss the medical need and effectiveness of the helipad service compared with the current ground transportation service. Further, the discussion should document the capital improvement and operational costs of the helipad, and show how such expenditure will be recovered by the reasonable use of the facility without abusing the level of frequency or critical usage.

We understand that the State Department of Social and Health Services has recently made a determination to require a Certificate of Need for the helipad proposal. Your cost/effectiveness analysis pursuant to the State criteria will undoubtedly disclose similar information necessary for our permit review, and we look forward to receiving the results of your analysis. As we stated in our April 17, 1985 letter, your analysis must discuss how the proposed facility meets the goals and objectives of the Puget Sound Health Systems Agency and State Certificate of Need Program, in order for our review to proceed.

You have also asked us to amplify our concerns on the environmental impacts of the proposal. We have had several discussions with your consultant (Mr. Glenn C. Backman of Shapiro and Associates), and we have asked him to address the potential impacts of the helipad on the surrounding community (e.g., impact on air, noise, environmental health and light and glare). We also expect the discussions to include any cumulative and indirect impact such as increased employment and parking needs, if any. Our environmental review is based on the City's SEPA Ordinance effective October 1, 1984. We have also forwarded a copy of the comments of the Laurelhurst Community Club dated January 25, 1985 to Mr. Backman.

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Please return this (1)st to Hermia

With reference to alternative helistop locations, Section 12.38.05.A.1. states:

> "The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas."

As stated, the intent of the Code is to examine alternative locations in relation to accomplishing the purpose of the helistop. We believe the purpose of the helistop, as defined in your application,is to support COH's air ambulance service for emergencies. The purpose of the proposed helistop is not to serve the ambulance function of any other hospital in Seattle. Therefore, the analysis on alternative locations does not need to be on a regional basis. Rather, the analysis should focus on alternative locations which can accomplish the same purpose as the proposed location within the context of the COH function, including both direct and referral services.

If you have further questions, please do not hesitate to contact Hermia Ip, Land Use Specialist, of our office at 625-4509.

Sincerely,

KATY CHANEY
Acting Director

By Katy Chaney
KATY CHANEY
Director, Land Use Division

HI:vg

cc: Tom Byers
Glenn Backman
Anita Francis
Liz Anderson
Treuman Katz
Frank Chestnut
L. Thompson

Shapiro + Assoc.
Smith Tower suite 1812
506 2nd Ave.
Seattle 98104

COH
4800 Sandpoint Way NE
PO Box C5371
University Station
Seattle 98105

Certificate of Need Program
State Dept of Social + Health Servs
Mail stop ET-33
Olympia, Wa 98504

Executive Director
Puget Sound Health System Agency
601 Valley St. Seattle 98109

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Hermia

Seattle
Department of Construction and Land Use

June 11, 1985

Re: COH Helicopter Noise Test

Ms. Liz Anderson
Citizens Concerned About
Helicopter Transport
4746 45th N. E.
Seattle, Washington 98105

Dear Ms. Anderson:

Thank you for your letter of May 24, 1985, to Mrs. Hermia Ip, Land Use Specialist of our office, regarding the recent helicopter noise test of COH. We have also forwarded a copy of your letter to Shapiro Associates, environmental consultant of COH, and we have asked Shapiro to address your concerns including discussions on the technical validity of their methodology. We will contact you again when the study is available for public review.

If you have further questions, please call Mrs. Ip at 625-4509.

Sincerely,

BEATRICE FARRAR RYAN
Interim Director

By Katy Chaney
KATY CHANEY, Director
Land Use Division

HI:vg

cc: Glen Backman, Shapiro Associates

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RECEIVED
MAY 30 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Hermia Ip
Department of Construction and Land Use
600 4th
Seattle, Washington 98104

May 24,1985

Dear Hermia,

While we shared information over the phone in regard to COH's noise test, we thought it might be beneficial to you to have our objections in writing and on file.

Our main concerns have to do with the inconsistencies in information that we have received regarding measurement site locations, and the fact that an essentially unloaded helicopter was used in the demonstration.

We appreciate your continued sincere efforts in regard to this issue and hope that by sending this memo some fraction of your job is made easier.

Thank you,

Liz Anderson

Liz Anderson
Citizens Concerned About
Helicopter Transport

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To: Department of Construction and Land Use
From: Citizens Concerned About Helicopter Transport
Re: COH Helicopter Noise Test

May 24,1985

The Citizens Concerned About Helicopter Transport would like to express the following concerns about the helicopter noise test conducted by COHMC on Tuesdav, May 14,1985.

We would also like to point out the fact that COH once again demonstrated its lack of concern for the surrounding community by notifying the Laurelhust Community Club Board of its intended test only the evening before it was to be conducted. With such little notice, we were unable to alert the community or the residents immediately surrounding the hospital to the proposed flight. The test itself caused great concern for the people living in Laurelon Terrace, the apartment complex adjacent to the proposed helipad site.

1.Based on conversations with Hermia Ip, Karen Cummings, and the gentleman measuring the noise at COH on May 14th, we believe that the information gathered from the test will not be either adequate or valid for the following reasons.

A. It is our understanding that Hermia Ip and a representative from the consulting firm of Shapiro and Associates had agreed upon a minimum of four sites at which the noise levels of the helicopter fly-by, landing, and take-off would be measured. The locations agreed upon were to include two sites east of the hospital in the residential area, one site north of the hospital and one site west of the hospital.

B. When our representative spoke with Karen Cummings minutes prior to the demonstration, she assured us that there were only two sites being monitored and she could not tell us the specific location of the second.

C. When we spoke with the person measuring the noise levels at the first site (4407 44th N.E.), he was unaware that there were measurements being taken anywhere else other than his site.

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In short, these two inconsistencies with the information given us with regard to four sites having been agreed upon for measurement, lead us to believe that the test conducted did not comply with the requests of DCLU. Further, the results of the test done on May 14th will be representative of only a very limited portion of the affected community. As we have pointed out in past correspondence with DCLU, the elderly residents of Laurelon Terrace will be severly impacted by the noise generated by such aircraft landing at, and taking off from, the proposed helipad site and yet their specific location was not monitored for noise levels during the test.

2. We believe that the demonstration monitored at COH on May 14th was not representative of what will be a typical patient transfer by helicopter.

A. The helicopter participating in the experiment carried only an empty stretcher, a female flight nurse (weighing approximately 120 pounds), and the pilot. On a typical emergency transfer of a neonate, it is expected that the helicopter will be loaded with an isolette weighing approximately 200 pounds, a patient, and a doctor in addition to the flight nurse and pilot. Because helicopter noise is related to weight on board, we feel that the measurements obtained may not be valid or representative of actual flight noise impacts.

In conclusion, we feel that the completed noise test should be deemed invalid and conducted a second time. We would like to see the noise levels monitored specifically at Laurelon Terrace in addition to the other sites previously established by DCLU. We would also like COH to use a loaded helicopter, so as to provide a more accurate measure of actual transport noise. Because of the inconsistencies which have arisen during the initial test, we would like a representative from the city to attend, if possible, and monitor a second helicopter noise test. Advance notification to the community and to Citizens Concerned About Helicopter Transport would be greatly appreciated.

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Seattle
Department of Construction and Land Use

June 5, 1985

Re: Proposed Helipad (CC 84-022)

Dorothy F. Teeter
Director of Planning
Children's Orthopedic Hospital
P. O. Box C5371
4800 Sand Point Way N. E.
Seattle, Washington 98105

Dear Ms. Teeter:

As you requested, we will amplify our earlier comments on the standards for the City's review on COH's application for a Council Conditional Use permit for the helipad facility.

As stated in Sections 23.48.05.A.1.a. and c. of the Land Use Code, a helistop may be permitted if the Council finds that the helistop is needed to save life and that its use will be restricted to occurrences involving life-threatening emergencies. The intent of the Code is to ensure that the helipad facility is used not for mere convenience purposes, but for absolute necessity. It is therefore, important for COH to document the medical need and circumstances under which the helipad facility will be used. The analysis should discuss the medical need and effectiveness of the helipad service compared with the current ground transportation service. Further, the discussion should document the capital improvement and operational costs of the helipad, and show how such expenditure will be recovered by the reasonable use of the facility without abusing the level of frequency or critical usage.

We understand that the State Department of Social and Health Services has recently made a determination to require a Certificate of Need for the helipad proposal. Your cost/effectiveness analysis pursuant to the State criteria will undoubtedly disclose similar information necessary for our permit review, and we look forward to receiving the results of your analysis. As we stated in our April 17, 1985 letter, your analysis must discuss how the proposed facility meets the goals and objectives of the Puget Sound Health Systems Agency and State Certificate of Need Program, in order for our review to proceed.

You have also asked us to amplify our concerns on the environmental impacts of the proposal. We have had several discussions with your consultant (Mr. Glenn C. Backman of Shapiro and Associates), and we have asked him to address the potential impacts of the helipad on the surrounding community (e.g., impact on air, noise, environmental health and light and glare). We also expect the discussions to include any cumulative and indirect impact such as increased employment and parking needs, if any. Our environmental review is based on the City's SEPA Ordinance effective October 1, 1984. We have also forwarded a copy of the comments of the Laurelhurst Community Club dated January 25, 1985 to Mr. Backman.

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With reference to alternative helistop locations, Section 12.38.05.A.1. states:

> "The Director's report shall examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas."

As stated, the intent of the Code is to examine alternative locations in relation to accomplishing the purpose of the helistop. We believe the purpose of the helistop, as defined in your application, is to support COH's air ambulance service for emergencies. The purpose of the proposed helistop is not to serve the ambulance function of any other hospital in Seattle. Therefore, the analysis on alternative locations does not need to be on a regional basis. Rather, the analysis should focus on alternative locations which can accomplish the same purpose as the proposed location within the context of the COH function, including both direct and referral services.

If you have further questions, please do not hesitate to contact Hermia Ip, Land Use Specialist, of our office at 625-4509.

Sincerely,

KATY CHANEY
Acting Director

By Katy Chaney
KATY CHANEY
Director, Land Use Division

HI:vg

cc: Tom Byers
Glenn Backman
Anita Francis
Liz Anderson
Treuman Katz
Frank Chestnut
L. Thompson

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

April 29, 1985

RECEIVED
MAY 1 - 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Katy Chaney
Director
Land Use Division
Seattle Department of
Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Re: The Children's Orthopedic Hospital and Medical Center
Helipad Proposal

Dear Ms. Chaney:

Thank you for your letter of April 17, 1985, and for your assistance in connection with our request for the City's approval of the construction of a helipad at COHMC. If I may, I would like to request that you amplify or explain some of your comments regarding the standards for the City's review of our application for council conditional use approval.

You enclosed a copy of Section 23.48.05, which set forth the criteria for approval of a helipad. When you allude in the April 17 letter to our need to justify "the medical need for the helipad facility," I believe that is a reference to Section 23.48.05A.1.a. This provision of the applicable code section requires a showing that the "helistop is needed to save lives."

Your letter appears to say that we are required to show the cost-effectiveness of the helipad's usage and development. I could not find a provision in Section 23.48.05 requiring such an analysis. I would appreciate your assistance in explaining the need for this type of analysis.

In your letter, you indicate that you are concerned about the proliferation of helipads and the resultant undesirable effects on neighborhoods. It would be of assistance to us if you would provide us with examples of such undesirable effects, or amplify your concerns sufficiently so that we could be sure that we addre s the City's specific concerns.

P.O. BOX C5371 • 4800 SAND POINT WAY N.E. • SEATTLE, WASHINGTON 98105 • (206) 526-2000

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Finally, you indicate that the City's review cannot proceed without an analysis of the helipad in light of the goals and objectives of the Puget Sound Health Systems Agency and the State Department of Social and Health Services Certificate of Need Program. We would very much appreciate a clarification of this statement. The Puget Sound Health Systems Agency's goals and objectives are simply an interpretation of those of the State Department of Social and Health Services Certificate of Need Program. The proposed helipad is exempt from certificate of need review under the policy of the legislature embodied in the Health Planning Act (Chapter 70.38 RCW) and the regulations of the Department of Social and Health Services interpreting that Act. I presume that the Seattle Department of Construction and Land Use is not going to assume the role of the Certificate of Need Program and ask us to address our arguments to it as if a Certificate of Need were required where one is not. In any case, please advise us of your thought about this matter.

Again, thank you for your assistance. We very much appreciate the dialogue between COHMC and the Department of Construction and Land Use on this matter.

Sincerely,

Dorothy F. Teeter

Dorothy F. Teeter
Director of Planning

DT:js

cc: T. Beyers
L. Thompson
F. Chestnut
T. Katz

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KEN RAHM
Secretary

STATE OF WASHINGTON
DEPARTMENT OF SOCIAL AND HEALTH SERVICES
Olympia, Washington 98504

May 7, 1985

RECEIVED
MAY 17 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dorothy F. Teeter
Director of Planning
The Children's Orthopedic
Hospital and Medical Center
P.O. Box C5371
4800 Sand Point Way N.E.
Seattle, Washington 98105

Dear Ms. Teeter:

This is to inform you that the construction of a helipad at Children's Orthopedic Hospital is subject to Certificate of Need review under the provisions of 70.38 RCW and 248-19 WAC. We consider a capital expenditure by a health care facility that enables on-site landing by an emergency services helicopter to be a capital expenditure which substantially changes the services of the facility under the provisions of WAC 248-19-230(1)(b).

Enclosed are Certificate of Need application materials. I would encourage you to meet with staff from this office, the Puget Sound Health Systems Agency and the Hospital Commission prior to development of your application so that we can identify potential issues and discuss elements of your proposal that should be emphasized in your application.

Sincerely,

Frank Chestnut
Director
Certificate of Need Program
HB 31

FC:bb
Enc
cc: Puget Sound Health Systems Agency
Hospital Commission
Katy Chaney, Seattle Dept. of Construction and Land Use
Jerry Schneider

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Hermia Jp -
for our 1:30 mtg.
tomorrow.

File 84.022
File 1

May 2, 1985

SHAPIRO & ASSOCIATES
The Smith Tower
Suite 1812
506 Second Avenue
Seattle
Washington 98104
206/624-9190

RECEIVED
MAY 9 - 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. Russ Altermatt
Seton, Johnson & Odell
133 S.W. Second
Portland, Oregon 97204

Dear Mr. Altermatt:

Glenn and I have visited and reviewed the area around the Children's Orthopedic Hospital's helipad and its flight path to determine what we believe to be the best locations for noise monitoring. We looked at sites within the line of sight of the facility, as well as sites along the flight path. We also looked at the land use in the vicinity.

We have tentatively selected the following four sites (see attached map):

1. The east side of 44th Avenue N.E. between N.E. 47th Street and N.E. 50th Street. The approximate address of the site is ~~4420~~ 4422 44th Avenue N.E. Shrubbery and the slope of the hill provide a limited visual buffer. The grade rises from 122 feet at the helipad to 150 feet along 44th Avenue N.E. These are single family houses along this street.

2. A multiple-family housing complex (yellow/cream-colored buildings) across from COH on the west side of Sand Point Way, directly south of N.E. 50th Street. As you can see from the map, these residences are both along the flight path and within the sight range of the helipad. The ground floor of the complex is approximately at 54 feet while the helipad is due east at 122 feet.

3. A highrise, south of Site 2, located on the east side of Sand Point Way, southwest of 40th Avenue N.E. This is the tallest building in the area and, although a residence, is also located in a commercial area along Sand Point Way. This building is located along the flight path.

4. A lowrise, multiple-family complex located west, adjacent to the COH property. This complex caters primarily to the elderly and residents have voiced unified opposition to the project. The noise monitoring should be done on the northeast portion of the complex, the portion that would both experience the flight noise as well as the landing. The complex is between 40th and 42nd Avenues N.E., north of N.E. 45th Street.

After reviewing the proposed sites for your concurrence and prior to finalizing the noise monitoring locations and considerations, you should contact Curt Horner with the City of Seattle Environmental Health Department at (206) 587-2722. He is familiar with the project and is on the Mayor's noise committee. He will also, in all likelihood, review the project for DCLU regarding noise. His perspective on the site selection, as well as his viewpoint on the issues and concerns to be addressed, are important.

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As soon as we have defined the monitoring locations, please call me so we can draw up the scope of services and contract, and get approval from the City's Land Use Department (which is overseeing the City's Land Use requirements). If you have any questions, please don't hesitate to call.

Sincerely,

SHAPIRO AND ASSOCIATES, INC.

Susan Killen, Project Manager

SK:pg
Enclosure

cc: Glenn Bachman

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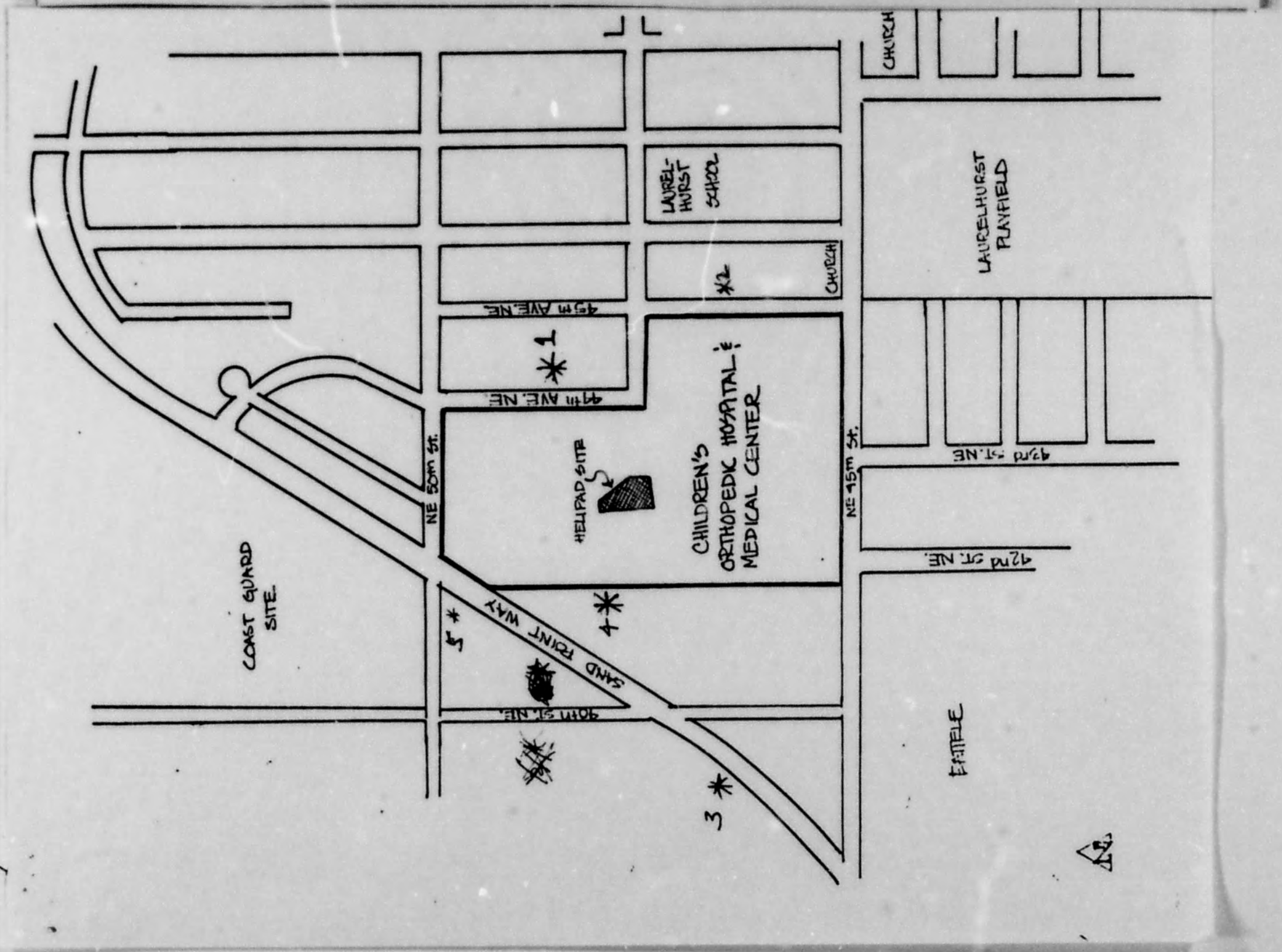

Hermia Ip Copy

File
cc 84-022

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

February 27, 1985

Dale E. Sherrow, Jr.
3625 - 1st Avenue South
Seattle, Washington 98108

Dear Mr. Sherrow:

Thank you for your letter and suggestions on the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on hospital grounds. I have asked William Justen, Director of the Department of Construction and Land Use, to respond to your specific concerns, and if you have not already heard from him, I'm certain you will soon. I have also asked Mr. Justen to provide me with a copy of his reply.

I appreciate your interest in the development and environment of your neighborhood and, again, thank you for taking the time to write.

Sincerely,

Charles Royer

CR:hil

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Log #1393

RECEIVED
FEB 15 1985
Dept. of Construction & Land Use

FISHMONGER
IMPORTS
EXPORTS
DOMESTIC

BALE E. SHERROW, JR.
3625 - 16th AVENUE SOUTH
P. O. BOX 80181
SEATTLE, WASHINGTON 98108

AREA CODE 206
OFFICE 323-8008
HOME 523-4430

CLU - Mayor's response due 2/26

February 9, 1985

RECEIVED
FEB 13 1985
MAYOR'S OFFICE

AK- FYI

Mayor Charles Royer
600 Fourth Ave.
Floor 12
Seattle, Wn. 98104

Dear Mayor Royer,

As a concerned citizen and resident of the neighborhood around Children's Orthopedic Hospital, I try to stay in touch with the proposed developments at the hospital. Since there are four major projects on going at this time, and little advanced notice to the neighborhood as to the plans, it is rather difficult. However the issue that inspired this letter is the proposed helipad.

I have written letters and stayed in contact with the DCLU and Mr. William Justin. The fourteen day period for public comment on the helipad ended on January 30, 1985 and I waited until February 7, 1985 to contact Mr. Justin's office about the decision concerning the necessity for an environmental impact statement on the helipad. During this conversation I was informed that a decision would not be reached for at least six weeks. The reason for this delay was that they were waiting for more information about the noise level and other impact from COH. I then asked if they would like more information from myself or other citizens about what we thought or knew about helicopters and was told that the time for public comment was over.

Waiting for more information about the impact from COH.

Public comment period is over.

Is the fox watching the hen house?

I believe that the information provided by COH will be bias in their favor, and further that Mr. Justin should be allerted to this fact. Yes, we need more information and this is what I am requesting in the form of an enviromental impact statement.

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Over the next twelve months COH is planning; 1) a new professional building; 2) expanding the short stay unit; 3) expanding the emergency room into a major trama center and; 4) building a helipad. Perhaps a master use plan would be appropriate, or even a certificate of need for the over all projects. As individual projects the codes do not require any major application or notification on the part of the COH. However, the impact of the total of the parts certainly will be significant.

Please advise me as to your thoughts on the helipad and the need for an environmental impact statement.

Sincerely,

Dale E. Sherrow, Jr.

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Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

February 20, 1985

Ms. Dorothy Teeter
Director of Planning
Children's Orthopedic Hospital
4800 Sand Point Way N. E.
Seattle, Washington 98105

Dear Ms. Teeter:

Pursuant to your meeting last week with Hermia Ip, Land Use Specialist of our Land Use Review Section, this is to confirm that the following information is required for our review of the Children's Orthopedic Hospital (COH) application for a helistop on the hospital grounds (CC 84-022):

1. A detailed description on the current emergency air transportation procedures, and the procedures involved with the proposed helistop facilities. Explain the benefits gained by the proposal, perhaps in terms of time, distances, extent of efficiency and any other pertinent factors. Why are such facilities needed at this particular location of COH and at this time?

2. We understand Airlift Northwest will be contracted to provide the helicopter services. Where will the helicopters be stationed? Use a map to show their flight paths, altitude and the geographic areas impacted. What kind of helicopters will be used, and what noise levels are generated by such equipment? What devices, if any, do these planes have for noise control?

3. How will the existing noise levels of the hospital and the surrounding community be impacted? Provide measurements on existing noise levels on site and at typical recipient points in the surrounding community. Based on the experience of similar services in comparable neighborhood environments, project the probable noise levels caused by the proposal. What mitigating measures are proposed?

4. For each landing and takeoff of the helicopter, what time duration is necessary? What time span is involved for any noise impact?

5. How frequent will the helistop services be used? Identify the average case and worst case. Based on the hospital's history and other pertinent considerations, what is the probable occurrence of night-time use versus day-time use?

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6. What economic costs are involved with the helistop services? What implications do the economic data have on the probable frequency and extent of use? In COH's contract with Airlift Northwest, is there a stipulation on a minimum use? What arrangement, plan and/or agreement does COH have with other hospitals in Seattle regarding the use of the helicopter services? Please submit a copy of COH's contract with Airlift Northwest.

7. What will be the potential impact on air quality? What quantity and quality of exhaust will be generated by the helicopters? What mitigating measures, if any, are proposed?

8. What will be the potential impact on light and glare? What sources and extent of light will be generated, both on campus and on the helicopters? What mitigating measures are proposed to minimize impact on the residential neighborhood?

As Mrs. Ip mentioned at the meeting, the Department has received numerous citizen phone calls and letters from the community, expressing their concerns with the environmental impacts of your proposal. We encourage you to review the file and incorporate, as much as possible, any pertinent community input in your response to this letter. If you have further questions, please do not hesitate to call Mrs. Ip at 625-4509.

Very truly yours,

WILLIAM J. JUSTEN, P. E.
Director

By Katy Chaney
KATY CHANEY, Director
Land Use Division

HI:lld

cc: Tom Byers, Office of the Mayor

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File
84-022

Seattle City Council

RECEIVED
MAR 5- 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

March 4, 1985

Herman S. Siqueland
The Siqueland Partnership
1200 Westlake North, Suite 801
Seattle, Wa. 98109

Dear Mr. Siqueland:

Thank you for contacting me regarding the proposal to build a helipad at Children's Orthopedic Hospital.

The application is for a Council Conditional Use permit which will require a decision by the City Council. I am forwarding your letter to the Director of the Department of Construction and Land Use so that your comments will be placed in the official record for consideration by the Land Use Committee and Council when the application comes before us.

I do appreciate your concerns. Thank you for taking the time to forward them to me.

Respectfully,

PAUL KRAABEL, Member
Seattle City Council

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The Siqueland Partnership
Attorneys at Law
1200 Westlake Avenue N., Suite 801
Seattle, Washington 98109
Telephone (206) 283-6069
Telex 32-0266

Partners
J. Byron Holcomb
Peter LeSourd
Herman S. Siqueland

February 13, 1985

Mr. William J. Justen, Director
Department of Construction & Land Use
600 4th Avenue
Seattle, WA 98104

Re: Children's Orthopedic Hospital Helicopter Pad Application dated November 13, 1984

Dear Mr. Justen:

I am writing this letter both to express my opposition to the Children's Orthopedic Hospital's November 13, 1984 application for operation of a helicopter pad on the hospital grounds, and also to express the reasons for my opposition.

I am not a resident of Laurelhurst, nor even of Seattle, yet I have a real and vital interest in opposing the hospital's helicopter pad application. Quite simply, that interest is the continued health and well being of my 89 year old mother who is a resident of the Laurelon Terrace Condominiums, and would be one of the nearest residents to the proposed helicopter pad. There are at least six other residents of Laurelon who are in their late eighties and early nineties, and who would likewise be adversely affected by the proposed helicopter operations.

The available information indicates that operation of the pad on the hospital ground would add very little benefit to children in emergency situations over the present operation from the pad on the University of Washington playfields. The possibility of that slight additional benefit must be balanced against the clearly detrimental affect which operation of a hospital ground pad would have on the health and comfort of my mother and the other nearby residents of Laurelon who are of a similar age.

As a result of my past military service, I am familiar with the noise levels generated by helicopter pad operations. I also experienced, approximately 15 years ago, the noise level generated by a commuter helicopter operation which was operated, on a trial basis, on the roof of a downtown Seattle office building. The noise during landing and takeoff operations totally disturbed work in all offices in the surrounding buildings within an area

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of several blocks, and my recollection is that the helicopter service was discontinued because of that severe noise interference.

In the case of the Children's Orthopedic Hospital's proposed pad, the noise level would be especially detrimental to the health and well being of the nearby residents in the eighty and ninety year old bracket.

I can understand why direct operation of the helicopters to the hospital would result in a cost savings over the present operation, as the ambulance service from the university playfield to the hospital would be eliminated. If that cost savings is a motivating factor in the hospital's pending application, then I am especially critical of the hospital having submitted that application. I am not interested in the hospital saving money at the expense of my mother's health and well being, nor at the expense of the other elderly residents near the proposed pad. I would appreciate your department inquiring into the significance to the hospital of possible cost savings as a motivating factor in their present application. Assuming it is not such a factor, then the objections stated above are nevertheless applicable and the application should be denied.

Very truly yours

Herman S. Sigueland

HSS/ms

cc: Councilmembers

Mrs. Robert (Peggy) Habegger
Pres., Board of Trustees of
The Children's Orthopedic Hospital

Mayor Charles Royer

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Seattle City Council

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Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

March 4, 1985

Earl E. Wheatley, Pres.
Montlake Community Club
2008 E. Louisa St.
Seattle, Wa. 98112

Dear Mr. Wheatley:

Thank you for contacting me regarding the proposal to build a helipad at Children's Orthopedic Hospital.

The application is for a Council Conditional Use permit which will require a decision by the City Council. I am forwarding your letter to the Director of the Department of Construction and Land Use so that your comments will be placed in the official record for consideration by the Land Use Committee and Council when the application comes before us.

I do appreciate your concerns. Thank you for taking the time to forward them tc me.

Respectfully,

PAUL KRAABEL, Member
Seattle City Council

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File 84-022 Community Club

RECEIVED
FEB 19 1985
PAUL KRAABEL
SEATTLE CITY COUNCIL

February 14, 1985

Mr. Paul Kraabel
Seattle City Council
1100 Municipal Bldg.
Seattle, 98104

Dear Sir:

The Mayor has requested a "Certificate of Need Study" of helicopter landing sites for Seattle hospitals. Montlake Community Club supports this, and in addition requests that the Council prepare legislation that would require a "Master Plan" for helicopter service before any helistop building permits would be issued. This plan would be prepared by hospital administrations and a Council committee.

If all area hospitals should decide to have helistops, added costs would result without a significant gain in patient care. Without some organization in control such proliferation may be forced by economic pressures. Now is the time to act.

montlake Community Club therefore supports the Laurelhurst Club in requesting a hold on the construction of pads until a logical location pattern can be agreed upon.

The City should try to control helicopter population in our sky. The various uses that result in operation below 2000 feet altitude should be subject to the requirement for a City license. The number issued for each need could be limited. Thus , for example, the various radio stations would find a way to share trafic spotting choppers.

The City should not allow commercial presures to prevail over the citizens desires for quiet overhead.

Earl E. Wheatley, Pres.
Montlake Community Club
2008 E. Louisa St.
Seattle, Wn., 98112

Earl E Wheatley

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4250 N.E. 50th
Seattle
Sept 12, 1985
File # 84022

Dept of Construction & Land Use
Municipal Bldg
Seattle WA

Dear Sirs:

I am writing because I am concerned about the development of helicopter service at Childrens Orthopedic Hospital

Everyone recognizes the value and importance of Childrens Orthopedic Hospital to the community and to the Pacific Northwest. Everyone wants to save lives wherever possible But does it not, too, to be balanced by some of its obvious disadvantages?

First, the overwhelming financial cost to the hospital, but mostly to the patients involved.

Could the service from Grades

field not be expanded and imprisoned for these "few" cases they expect.
In my view University Hospital and Childrens could cooperate further in this kind of service

Noise is a big unpleasant factor from the hospital mentions how it could effect the patients already there Lights would be still worse

The competition among hospitals to fill beds needs to be regulated adding helipads will only promote this Ambitions, competing helicapter services add to the problem

There are dangers in flying over heavily populated areas

Expanded use of helicapters except in cases of true emergency could badly effect the use of the military helicapters which are already giving good service

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and are paid for by taxpayers.

Orthopedic Hospital moved into this community saying they would only be a "cottage" hospital. They have not kept promises made. In the case of the large concrete garage they promised it would ~~only~~ be ~~one~~ no higher than the present parking lot. It is a very unsightly two story structure for those of us who live near it. Their policy of secrecy about their plans is very disturbing.

I wish you success in solving these problems. I dont mean to stand in the way of progress, but there are valid neighborhood considerations.

Sincerely yours
Claire Marston

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Seattle, Wash.
4708-41st Ave NE.
Sept 4-1985.

Ms Beatrice Ryan.
400 Municypal Bldg.
Dear Ms Ryan

In general I am a booster of Childrens Hospital but re the case of the illegal landing of helicopters over this complex - and so low over our housetops - I must object stongly. For one with normal hearing the noise is destracting enough but for a wearer of double hearing aids, it is definitely deafening. There are two sides to all questions, we would like to see the lives of the patients saved but what about the effect on we who live here and have for years.

Respectfully,
Edna Lincoln

RECEIVED
SEP 05 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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Hermia
Violation
cc 84-022

Seattle
Department of Construction and Land Use

Beatrice Farrar Ryan, Interim Director
Charles Royer, Mayor

September 3, 1985

Re: Code Violation of Children's Orthopedic Hospital (COH)

Mrs. Pat Lundquist
4685 41st Avenue N. E.
Seattle, Washington 98105

Dear Mrs. Lundquist:

Thank you for your letter stating your objection to the landing of a helicopter at COH campus. Our Department has sent a Notice of Violation to the hospital and Air Lift Northwest (see enclosed), and your letter serves as a supportive document.

If you have any questions, please do not hesitate to call Hermia Ip, Land Use Specialist of our office, at 625-4509.

Sincerely,

Katy Chaney

BEATRICE FARRAR RYAN
Interim Director

HI:vg

Enclosure

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RECEIVED
AUG 29 1985
Dept. of Construction & Land Use

August 28, 1985

Ms. Beatrice Ryan, Interim Director
Department of Construction and Land Use
400 Municipal Building
600 4th Avenue
Seattle, Wa 98104

Re: Unauthorized Helicopter Landing at
Childrens Orthopedic Hospital

Dear Ms. Ryan:

I am writing to protest the unauthorized landing of helicopters at Childrens Orthopedic Hospital. Last night August 27 at about 8:15 p.m. a noisy, thrashing, vibrating helicopter came over my roof and landed at the hospital. This is a residential neighborhood and I do not approve of turning my home into a landing field. I am in the path of these noisy obtrusive objects and can do nothing to avoid the racket. This is the second time this has happened and it seems the hospital is acting with complete disregard for the people that dwell in its vicinity. This is a detriment to the neighborhood and I am sure if one put one's condominium up for sale and one of those helicopters came over at the precise time you were showing the condominium you would be unable to make a sale, therefore it is lowering the property value as well.

It seems that Childrens Orthopedic Hospital has a pattern of expansion that is oblivious to the neighborhood concept. The original plans called for a cottage type of institution and they have added on continuously so that they sprawl all over the hill in ever uglier proportions.

The hospital should not be allowed to invade a peaceful neighborhood with ever increasing noise polution. Their ambulance sirens are enough to contend with as it is. Everyone knows they are trying to become a trauma center as their patient count has fallen and they are just trying to attract more business. However this latest attempt to attract business should be weighed in relation to the deteriorating effect it is having on the surrounding neighborhood.

I would be very interested to know your views on the subject and what can be done to keep the hospital from transgressing on other people's rights.

Yours very truly,

Pat Lundquist

Mrs. Pat Lundquist
4685 41st N.E.
Seattle, Wa 98105 (wk) 628-6600; 525-5653

cc: Charles Royer

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~~Dept/Hearing~~
File 84-022

September 3, 1985

RECEIVED
SEP 04
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Beatrice Ryan, Interim Director
Department of Construction and Land Use
400 Municipal Building
600 4th Avenue
Seattle, Wa. 98104

Re: Unauthorized Helicopter Landing at
Children's Orthopedic Hospital

Dear Ms. Ryan:

I am writing to protest the alleged unauthorized landing of helicopters at Children's Medical Center and Hospital, Sand Point, Northeast Seattle. I understand that authorization for such landings has not been given as it has not been proven that such activity is necessary to save a child's life. Helicopters do land two minutes away by ambulance.

This is a residential neighborhood and, to date, the residents have been more than generous to the Medical Center as it has grown, annually, in physical size to accommodate its needs. However, the noise factor and the possibility of accidents are a real problem here. The landing at a nearby play field, just two minutes away by ambulance, has been adequate to date. I see no reason to change this arrangement.

I am hoping that you will take all opinions into consideration before permission is given for helicopter landings on the hospital grounds. Please know that I, of course, am interested in and proud of the Medical Center and all it is doing for children of our State of Washington. However, the surrounding neighborhood deserves to be kept to the standard it has been and not reduced to an uncomfortable place to live and/or sell their homes.

Yours very truly,

Mrs. Lois Jean Zander

Mrs. Lois Jean Zander
4679 - 41st N.E.
Seattle, Wa. 98105

cc: Office of Mayor
Charles Royer

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H.I Garage violation cc 84.022

ALBERT A. FELDMANN
P. O. BOX 85568 UNIVERSITY STATION
SEATTLE, WASHINGTON 98105

RECEIVED
SEP 06 1985
DEPT. OF COMMUNITY DEVELOPMENT
LAND USE DIVISION

Aug. 30. 1985

Ms Anne Ormsby
Dept. of Cost and Land Use
Municipal Building
Seattle, WA 98101

Subject: COH Helicopter Landings

Dear Ms Ormsby,

Further to our telephone conversation of Aug. 28. I want to reiterate my protest against the violation, by the Childrens Orthopedic Hospital, of the safety of the many residents of this densely populated area in flying helicopters at low altitude over their homes and landing them on the hospital grounds. I also want to protest against the environmental pollution caused by the engine noise of these helicopters, which is about to turn one of this city's most quiet neigborhoods into a heliport area.

With regard to the specific instance of this week's landing I heard the noise but was not an eye witness. However, I have spoken with eye witnesses and given them your name and address so that they can send you written affidavits of their observations for potential appearance as witnesses in Court. Let me add that as Vice President of the Laurel Crest Condominium Owners Association, I represent 79 families in addition to myself in this protest. The administration of Mayor Royer has done a creditable job of keeping Seattle a very liveable city and your handling of this violation by an institution whose motto appears to be " the public be damned ", will be a good indication whether this administration is capable of protecting us against such encroachments in the future or not.

Sincerely yours,

Albert A. Feldmann

cc. Mayor Charles Royer

Albert A. Feldmann

4873 Terrace Drive NE
Seattle, WA 98105

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cc 84-022 d. atty

Seattle
Department of Construction and Land Use

August 30, 1985

Bud Nicola, Director
Health Department
7th Floor, Yesler Building

Dear Mr. Nicola:

I am writing to ask your help.

As you know, this Department has received an application from the Children's Orthopedic Hospital to establish a helipad on hospital grounds. The Land Use Code classifies the hospital as a Major Institution, and Major Institutions are permitted to establish helistops as a Council Conditional Use if the Council finds that:

a. The helistop is needed to save lives;
b. The helistop is located so as to minimize impacts upon surrounding residential property; and,
c. Use of the helistop will be restricted to occurrences involving life-threatening emergencies.

We must make a recommendation to the City Council and our report must examine alternative locations for the helistop, including sites outside the institution's boundaries, which would accomplish the purpose of the helistop with a lesser impact upon residential areas as part of the analysis.

The question of medical need is beyond our area of expertise and this is where I am asking for your Department's assistance. In the past, helicopters have made emergency landings at the Graves athletic field and patients are then transported by ambulance to either Children's Orthopedic or to the University of Washington Medical Center. This request by Children's Orthopedic would mean those patients destined for Children's would instead land on hospital grounds with those destined for the University of Washington continuing to land at Graves field. The University of Washington may subsequently apply for a permit for a helistop on the grounds of the U. W. medical campus.

You have agreed to sponsor a public hearing and to give us your opinion on the question of medical need. The questions I would like your opinion on are:

1. What are existing emergency services in Seattle and how does the service fit into the existing services?
2. What emergency services does COH offer that are unique and unavailable elsewhere?
3. Is there a medical need for emergency helicopter service to serve the hospitals in this immediate area, (Children's and University of Washington primarily)? What, if any, would be the effect on the well-being of a patient transported by helicopter versus helicopter and ground transport as it is presently done? Are direct flights versus air/ground transports medically significant in terms of patient morbity and mortality?

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4. Is the current site at Graves athletic field adequate, or is there a medical need to locate such facilities on the hospital grounds? Or are there alternative sites? Would one such facility either at COH or U. W. be a preferred location?
5. What data are available regarding the number of emergencies that are likely to be generated by the population to be served by the helicopter services? How many landings per week will result?
6. If there is an established medical need, how would you define "occurrences involving life-threatening emergencies," as the use must be restricted to such occurrences? Are there other restrictions we should consider, based on existing medical care facilities capabilities?
7. How would you suggest we monitor the occurrences to ensure that the use is restricted to life-threatening emergencies should the use be permitted? Can we ensure that the service is used for emergency purposes only?

We have asked Children's Orthopedic Hospital for more information to support their application for the helistop (see attached). This information is necessary for your consideration of these questions. As soon as we receive it, we will send you a copy. As you know, we are happy to help with the scheduling and public notice of the hearing.

Thank you for your assistance. If you have questions, please call me at 625-2262 or Katy Chaney at 625-4274.

Sincerely,

Katy Chaney

FOR BEATRICE FARRAR RYAN
Interim Director

KC:vg

Attachment

cc: Truman Katz, Director, Children's Orthopedic Hospital

bcc: Tom Byers

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Mary: Send [redacted] copy of letter to:

(1) Anita Francis > 4746 KS NE
Li Anderson seattle 98105

(2) Bd of [redacted] Mary Jane Anderson, Chairman
Trustees, Children Orthopedic Hospital,
4800 Sand Point Way NE
Seattle WA 98105

( )hat letter was from Kelly to Health Dpt. Head)

Done
Mar

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Object File
CC 84-022

RECEIVED
SEP 03 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

4200 N.E. 50th St.
Seattle, WA 98105
August 29,1985

Department of Construction and Land Use
4th Floor Seattle Municipal Building
600 Fourth Avenue
Seattle, WA 98104

Attn.: Ann Ormsby

De ar Ms. Ormsby,

I am writing in connection with the application for conditional use permit filed by the Childrens' Orthopedic Hospital allowing the hospital to const ct a helipad on their property.

While I am in agreement that such a facility might make transfer of patients to the hospital more convenient and on some occasions might aid ina life-threatening situation, I feel that these advantages are outweighed by the effect of the noise on residents of the immediate neighborhood, many of whom are senior citizens and a number in poor health.

I understand that there have been three recent landings of helicopters at the site, even though no land use permit has been granted. I object to such flaunting of authority and urge that the hospital's application be denied. (My wife, Mrs. Kathleen McHigh Johnston, withes that her objection also be registered.)

Ve ry truly yours,

Leo C. Johnston

cc - Federal Aviation Agency
7300 South Perimeter Road So.
Seattle, WA 98108
Attn: Mr. Roseborough

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Copy sent to Jerry Schaefer

Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

February 20, 1985

Ms. Dorothy Teeter
Director of Planning
Children's Orthopedic Hospital
4800 Sand Point Way N. E.
Seattle, Washington 98105

Dear Ms. Teeter:

Pursuant to your meeting last week with Hermia Ip, Land Use Specialist of our Land Use Review Section, this is to confirm that the following information is required for our review of the Children's Orthopedic Hospital (COH) application for a helistop on the hospital grounds (CC 84-022):

1. A detailed description on the current emergency air transportation procedures, and the procedures involved with the proposed helistop facilities. Explain the benefits gained by the proposal, perhaps in terms of time, distances, extent of efficiency and any other pertinent factors. Why are such facilities needed at this particular location of COH and at this time?

2. We understand Airlift Northwest will be contracted to provide the helicopter services. Where will the helicopters be stationed? Use a map to show their flight paths, altitude and the geographic areas impacted. What kind of helicopters will be used, and what noise levels are generated by such equipment? What devices, if any, do these planes have for noise control?

3. How will the existing noise levels of the hospital and the surrounding community be impacted? Provide measurements on existing noise levels on site and at typical recipient points in the surrounding community. Based on the experience of similar services in comparable neighborhood environments, project the probable noise level caused by the proposal. What mitigating measures are proposed?

4. For each landing and takeoff of the helicopter, what time duration is necessary? What time span is involved for any noise impact?

5. How frequent will the helistop services be used? Identify the average case and worst case. Based on the hospital's history and other pertinent considerations, what is the probable occurrence of night-time use versus day-time use?

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6. What economic costs are involved with the helistop services? What implications do the economic data have on the probable frequency and extent of use? In COH's contract with Airlift Northwest, is there a stipulation on a minimum use? What arrangement, plan and/or agreement does COH have with other hospitals in Seattle regarding the use of the helicopter services? Please submit a copy of COH's contract with Airlift Northwest.

7. What will be the potential impact on air quality? What quantity and quality of exhaust will be generated by the helicopters? What mitigating measures, if any, are proposed?

8. What will be the potential impact on light and glare? What sources and extent of light will be generated, both on campus and on the helicopters? What mitigating measures are proposed to minimize impact on the residential neighborhood?

As Mrs. Ip mentioned at the meeting, the Department has received numerous citizen phone calls and letters from the community, expressing their concerns with the environmental impacts of your proposal. We encourage you to review the file and incorporate, as much as possible, any pertinent community input in your response to this letter. If you have further questions, please do not hesitate to call Mrs. Ip at 625-4509.

Very truly yours,

WILLIAM J. JUSTEN, P. E.
Director

By Katy Chaney
KATY CHANEY, Director
Land Use Division

HI:11d

cc: Tom Byers, Office of the Mayor

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Hermia Ip Copy

File CC 84-022

Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

February 26, 1985

Re: Children's Orthopedic Hospital
Application CC 84-022

Dale E. Sherrow, Jr.
3625 1st Avenue South
P. O. Box 80181
Seattle, Washington 98108

Dear Mr. Sherrow:

Thank you for your letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. We have received numerous phone calls and letters from COH neighbors who are concerned about the particular location of the helistop, which they feel may adversely affect their neighborhood.

As you know, we are reviewing the environmental checklist submitted by COH, and we have requested additional information necessary for our threshold determination. I am enclosing a copy of our letter to COH dated February 20, 1985. We do not preclude any comment from the public, although our official comment period has expired as of January 30, 1985. Your letter and letters of other citizens of the community are included in the official file (CC 84-022), and will be given careful consideration in our review process. You will also be notified of future public hearing schedules and decisions on this proposal. Further, you may contact the State Department of Social and Health Services regarding the requirement of a Certificate of Need for the proposal. We understand this agency is in the process of determining whether a Certificate is necessary or not. The contact person is: Charles H. Pugh, Certificate of Need Program, State Department of Social and Health Services, Mail Stop ET-33, Olympia, Washington 98504; phone number (206)753-5857.

I appreciate your interest, and I am glad you took the time to write. If you have other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Very truly yours,

WILLIAM J. JUSTEN, P. E.
Director

HI:lld

Enclosure

cc: Mayor Charles Royer

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Support Hollywood
~~Against Hermite~~
File
cc 84-022

RECEIVED
SEP 3 1985
Dept. of Construction & Land Use

August 30, 1985

Letters to the Editor
Seattle Post-Intelligencer
Seattle, WA 98121

RE: Orthopedic Hospital helipad controversy

Dear Editor,

I am absolutely amazed at the selfish attitude of some Laurelhurst residents regarding the use of helicopters for delivery of patients to Children's Orthopedic Hospital. How can anyone even attempt to obstruct the saving of a human life!

Incidentally, we went through an identical controversy some fifteen years ago when the use of a similar facility was proposed for Harborview Hospital. Thanks to the compassion and common sense of responsible officials, the protests were denied and the helipad approved. Since that time hundreds of patients have benefited and in many cases lives were saved because this capability exists.

Harborview Medical Center and Children's Orthopedic Hospital offer specialized medical treatment not available at any other hospital in the state. If a patient's life can be saved or their recovery enhanced, these hospitals should be used regardless of some periodic minor irritation to adjacent residents.

The selfish position of some Laurelhurst residents was emphasized by the suggestion, at a recent meeting on this subject, that a Chehalis child being rushed to Orthopedic by helicopter could have stopped at some other hospital enroute. I wonder if the spokeswoman was suggesting Madigan General?

Let's end this foolish debate and grant whatever permits are required for authorization of the helipad.

Sincerely,

Gordon F. Vickery
2621 Second Avenue Suite 1804
Seattle, WA 98121

Phone - 448-0448

c/c City of Seattle
Department of Construction and Land Use

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CALAWAH MEDICAL CLINIC
R.R. 3 BOX 3576
FORKS, WASHINGTON 98331
TELEPHONE 374-2500

File
C084-022
Support

September 4, 1985

Mr. John Welsh, Jr.
Senior Counsel
House of Representatives
Mail Stop AL 21
Olympia, WA 98504

SEP 12 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE SECTION

Dear Mr. Welsh,

I understand that Representative Joanne Brekke, as chair of the House Social and Health, will hold a public hearing on September 9 in Seattle regarding the medical need for helicopter services in the state. I will not be able to attend the hearing. However, I support the need for Children's Orthopedic Hospital to have a Helipad on their campus.

I am a family practice physician in Forks, a town of 3000 on the Olympic Peninsula. We transport several premature infants and other ill children to Children's Orthopedic Hospital each year. In transporting children from Forks to Seattle, there is already an inherent delay in awaiting the helicopter from Seattle. To require a transfer by ground ambulance from Harborview Medical center to Children's Orthopedic Hospital would add unnecessary delay which might affect the care of the child adversely. Many times the high level of care provided at Children's Orthopedic is time dependent: this is especially true in the care of premature infants with severe lung disease requiring ventilator assistance.

On August 20, we transported a premature boy whose lung collapsed at the Forks airport. He was in critical condition on arrival in Seattle. I feel that his life would have been endangered by further ground transport in Seattle. I understand he is now doing quite well and nearing discharge.

I realize that there is some impact on the homeowners near the hospital, but I would still encourage helicopter transport services at Children's. That institution plays a vital role in treating severely ill children from outlying regions and I think that helicopter services at Children's are an integral part of that kind of care.

Sincerely,

Richard Gibson

Richard Gibson MD
RG/bjb

CC: Nancy Greenawalt
Director of Government Affairs
Children's Orthopedic Hospital Medical Center
P.O. Box C 5371 4800 Sandpoint Way
Seattle, WA 98105

City of Seattle
Department of Construction and Land use
600-4th Avenue
Seattle, WA 98105

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File

cc 84-022

Suppl. 5

SEP

FORKS WOMEN'S CLINIC
SUSAN SHANE, CRN
P.O. BOX 1022
FORKS, WASHINGTON 98331
TELEPHONE (206) 374-3143

9-5-85

City of Seattle
Department of Construction and Land Use
600 - 4th Ave.
Seattle, Wa. 98104

Enclosed you will find a letter that I have sent to the citizen's group opposing the helipad at COH. It expresses my sentiments.

In my opinion there is no comparison between brief episodes of noise and the saving of human lives. I live on the Sol Duc river which is patrolled by helicopter for various reasons--fisheries, forest use, etc. The sound of a helicopter is less bothersome and lower pitched than jet engine noise. I can't see how sporadic helicopter landings could greatly disturb the citizens of Laurelhurst.

Children's Orthopedic is an established resident of the community and deserves as much consideration or more than private citizens because of the importance of the work done there and the lives saved.

Thank you very much.

Very sincerely,

Susan L. Shane

Susan L. Shane CRN

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September 5, 1985

Dear Neighbors of COH:

I am sorry that you object to a helicopter landing site at the hospital. I hope you are still open to considering the issue f m all sides.

I grew up in the Sand Point/View Ridge area. We were always very proud of our famous neighbor--Children's Orthopedic Hospital. We supported it with our donations, our guild memberships and always had the calendar hanging in the kitchen.

I always knew I would be a nurse and went on to specialize in perinatal nursing, caring for mothers and their newborns. I moved to Forks, Wa. 10 years ago. I am now a Nurse Practitioner and work in a tiny clinic where I give care to expectant mothers. You can imagine how distressed we were when our patient Jackie Amsdill came in one morning fully dilated yet 2½ months away from her due date.

Our little hospital and dedicated doctor and nurses flew around and made ready for the birth of little Blayne, just 3 lbs. We were so grateful for the Seattle perinatal team that came by helicopter to assist Blayne with life saving state-of-the-art techniques that a small hospital like ours can't offer. Blayne's condition was deteriorating and we knew his only hope was to get to an expert neonatal intensive care unit within a short period of time. Thank goodness the physician made the decision to land right at COH and not stress a critically ill, fragilepremie by unloading at the always windy football field and making yet another transfer via ambulance.

We're glad to report that little Blayne is doing pretty well and will likely grow up. Think how thrilled his parents must be. Babies have not come easy to this family. They know the pain of losing a baby. Fewer minutes and less stress in transport DID make a difference to this baby--it probably saved his life.

The sound of a helicopter coming in to land is a welcome sound in our isolated logging town. It means someone may live who otherwise would not have. Can't you think of it in your neighborhood as a brief and noisy reminder that some tiny baby now lives because of the hospital and the helicopter team? Can't you be proud to support such a wonderful mission and help to send babies back to the waiting arms of their mothers?

You should look up and cheer and teach your children to rejoice that a little girl or boy will live and parents' hearts will not be broken with grief.

You can make the difference. Be supportive of the wonderful work the hospital does and help them in any way you can. There is NO better or comparable facility in the Northwest. Aren't we lucky? Someday, it might be there for your child or grandchild.

Very sincerely,

Susan L. Shane CRN

Susan L. Shane CRN

cc: COH,
Seattle, Dept. of Construction and Land Use.

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Hospital defends chopper landings

By S.L. Sanger
PI Reporter

Children's Orthopedic Hospital yesterday defended three helicopter landings outside the hospital this month, saying each was necessary to preserve the life of a critically ill youngster.

The hospital is embroiled in a controversy with its neighbors in the Laurelhurst area of Seattle over a proposal to build a helicopter landing pad outside its emergency room entrance.

"We hope there is not the impression that we are forcing the issue of building our own helipad. That is not our intention," Treuman Katz, the hospital's chief executive officer, told a news conference at Children's.

"The decisions to land at COHMC were made by physicians attending to the patients inflight and cleared by the county's director of the Emergency Medical System," Katz said.

Complaint calls

"Each decision was made in order to preserve the life of a critically ill infant.

"We have received 10 to 14 complaining calls for each landing."

Complaints vary from concerns about noise and safety to a feeling the hospital is going to expand, said Katz.

Most recent use of a helicopter at the hospital occurred Tuesday night when a 1-month-old boy was flown in from Chehalis. The baby, with severe meningitis, was comatose and suffering breathing problems, said Dr. John Neff, hospital medical director. The boy was in serious condition yesterday.

The first flight this month, during the late afternoon of Aug. 3, involved a 1-day-old boy transferred from Bremerton Naval Hospital. The boy died the next day of a perforated bowel.

'No choice'

The second, on the mid-afternoon of Aug. 20, was a premature boy, a few hours old, transferred from Forks with severe breathing problems because of a collapsed lung. This boy survived and is doing "fairly well," Neff said.

"We had no choice but to land at the hospital when children are as critical as these three," Neff said.

Use of the proposed helipad would depend "on the situation," but would occur "solely for critically ill patients," he said.

For years, ill children have been landed by helicopter at a nearby University of Washington playing field, minutes away from the hospital by ambulance.

Jane Cassels, a flight nurse for Airlift Northwest, said helicopter flights in the area [illegible] said the flights conferring [illegible] every move is life-threatening [illegible] critically ill patients and it is preferable to avoid unnecessary transfers from one mode of transport to another.

In city's hands

Karen Cummings, assistant hospital administrator, said efforts are continuing to construct a helipad. The issue now rests with the city's Department of Construction and Land Use.

Sharon East, an opponent of the helipad, said during a telephone interview after the news conference that "no one wants to deny any child emergency care."

But, she said, in the case of the Chehalis child Tuesday, the helicopter could have stopped at some other hospital between Chehalis and Seattle. "Children's is not the only one that treats children," she said.

City of Seattle
Dept. of Construction
and Land Use
600 - 4th Ave.
Seattle, WA. 98104

The Children's Orthopedic Hospital
and Medical Center
4800 Sand Point Way NE
Seattle, WA. 98105

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February 14, 1985

RECEIVED
FEB 19 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Seattle Dept. of Constr. & Land Use
400 Municipal Bldg.
Seattle, 98104

SUBJECT: Heliports

Attention Ms. Hermia Ib

Members of the Montlake Community Club at the January meeting considered the issue of helicopter landing pads. Laurelhurst Community Club has asked us to support them in apposing the construction of such a landing facility at Childrens Orthopedic Hospital.

Montlake Community Club recommends that the DCLU require preparation of an EIS for this project. The EIS should adress the problem of noise. We believe that the disturbance from helicopter service will be so great that a finding of non-significance is not supportable.

Mayor Royer has asked that the medical community consider the best distribution of helistops needed to serve the hospitals and people of the city. This may be done through the certificate of need study, but should also receive attention from the DCLU. Helicopter landing pads should not be allowedwithout study of the cost in noise, increased hospital fees and accident potential versus actual medical service improvement.

Montlake Community Club asks that the DCLU not issue any permits for heliports to serve hospitals until these questions have been adequately studied.

Earl E. Wheatley, Pres.
Montlake Community Club
2008 E. Louisa St.
Seattle, 98112

Earl E Wheatley

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Several snow slides had taken place along the Portage road (Fig. 20) during the earthquake. These were reported to have travelled further out from the toe of the slope than they usually do. Since the past winter had been one of lighter-than-normal snow fall, the presence of broken trees in some of the slides also indicated that the slides had not all followed customary paths.

(d) Whittier

No observations of unusual snow or rock slides were made during the flight to Whittier. At Whittier the oil tanks at the head of the Passage inlet were examined; one of these was said to be leaking and was noticed to be tilted. It was at least partially full at the time of the earthquake and therefore it must be deduced that some soil movement had taken place below it. Other tanks, also containing liquid, were undamaged, but no detailed soil information on the tank foundations was available. At Whittier, the 6-story Brucker building was founded on bedrock, while the 14-story taller reinforced concrete structure was reported to be founded on 20 to 50 ft of dense sand and gravel over bedrock. The damage to the larger building seemed to be no more severe than that suffered by buildings of similar construction and size in Anchorage considerably more distant from the earthquake. This result may be attributable to the depth and type of soil at Anchorage in contrast with the relatively shallow depth at Whittier or to difference in strengths of structures

A cross section through the wharf at Whittier is shown in Fig. 21, and Fig. 22 shows typical damage to the floor slab of the warehouse behind the wharf. It appears that the fill on which the warehouse floor

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Earl E Wheatley
2008 E Louisa St
Seattle Wash 98112

SEATTLE, WA
PM
15 FEB
1985



Seattle Dept of Constr. & Land Use
400 Municipal Bldg.
Seattle, Wash., 98104

Subject: COH Helipad

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cc 84.022 File - 275

LAURELHURST COMMUNITY CLUB

Serving over 1600 homes.

January 14,1985

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DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Department of Construction
and Land Use
City of Seattle
Municipal Building
Seattle, Washington 98104

Re: Childrens Orthopedic
Hospital Helipad
CUP Application

Dear Ms.Ipp:

In response to the helipad application by Childrens Orthopedic Hospital, The Laurelhurst Community Club passed the following resolution, expressing their concerns with this proposed project:

> Be it resolved that the Laurelhurst Community Club's Board of Trustees is seriously concerned about a proposal to develop a helipad at the Children's Orthopedic Hospital. The LCC recognizes and actively supports the valuable services which COH provides to the community. However, many residents of the community are concerned about the potential impact a helipad will have on the community and its residents. There are also questions about the necessity of such a facility at COH since other landing facilities are available nearby. The LCC requests that these issues be carefully evaluated by those agencies responsible for approving such a facility, and specifically that an environmental impact statement and certificate of need be required.

Thank you for your consideration of this matter.

Sincerely yours,

Ruth Engelberg

Ruth Engelberg
COH Liasion
Laurelhurst Community Club
Board of Trustees

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Community Club

VIEW RIDGE COMMUNITY CLUB, Inc.

P.O. Box 15218 Seattle Washington, 98115
"For the Community and by the Community"

January 25, 1985

RECEIVED
JAN 30 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dept. of Construction
and Land Use
City of Seattle
Municipal Building
600 4th Ave.
Seattle, Washington 98104

Re: Childrens Orthopedic
Hospital Heliport
CUP Application

Dear Director Justen,

Childrens Orthopedic Hospital has again acted upon their application to build a heliport at their main facility. This Hospital was established in a high density residential neighborhood, and has continued to expand into the major facility it is today. Each expansion is to have minimal impact on the adjacent communities. Yet, each seems to have a greater impact than the last. When is Enough, Enough?

We recognize, of course, that COH offers a great service to the community. However, each expansion of this facility must be looked at with an ever increasing critical eye. Any new project should be a major benefit for the Hospital to warant further impact on the adjacent communty.

Does COH have a clear cut need for a Heliport? It now uses the University of Washington Hospital and University of Washington Intramural fields to provide the same capability which COH now wishes to duplicate a few minutes away. The heliport appears to be a nice addition, but not necessary bases on a preliminary analysis.

Your careful consideration of this issue would be greatly appreciated.

Sincerely,

Leonard Miller
President

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Petition

January 24, 1985

RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justen
Department of Construction and Land Use
600 - 4th Avenue
Seattle, Washington 98104

Dear Mr. Justen: Re: COH Helipad

We, as members of the Marian Blethen Mesdag Orthopedic Guild, wish to communicate to you our continued opposition to the construction of a helipad at Children's Orthopedic Hospital, Seattle, Washington. In the Spring of 1983 we wrote objecting to the Institutional Zoning Ordinance as the helipad was in the Hospital administration's plans at that time.

All of our members live in communities immediate to or adjoining the hospital, and we have lived there for many years. The group has given thousands of hours of volunteer service and thousands of dollars over the past twenty-plus years in support of good medicine.

The decision to oppose the helipad construction has not been made casually. We have studied information for and against the project. We urge the DCLU to require an EIS on this project. An EIS is a necessity, not a choice. Our information indicates there are plans in the immediate future for COH to develope a Trauma Center. These and many other factors lead us to write and express our strong opposition to the construction of a helipad at COH.

Sincerely,

CC: Mayor Charles Royer
Members of the Seattle City Council

Shirley McQuell 3930 NE Belvoir 98105
Helen A. Sweeney 3335 W. Laurelhurst Dr N.E. 98105
Beverly Lycette 88 Virginia 98101
Gloria M. Hennings 4314 54th NE. 98105
Patricia O. Wright 3925 48th Ave NE 98105
Betty Ann Christman 4350 53rd ave. N.E. 98105
Martha F Kane 3386 46th N.E. 98105
Pauline J. Westlund 5150 NE Latimer Pl. Seattle 98105
Elizabeth M. Wood 3863-42nd N.E. Seattle 98105
Diana Kirkwood 6669 E. Lawton Rd Seattle 98115

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, Mrs. Claire Etherington 3355 E. Fairhurst Dr. NE.
, Mrs John B Jones 5115 NE 45
, Dorothy Elvern 4326 NE 41ST
, Ruth P. Hartley 4303 NE 35
, Carolyn Carson 3854 42 NE
, Jane M. Miller 3500 46th Ave NE
, Peggy Hill Dumaresq 3323 43rd N.E.
, Rita J. Gill 4700 N.E. 40th

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SWB AKER COMPANY

P.O. BOX 15216 WEDGEWOOD STATION SEATTLE, WASHINGTON 98115
3951 44th Ave N.E. 98105

RECE[illegible]
JAN 31 1985
DEPT OF CONSTRUCTION & [illegible]
LAND USE DIVISION

January 28, 1985

Department of Construction and Land Use
Room 400 Municipal Building
600 4th Avenue
Seattle, Washington

Re: Case #CC84-022
Helicopter Landings
Childern's Orthopedic Hospital

Gentlemen:

This letter is to strongly protest the current plans of Childern's Orthopedic Hospital to build a helicopter facility on the hospital site.

Peace and quiet have always been synonymous with a quality neighborhood. Noise pollution from a helicopter will destroy the peace and quiet of many Laurelhurst homeowners. It is simply not fair to subject this prime area to the racking of helicopters throughout the day and evening hours.

The hospital has operated for years without such a facility, and has done so without any great problems.

I urge you to consider the well being of the surrounding neighborhood of the hospital and deny this application.

Thank you for your consideration.

Yours truly,

S.W. Baker

PHONE 525-4870

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85 JAN 28 AM 10: 35

CONSTRUCTION & LAND USE DEVELOPMENT

RECEIVED
JAN 30 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

4200 NE 50th Street
Seattle, WA 98105
January 26, 1985

Director
Department of Construction and Land Use
Seattle City Administration Building
Seattle, WA 98104

Re: Proposed helestop
Childrens' Orthopedic Hospital
Opposition statement

Dear Sir:

Although I live within close proximity to the proposed addition to the Childrens' Orthopedic Hospital, I am writing out of concern for others who would be much more adversely affected by such a facility than I, namely the many senior citizens living in the immediate area and, for that matter, the many young patients in the hospital.

From my experience with helecopters, I cannot help but feel that the noise level from the machines would most certainly be irritating to both groups as well as to other neighbors, if not actually damaging to the hearing of these people. While that noise level probably would not be high enough to immediately damage a person's hearing, tests have shown that prolonged or recurrent noises of as little as fifty Db can be harmful to the hearing.

I hope that the noise fac tor will be given serious consideration. You are undoubtedly aware of the noise monitoring instruments and expertise available through the Seattle-King County Health Department.

Very truly yours,

Leo C. Johnston

Leo C. Johnston

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4112-43rd Ave. NE
Seattle, Wa
98105
Jan 28, 1985

Mr William Justen, Director
Dept. of Construction and Land Use
600 - 4th Ave.
Seattle, Wa 98104

RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear sir

As a neighbor of Children's Orthopedic Hospital I am concerned about the building of a Helipad there. This is a residential neighborhood and I believe a helipad is inappropriate.

An environmental impact study should certainly be required.

Thank you
Yours truly,
Margaret N. Bingham

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Eleanor Haldane
4123 - 43rd Ave. N. E., Seattle, Washington 98105

RECEIVED
JAN 28 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Jan. 27, 1985

Dear Mr. Juntea:

Our home in Laurelhurst is just a few blocks away from the Childrens Orthopedic Horpital.

We have lived here over thirty years and have watched addition after addition made to the horpital. The sound of sirens has increased as well as traffic because of its growth.

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Now we are faced with a possible helipad at COH. We are very concerned about the impact this will have on our neighborhood.

The noise of a helicopter landing and taking off at all hours of the day and night will be extremely disruptive and nerve-racking.

There is definitely a safety factor - the possibility of a crash over the hospital or over homes.

Air pollution is becoming

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Eleanor Haldane
4123 - 43rd Ave. N. E., Seattle, Washington 98105

more and more of a problem in Seattle and the emissions of a helicopter will add to that.

Our quiet, residential neighborhood has patiently endured the ever increasing traffic from the University of Washington, the hospital, the Sand Point Naval Air Station and the possible threat of a retirement home. Now we are faced with a helipad.

My husband and I strongly urge you to conduct an environmental impact study. Sincerely,

Eleanor Haldane

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3657-42nd NE
Seattle, WA 98105
January 26, 1985

Hon. Justin
Rm 24
600 4th Ave
Seattle 98104

RECEIVED
JAN 28 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. Justin,

I am writing concerning the proposed helicopter pad at U.W.H. I wish to object to the construction there as there is presently such a facility less than ½ mile away at the U.W. The proposal appears to be redundant, unless the present site is closed.

Seriously yours,
Mary F. Mahoney

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January 28, 1985

Mr. William Justin, director
Dept. of Construction + Land Use
600 Fourth Avenue
Seattle, WA 98104

RECEIVED
JAN 28 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Re: The Proposed Helipad at COH

Dear Mr. Justin:

We are concerned about the proposed helipad at Children's Orthopedic Hospital because of the affect that it may have on the neighborhood. We feel that a decision should not be made until an environmental impact study has been completed. Reasons we think a study is necessary include the need to assess: 1) the safety factor in a populated area 2) the noise factor for the neighborhood as well as the noise affecting the young hospital patients and 3) the air pollution emissions factor from helicopters flying so close to homes.

Thank you for consideration your department can give in this important matter.

Sincerely,

Bonnie + Bryce Nelson

Bonnie + Bryce Nelson
4127 - 42nd NE
Seattle, WA 98105

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File cc 84-022

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

September 25, 1985

Albert Feldmann
4873 Terrace Drive N. E.
Seattle, Washington 98105

Dear Mr. Feldmann:

Thank you for your letter stating your objection to the landing of a helicopter at Children's Orthopedic Hospital (COH) campus. The Department of Construction and Land Use (DCLU) is responsible for reviewing the environmental impacts of the proposed helipad facilities as well as enforcing against code violations. Beatrice Ryan, Interim Director of DCLU, tells me that a Notice of Violation was given to COH on August 30, 1985, because COH has been using their premises as a helicopter landing pad without a permit. Your letter will serve as a supportive document for our code enforcement.

The City's Land Use Code also requires a finding that the helipad is needed to save lives. To make that determination, DCLU has asked the City's Health Officer, Dr. Nicola, for advice on the question of medical need. Dr. Nicola will hold a public hearing in the next few weeks, and his findings will form the basis for DCLU's recommendation to the City Council.

Thank you again for taking the time to write to me. If you have questions, please do not hesitate to call Mrs. Hermia Ip, the DCLU Land Use Specialist assigned to this case. She can be reached at 625-4509.

Sincerely,

Charles Royer

CR:hig

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January 26, 1984

RECEIVED
JAN 29 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justin, Director
Dept. of Construction & Land Use
Room 400
Municipal Bldg.
600 - 4th Avenue
Seattle, Washington 98104

Re: Application #CC84-022

Dear Mr. Justin:

We would like to go on record as being strongly opposed to a Helicopter Pad being installed at the Children's Orthopedic Hospital.

The current place of landing on the field north of the University of Washington Campus seems quite adequate to us and the noise of such a landing seems to be unreasonable for those living near and below the Hospital.

Certainly some consideration should be given to the scores of people and homes in this area. No one we have talked to seems to feel the necessity of such a move and we feel this landing should not be further considered.

We hope this information will be passed on to those involved in this plan.

Thank you for your consideration in this matter.

Sincerely,

Mr. & Mrs. Raymond Brown

Mr. and Mrs. Raymond W. Brown
6023 NE 61st St.
Seattle, Washington 98115

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27th Jan. 1985

RECEIVED
JAN 28 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Sir

Yes I know that the Laurelhurst community club has been active in working to prevent the helipad from being built - I have answered all the letters to say "I was against it" for all the good reasons you give.

I am in favour of your using the amount needed to stop having the helipad come to the C.O.H.

Yours sincerely

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_____ Yes, I would like the Laurelon Board to authorize that money be spent to oppose construction of a helipad at Children's Orthopedic Hospital.

_____ ~~No, I would not like money spent on this issue.~~

- -

If you answered yes above please indicate about how much you feel should be spent: the amount needed

_____ $ 100.00

_____ $ 200.00

_____ Other

- -

Would you be interested in attending a City Council hearing on this subject laterthis Spring?

_____ Yes

_____ ~~No~~

- -

Would you be interested in becoming involved in this issue?

_____ ~~Yes~~

_____ ~~No~~ no because of my age

- -

If you answered yes to either or both of the above 2 questions, please give your name, address and telephone number so that we may contact you.

Mrs Edith Sujor
Name

Phone number
523 8553

Address 4671-41st N.E
Seattle 98105

Please use reverse side if you have additional comments.

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3812 48TH AVENUE, N.E.
SEATTLE, WASHINGTON 98105

RECEIVED
JAN 28 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ann Ormsby
Land Use Review
402 Municipal Building
Fifth and Cherry
Seattle, WA 98104

Dear Ann Ormsby:

As a resident of Laurelhurst I wish tc protest the construction of a helicopter landing pad at Children's Orthopedic Hospital for the following reasons:

Doctors with whom I have discussed the proposal put little medical value on a helipad at COH because of the proximity of a helipad at University Hospital. Even some of the doctors on the staff of COH are of this opinion.

Competition among Seattle's hospitals runs high and so does the emphasis they place on their marketability. I believe that many trustees of COH and their doctors are strongly motivated by a desire to enhance the hospital's prestige and to acquire more patients.

In spite of COH's declaration that a helicopter would be used infrequently, the desire to prove the operation cost efficient (and it will be very expensive) would make for frequent and unnecessary use.

I believe that the benefits to be gained by installing a helipad at COH are greatly outweighed by the misery it would cause many residents in Laurelhurst and the losses they would sustain in the value of their property.

Sincerely yours,
Helen R. Pinkney

January 27, 1985 Mrs. David H. Pinkney

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Mrs. Richard W. Maider
3832 - 48th Avenue N.E.
Seattle, Washington 98105

RECEIVED
JAN 31 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr Justin

I encourage you to have an Environmental impact statement concerning the heliopad at Children's Orthopedic Hospital.

It is not a superficial decision - american Flag, motherhood etc If we want strong neighborhoods and quality in city living we must make wise choices

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Ernestine J. Rombouts
Apt. 4675, 41st Avenue N. E.
Seattle, Washington 98105

RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. Justin —

I am writing in regards to the proposed building of a helipad at Children's Orthopedic Hospital. I live directly below the hospital on Sand Point Way and I am very concerned about the noise, amount of helicopter traffic and the possible effect on the value of my home.

I have attended the meetings presented by the Laurelhurst Community Club and they have been very thorough in presenting information about the proposed plan. As a concerned citizen and homeowner, I greatly oppose the building of the helipad for a number of reasons: environmental, personal and

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Ernestine J. Rombouts
Apt. 4675, 41st Avenue N. E.
Seattle, Washington 98105

RECEIVED
JAN 31 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. Justin —

I am writing in regards to the proposed building of a helipad at Children's Orthopedic Hospital. I live directly below the hospital on Sand Point Way and I am very concerned about the noise, amount of helicopter traffic and the possible effect on the value of my home.

I have attended the meetings presented by the Laurelhurst Community Club and they have been very thorough in presenting information about the proposed plan. As a concerned citizen and homeowner, I greatly oppose the building of the helipad for a number of reasons: environmental, personal and

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financial. The Laurelhurst area is attractive to me because of its greenness, safeness and standard of living and I would hate to see it destroyed and contaminated by the building of an unnecessary heliport. Safety issues also come into play here and I'm sure that there will be an increased amount of traffic once this proposal goes through. I oppose this project very strongly and from any angle or point of view, I cannot support it.

Sincerely,
Ernestine Rowlands

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Jan. 24, 1975

RECEIVED
JAN 28 1985
DEPT OF CORRECTIONS

CC 94
600 - Fourth ave.
Seattle, Wa. 98104

I have been asked to write to you that I do not approve of the Orthopedic Hospital buying a helocopter and building a landing pad on the roof of their building.

I live just below the hospital building and for 10 years they have spent money received from donors + spent on whatever is approved by their Board of Directors.

Yours Truly
Dale Wallace

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Ann Ormsby Copy

4I file
or+055

Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

March 12, 1985

Re: Helipad Proposal and Short Stay Remodel

Dorothy F. Teeter
Director of Planning
Children's Orthopedic Hospital
P. O. Box C5371
4800 Sand Point Way N. E.
Seattle, Washington 98105

Dear Ms. Teeter:

Thank you for your letter and list of additional information which you will submit for our environmental review for the helipad proposal. I believe you have also received our letter and list of questions dated February 20, 1985. While we have listed as many issues as we can foresee at this time, we may need to require further clarification if your supplemental information does not provide the level of detail necessary for our analysis.

You also asked about the time frame of the permit process. We are enclosing Section 23.80.10 of the Land Use Code, which specifies the procedures. It is not possible to identify when the City Council will consider this project because of the complex review and appeal processes. However, you may keep in mind the following milestones:

1. The first step is to complete the environmental review (SEPA) process. This includes an appeal hearing on the threshold determination of significance or non-significance (if there is an appeal), and the decision of the Hearing Examiner on the appeal.

2. A public hearing before the Hearing Examiner on the merits of the Council Conditional Use. Section 23.80.10.D. requires that notice of the hearing shall be made at least 30 days before the hearing. The hearing date cannot be scheduled until SEPA review is completed.

3. The Hearing Examiner will submit his/her recommendation on the Council Conditional Use to City Council within 14 days after the hearing is closed. The Hearing Examiner's recommendation is subject to reconsideration by the City Council on request by parties of record.

4. City Council will consider the proposal, and may or may not require further public hearing and/or reopening the record.

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With reference to your proposed short stay unit remodel and addition, we have determined that a separate environmental review is required. We understand that the existing waiting rooms will be changed to additional surgery rooms because of increased demand for minor surgeries. You also propose to construct a new one-story waiting room, about 30 ft. by 24 ft., on the east side of the existing short stay unit. This proposed construction and remodeling is not exempt under the Seattle SEPA Ordinance (111866). However, we understand the proposed work is not functionally related to the proposed helipad. Therefore, we will consider the proposal as a separate project for permit and SEPA review purposes. If you wish to pursue this proposal, please submit the required application forms, environmental checklist, plot plans and fees. The large sign notification is also required.

Thank you for your attention. If you have further questions, please do not hesitate to call Hermia Ip, Land Use Specialist of our office, at 625-4509.

Very truly yours,

WILLIAM J. JUSTEN, P. E.
Director

Ann Ornosby for

By
KATY CHANEY, Director
Land Use Division

HI:lld

Enclosure

cc: Treuman Katz
Jerry Schneider
Tom Byers, Office of the Mayor

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RECEIVED
APR 25 198[illegible]
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

April 23, 1986

Dear Ms Gibb:

I am writing to speak in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I understand the concerns but feel in cases of emergency time is important.

Also I have heard the helecopter and do not believe the occasional noise and safety outweigh the good that will be ~~alleged~~.

Mr & Mrs R. W. McManis - A Friend

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May 27, 1986

Dear Sirs or Whom it May Concern:

As a member of Saguaniso Indianola Orthopedic organization I am distressed to hear of the trouble regarding helicopter landings at the Hospital.

I am sure they don't land for any other reason than emergencies for our children & yours.

Please reconsider your objections. Surely this is one case where the results justify the means to quote (or misquote.)

Having five children & ten grandchildren I have a real concern.

Thanking you, Sincerely

Mary R. Doyle

RECEIVED
MAY 31 1986
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a helistop outside their emergency room.

I am
* an employee, nurse, physician
* a parent
* a neighbor
* a Seattle resident
* A Kirkland Resident

I understand the concerns of those who are objecting, but I
* treat the children and know this is necessary - give examples.
* want to know that if my children need to come to COHMC in a hurry, the helicopter can land directly at the hospital.
* have heard the helicopter and do not believe that concerns about noise and safety outweigh the good that will be realized.
* etc.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Genevieve McLeod

RECEIVED
MAY 20 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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RECEIVED

APR 29 1986

DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

April 23, 1986

Julia Gibb
Department of Construction and Land Use
400 Municipal Building
Seattle Washington, 98104

Dear Ms. Gibb:

As a very long term member of the Children's Orthopedic Hospital and Medical Center staff I am wri[illegible]ng in support of the request for a conditional land use permit to build a helistop outside of the emergency room.

Because I have been a part of Children's since its beginnings in Laurelhurst (and before that, on Queen Anne) I can fully appreciate the impact of the hospital on the community. However, as a part of the hospital management team I can speak with confidence when I say that the institution has always endeavored to do those things mandated by growth and need in a fashion which would be the least traumatic to the area.

The noise generated by the helicopters is not of long duration and would be fairly infrequent. The approach route used by the helicopters is designed to minimize flight over residential areas for reasons of safety as well as noise reduction. Utilization of the helistop would be based on need and the nature of the emergency. These decisions are made by the medical team on board during the flight and not by the hospital. It is NOT focused on convenience. One needs to see first hand the myriad of complicated and risky maneuvers required if a child needs to be repeatedly transferred from air to ground transport, etc. To risk the life of a child is a terribly high price to pay for this occasional inconvenience.

Thank you for the opportunity to comment. I trust you will convey my opinions to the Seattle City Council.

Sincerely,

Charles A Seager

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RECEIVED
MAY 19 1986
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

May 8, 1986

Ms. Julie Gibb
Dept. of Construction and Land Use
400 Municipal Building
Seattle, WA 98104

Dear Ms. Gibb:

I am writing in support of Children's Orthopedic Hospital and Medical Center's request for a conditional land use permit to build a heli-stop outside their emergency room.

I am an employee of Seattle Central Community College and understand the concerns of parents who have children who need emergency care at the Children's Orthopedic Hospital.

I sympathize with those who are objecting to this permit due to the noise, but I feel that the good that will be realized outweights any objection that the residents may have.

Thank you for the opportunity to comment. Please convey my opinions to the Seattle City Council.

Sincerely,

Jean J. Carlson

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Hermia Ip Copy

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

February 6, 1985

Charles R. and M. Rea Trzcinski
6547 52nd N. E.
Seattle, Washington 98115

Dear Mr. and Ms. Trzcinski:

Thank you for your letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. We have received many letters and inquiries from COH neighbors who are concerned about the particular location of the helistop, which they feel may adversely affect their neighborhood.

William Justen, Director of the Department of Construction and Land Use (DCLU), tells me that before a permit can be issued, there must be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by City Council. Your letter and letters of other citizens of the community are included in the official file (C(84-002), and you will be notified of future public hearing schedules and decisions.

I appreciate your interest, and I am glad you took the time to write. If you have any questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Sincerely,

Charles Royer

CR:hid

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Log # 1293
DCLU - Mayor's response due 2/6
AK
TB > FYI

RECEIVED
JAN 28 1985
MAYOR'S OFFICE

6547-52nd N. E.
Seattle, Wa. 98115
January 25, 1985

RECEIVED
JAN 29 1985
Dept. of Construction & Land Use

Honorable Mayor Charles Royer
12 Floor
600 - 4th Avenue
Seattle, Wa. 98104

Re: Helipad at Children's Orthopedic Hospital

Dear Mayor Royer:

We are writing to express our opposition to the helicopter landing pad on the Children's Orthopedic Hospital grounds. We own property in the Laurelon Terrace condominums.

It is hard to oppose something as humanitarian as a helipad on the grounds for the children. Especially is this true when you believe in the work and care which is performed there and support it each year.

However, when you analyze it you realize the current method works within a very short period to serve the same purpose. The child has to be handled the same number of times whether landing near the U of W baseball field or at the helipad. The exposure from potential helicopter difficulties is considerably reduced under the current program. The noise and disturbance to both neighbors and those at the hospital is much less now. Helicopters can be very noisy.

Respectively,

Charles R. Trzcinski M. Rea Trzcinski

Charles R. Trzcinski M. Rea Trzcinski

8511 1/25

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Log # 1275
DCLU - mayn's respr.

January 22. 1985

RECEIVED
JAN 23 1985
MAYOR'S OFFICE

AK
TB
FYI

Mayor. Charles Royer
600 4th Avenue - Floor 12
Seattle, WA. 98104

Dear Mayor Royer:

After years of support for and cooperation with Children's Orthopedic Hospital (COH), after months of anguished thought, and after weeks of research, the residents of Seattle--especially those who live within a few feet of the proposed site and whose lives will feel the impact--have reached the decision that a helipad ought not be built at COH. The following facts are basic to this decision:

1. A helipad is extremely unwise and unsafe in a densely populated residential area -- made up of condominiums, apartments, senior citizen housing, elementary school, and single family residences. No one can guarantee against helicopter malfunction and crash. Proposed location allows for no margin of error. For the residents living in the 136 units of Laurelon Terrace Condominiums--including a high percentage of senior citizens--the helicopter quite literally would be landing on their roof top or in their yard. Are they considered to be expendable? Will COH pay for loss of life and property in case of crash? Who will really pay?

2. The two-engine helicopter sought by COH would be noisy. It would produce negative environmental impact. The noise would be in addition to ambulance and truck traffic already endured. Emergencies can occur anytime during day or night. The noise would be disturbing at any hour to COH patients and personnel as well as to neighbors. Would you want this in your neighborhood -- day and night?

3. Alternative landing sites are available and workable. The proponents have conceded that the present landings in the UW soccer field (3 minutes from COH by ambulance) have been safe, satisfactory and no problem. Another site is available at Sand Point Naval Station (6 minutes away). A helipad at University Hospital (5 minutes from COH) will be ready for use by Spring, 1985.

4. Does every hospital in Seattle need a helipad? Why this sudden proliferation--helicopters have been available for decades. Has it become a status symbol to have a helipad? Has a helipad become a marketing tool of the medical profession/hospital administration? Do you know that hospitals in other cities USA have stopped their helicopter service because of the high risk safety and expense factors measured against negligible benefits observed for patients. Millions of dollars are being spent on each--aircraft, landing pad, maintenance of both, pilot salary and insurance. This is horrendous and excessive duplicationof expenditures. This causes costs at hospitals to rise and rise and rise!

5. The reasons given by COH for justification of helicopter service sound good--to a point--and are emotionally charged. However, one crucial point has been overlooked and/or omitted: COH located by choice in a densely populated residential neighborhood. The projected total of 30-40 flights a month (15-20 in and 15-20 out) would be detrimental and dangerous to the residents who live within a few feet from the landing pad. Since COH chose to live in this location, it has a responsibility for the safety and well-being of these residents. IF COH wishes to continue in its present location

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we believe it must abide by the rules for a quiet and safe residential neighborhood.

Is this additional institutional encroachment in a densely populated residential neighborhood right? Is endangerment of life, property, and environment right? Is duplication of excessive expenditures right? Is it right and is it fair that the rights of the residents living next door to COH are abridged and ignored? The opponents of the helipad are concerned.

This is a city-wide concern which demands our attention. Study of how many helicopters are needed in our city, and closeness of location of helicopter service/helipads (e.g., University Hospital and COH) demands high priority planning.

In the meantime, PLEASE:

1. Visit site at Laurelon Terrace Condominiums.
2. Formulate a public statement policy for quality of life and community values for the City of Seattle.
3. Act now to prevent tragedy from helicopter accidents before they occur.
4. Stop building plans for a helipad at COH.

THANK YOU.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105
524-4151

cc: Members - City Council
Dept. Construction & Land Use

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Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

February 4, 1985

Ms. Maryann E. Spangler
4013 N. E. 46th Street
Seattle, Washington 98105

Dear. Ms. Spangler:

The Mayor has asked me to respond to your specific questions regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on hospital grounds. There have been numerous phone calls and letters to this Department from COH neighbors who are concerned about the particular location of the helistop, which they feel may adversely affect their neighborhood.

Before a permit can be issued, there must be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by City Council. Puget Sound Health Systems Agency has been asked to provide us with health policy guidance on the development of emergency helicopter landing facilities at hospitals in the City of Seattle. While the City of Seattle has the responsibility to address the land use implications of hospital helipads, we rely on the health planning experts to determine the need and cost effectiveness of such facilities in medical practices. Mr. Larry Thompson, Executive Director of the Agency, has indicated to me that the agency's preliminary opinion will be available by February 15, 1985. If you wish to contact Mr. Thompson's office, you may telephone 464-6143 (601 Valley St., Seattle, Washington 98109).

Further, you may contact the State Department of Social and Health Services regarding the requirement of a Certificate of Need for the proposal. This agency is in the process of determining whether a Certificate is necessary or not. The contact person is: Christiana Sparks, Certificate of Need Program, State Department of Social and Health Services, Mail Stop ET-33, Olympia, Washington 98504; phone number (206) 753-5857.

Your letter and letters of other citizens of the community are included in the official file (CC 84-022), and you will be notified of future public hearing schedules and decisions. I appreciate your interest, and I am glad you took the time to write.

If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Very truly yours,

WILLIAM J. JUSTEN, P.E.
Director

HI:vg

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Office Of The Mayor
City of Seattle

Charles Royer, Mayor

February 8, 1985

Ms. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

Dear Ms. Spangler:

Thank you for your letter and suggestions on the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on hospital grounds. I have asked William Justen, Director of the Department of Construction and Land Use, to respond to your specific concerns, and if you have not already heard from him, I'm certain you will soon. I have also asked Mr. Justen to provide me with a copy of his reply.

I appreciate your interest in the development and environment of your neighborhood and, again, thank you for taking the time to write.

Sincerely,

Charles Royer

CR:hil

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The Siqueland Partnership
Attorneys at Law
1200 Westlake Avenue N., Suite 80
Seattle, Washington 98109
Telephone (206) 283-6069
Telex 32-0266

RECEIVED
FEB 15 1985
Dept. of Construction & Land Use

Partners
J. Byron Holcomb
Peter LeSourd
Herman S. Siqueland

February 13, 1985

Mr. William J. Justen, Director
Department of Construction & Land Use
600 4th Avenue
Seattle, WA 98104

Re: Children's Orthopedic Hospital Helicopter Pad Application dated November 13, 1984

Dear Mr. Justen:

I am writing this letter both to express my opposition to the Children's Orthopedic Hospital's November 13, 1984 application for operation of a helicopter pad on the hospital grounds, and also to express the reasons for my opposition.

I am not a resident of Laurelhurst, nor even of Seattle, yet I have a real and vital interest in opposing the hospital's helicopter pad application. Quite simply, that interest is the continued health and well being of my 89 year old mother who is a resident of the Laurelon Terrace Condominiums, and would be one of the nearest residents to the proposed helicopter pad. There are at least six other residents of Laurelon who are in their late eighties and early nineties, and who would likewise be adversely affected by the proposed helicopter operations.

The available information indicates that operation of the pad on the hospital ground would add very little benefit to children in emergency situations over the present operation from the pad on the University of Washington playfields. The possibility of that slight additional benefit must be balanced against the clearly detrimental affect which operation of a hospital ground pad would have on the health and comfort of my mother and the other nearby residents of Laurelon who are of a similar age.

As a result of my past military service, I am familiar with the noise levels generated by helicopter pad operations. I also experienced, approximately 15 years ago, the noise level generated by a commuter helicopter operation which was operated, on a trial basis, on the roof of a downtown Seattle office building. The noise during landing and takeoff operations totally disturbed work in all offices in the surrounding buildings within an area

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of several blocks, and my recollection is that the helicopter service was discontinued because of that severe noise interference.

In the case of the Children's Orthopedic Hospital's proposed pad, the noise level would be especially detrimental to the health and well being of the nearby residents in the eighty and ninety year old bracket.

I can understand why direct operation of the helicopters to the hospital would result in a cost savings over the present operation, as the ambulance service from the university playfield to the hospital would be eliminated. If that cost savings is a motivating factor in the hospital's pending application, then I am especially critical of the hospital having submitted that application. I am not interested in the hospital saving money at the expense of my mother's health and well being, nor at the expense of the other elderly residents near the proposed pad. I would appreciate your department inquiring into the significance to the hospital of possible cost savings as a motivating factor in their present application. Assuming it is not such a factor, then the objections stated above are nevertheless applicable and the application should be denied.

Very truly yours

H S Siqueland

Herman S. Siqueland

HSS/ms

cc: Councilmembers

Mrs. Robert (Peggy) Habegger
Pres., Board of Trustees of
The Children's Orthopedic Hospital

Mayor Charles Royer

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Seattle City Council

RECEIVED
FEB 8 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

February 7, 1985

Mrs. Maryann E. Spangler
4013 N.E. 46th St.
Seattle, Wa. 98105

Dear Mrs. Spangler:

Thank you for contacting me regarding the proposal to build a helipad at Children's Orthopedic Hospital.

The application is for a Council Conditional Use permit which will require a decision by the City Council. I am forwarding your letter to the Director of the Department of Construction and Land Use so that your comments will be placed in the official record for consideration by the Land Use Committee and Council when the application comes before us.

I do appreciate your concerns. Thank you for taking the time to forward them to me.

Respectfully,

PAUL KRAABEL, Member
Land Use Committee

Cc: William Justen

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COPY

January 22. 1985

Mayor Charles Royer
600 4th Avenue - Floor 12
Seattle, WA. 98104

Dear Mayor Royer:

After years of support for and cooperation with Children's Orthopedic Hospital (COH), after months of anguished thought, and after weeks of research, the residents of Seattle--especially those who live within a few feet of the proposed site and whose lives will feel the impact--have reached the decision that a helipad ought not be built at COH. The following facts are basic to this decision:

1. A helipad is extremely unwise and unsafe in a densely populated residential area -- made up of condominiums, apartments, senior citizen housing, elementary school, and single family residences. No one can guarantee against helicopter malfunction and crash. Proposed location allows for no margin of error. For the residents living in the 136 units of Laurelon Terrace Condominiums--including a high percentage of senior citizens--the helicopter quite literally would be landing on their roof top or in their yard. Are they considered to be expendable? Will COH pay for loss of life and property in case of crash? Who will really pay?

2. The two-engine helicopter sought by COH would be noisy. It would produce negative environmental impact. The noise would be in addition to ambulance and truck traffic already endured. Emergencies can occur anytime during day or night. The noise would be disturbing at any hour to COH patients and personnel as well as to neighbors . Would you want this in your neighborhood -- day and night?

3. Alternative landing sites are available and workable. The proponents have conceded that the present landings in the UW soccer field (3 minutes from COH by ambulance) have been safe, satisfactory and no problem. Another site is available at Sand Point Naval Station (6 minutes away). A helipad at University Hospital (5 minutes from COH) will be ready for use by Spring, 1985.

4. Does every hospital in Seattle need a helipad? Why this sudden proliferation--helicopters have been available for decades. Has it become a status symbol to have a helipad? Has a helipad become a marketing tool of the medical profession/hospital administration? Do you know that hospitals in other cities USA have stopped their helicopter service because of the high risk safety and expense factors measured against negligible benefits observed for patients. Millions of dollars are being spent on each--aircraft, landing pad, maintenance of both, pilot salary and insurance. This is horrendous and excessive duplicationof expenditures. This causes costs at hospitals to rise and rise and rise!

5. The reasons given by COH for justification of helicopter service sound good--to a point--and are emotionally charged. However, one crucial point has been overlooked and/or omitted: COH located by choice in a densely populated residential neighborhood. The projected total of 30-40 flights a month (15-20 in and 15-20 out) would be detrimental and dangerous to the residents who live within a few feet from the landing pad. Since COH chose to live in this location, it has a responsibility for the safety and well-being of these residents. IF COH wishes to continue in its present location,

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we believe it must abide by the rules for a quiet and safe residential neighborhood.

Is this additional institutional encroachment in a densely populated residential neighborhood right? Is endangerment of life, property, and environment right? Is duplication of excessive expenditures right? Is it right and is it fair that the rights of the residents living next door to COH are abridged and ignored? The opponents of the helipad are concerned.

This is a city-wide concern which demands our attention. Study of how many helicopters are needed in our city, and closeness of location of helicopter service/helipads (e.g., University Hospital and COH) demands high priority planning.

In the meantime, PLEASE:

1. Visit site at Laurelon Terrace Condominiums.
2. Formulate a public statement policy for quality of life and community values for the City of Seattle.
3. Act now to prevent tragedy from helicopter accidents before they occur.
4. Stop building plans for a helipad at COH.

THANK YOU.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

524-4151

cc: Members - City Council
Dept. Construction & Land Use

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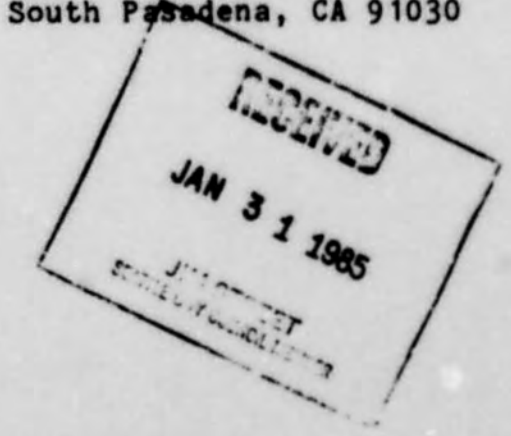
NC → Replies: duplicate

January 29, 1985

1788 Grevelia St.
South Pasadena, CA 91030



Councilman Jim Street
Seattle City Council
600 - 4th Avenue
Seattle, WA 98104

Dear Mr. Street:

I love children.

For 20 years I taught 4 & 5 yr. olds in Sunday School.

When I retire to my condo in Seattle in two years I intend to volunteer at the Children's Orthopedic Hospital.

I am in favor of doing things to promote the wellbeing of our children.

I am not in favor of building a helipad at COH because:

1. There is already a helipad in the U of W intramural field just three minutes from COH.

2. I think the millions of dollars it will cost to build and operate the helicopter service to decrease the children's arrival time by just a couple of minutes could be put to much better use doing other things for the children.

3. It is not fair to submit us homeowners and residents to the disruption and dangers of helicopters flying overhead in our retirement years when the children already have their helipad 3 minutes away.

Before making your decision, will you please pray and ask God what His will is in this matter.

With prayers that your
hearts will help you
make the right decision,

Nancy J. Philips

Nancy J. Philips
Homeowner
4635 - 41st N.E.
Seattle, WA 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Seattle City Council

RECEIVED
FEB 8 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

February 7, 1985

Nancy J. Philips
4635 41st N.E.
Seattle, Washington 98105

Dear Ms. Philips:

Thank you for your recent letter regarding the proposal to build a helipad at Children's Orthopedic Hospital.

The application is for a Council Conditional Use permit which will require a decision by the City Council. So that your comments will be placed in the official record for consideration by the Land Use Committee and Council when the application comes before us, I am forwarding your letter to the Director of the Department of Construction and Land Use. The decision on the proposal will be made on the merits of the case contained in the official record.

I appreciate your concerns. Thank you for taking the time to forward them to me.

Respectfully,

PAUL KRAABEL, Member
Land Use Committee

Cc: William Justen

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57

2.

Duplicate

January 29, 1985

1788 Grevelia St.
South Pasadena, CA 91030

Councilman Paul Kraabel
Seattle City Council
600 - 4th Avenue
Seattle, WA 98104

Dear Mr. Kraabel:

I love children.

For 20 years I taught 4 & 5 yr. olds in Sunday School.

When I retire to my condo in Seattle in two years I intend to volunteer at the Children's Orthopedic Hospital.

I am in favor of doing things to promote the wellbeing of our children.

I am not in favor of building a helipad at COH because:

1. There is already a helipad in the U of W intramural field just three minutes from COH.

2. I think the millions of dollars it will cost to build and operate the helicopter service to decrease the children's arrival time by just a couple of minutes could be put to much better use doing other things for the children.

3. It is not fair to submit us homeowners and residents to the disruption and dangers of helicopters flying overhead in our retirement years when the children already have their helipad 3 minutes away.

Before making your decision, will you please pray and ask God what His will is in this matter.

With prayers that your
hearts will help you
make the right decision,

Nancy J. Philips

Nancy J. Philips
Homeowner
4635 - 41st N.E.
Seattle, WA 98105

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Seattle City Council

RECEIVED
FEB 8 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Norman B. Rice
President of the City Council
625-2436

George E. Benson
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Committee
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Paul Kraabel
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Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

February 7, 1985

Ms. Shirley McJouell
3930 N.E. Belvoir
Seattle, Wa. 98105

Dear Ms. McJouell:

Thank you for contacting me regarding the proposal to build a helipad at Children's Orthopedic Hospital.

The application is for a Council Conditional Use permit which will require a decision by the City Council. I am forwarding your letter to the Director of the Department of Construction and Land Use so that your comments will be placed in the official record for consideration by the Land Use Committee and Council when the application comes before us.

I do appreciate your concerns. Thank you for taking the time to forward them to me.

Respectfully,

PAUL KRAABEL, Member
Land Use Committee

Cc: William Justen

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Duplicate

January 24, 1985

RECEIVED
JAN 30 1985
PAUL KRAABEL
SEATTLE CITY COUNCIL

Mr. William Justen
Department of Construction and Land Use
600 - 4th Avenue
Seattle, Washington 98104

Re: COH Helipad

Dear Mr. Justen:

We, as members of the Marian Blethen Mesdag Orthopedic Guild, wish to communicate to you our continued opposition to the construction of a helipad at Children's Orthopedic Hospital, Seattle, Washington. In the Spring of 1983 we wrote objecting to the Institutional Zoning Ordinance as the helipad was in the Hospital administration's plans at that time.

All of our members live in communities immediate to or adjoining the hospital, and we have lived there for many years. The group has given thousands of hours of volunteer service and thousands of dollars over the past twenty-plus years in support of good medicine.

The decision to oppose the helipad construction has not been made casually. We have studied information for and against the project. We urge the DCLU to require an EIS on this project. An EIS is a necessity, not a choice. Our information indicates there are plans in the immediate future for COH to develope a Trauma Center. These and many other factors lead us to write and express our strong opposition to the construction of a helipad at COH.

Sincerely,

CC: Mayor Charles Royer
Members of the Seattle City Council

Shirley McQuelle 2930 NE Belvoir 98105
Helen A. Sensenney 3335 W. Laurelhurst Dr N.E. 98105
Beverly Lycette 88 Virginia 98101
Gloria M. Hennings 4314 54th NE. 98105
Patricia O. Wright 3925 48th Ave NE 98105
Betty Ann Christian 4350 51st ave. N.E. 98105
Martha F Kane 3386 46th N.E. 98105
Pauline J. Westlund 5150 NE Latimer Pl. Seattle 98105
Elizabeth M. Wood 3863-42nd N.E. Seattle 98105
Helen Fellows 64[illegible] Lawton Seattle 98[illegible]

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Mrs. Clara Peterson 3355 E. Fairchild Dr. NE.
Mrs John O (me) 5115 NE45
Dorothy Elven 4326 NE 41ST
Ruth L. Hamilton 4303 NE 35
Carolyn Carson 3854 42NE
Jane M. Miller 3500 46TH Ave NE
Peggy Hill Demarest 3323 43rd N.E.
Rita E. Hill 4700 N.E. 40th

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RECEIVED
FEB 8 1985
Dept. of Construction & Land Use

House of Representatives
State of Washington
Olympia

February 7, 1985

William Justen, Director
Department of Construction and Land Use
Municipal Building
Seattle, Washington 98104

Dear Mr. Justen:

We are concerned about the proposal to install a helipad at Children's Orthopedic Hospital in Seattle. While we are not necessarily opposed to the proposal, we recognize that the proposal will subject adjacent neighbors to substantial noise impacts. It is our belief that the proposal should be subjected to the formal Certificate of Need process so that the public is ensured by due process that the facility is duly needed and effort has been made to minimize the adverse impact of those who must reside adjacent to the hospital.

We wholeheartedly encourage you to require that the Certificate of Need process be applied to this proposal and that in the interest of all, the procedure be followed expeditiously.

Sincerely,

Ken Jacobsen
Representative
46th District

Sincerely,

Marlin Appelwick
Representative
46th District

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

February 8, 1985

Ms. Patricia L. Scanlon
4015 Northeast 46th Street
Seattle, Washington 98105

Dear Ms. Scanlon:

Thank you for your letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. There have been numerous phone calls and letters to me and to the Department of Construction and Land Use (DCLU) from COH neighbors who are concerned that the proposed helistop may adversely affect their neighborhood.

William Justen, Director of DCLU, tells me that before a permit can be issued, there must be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by the City Council. Your letter and letters from other citizens of the community are included in the official file (CC 84-002), and you will be notified of future public hearing schedules and decisions.

I appreciate your interest, and I am glad you took the time to write. If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Sincerely,

Charles Royer

CR:his

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8511.6 1/29

Log #1318
CLU - Mayor's response due 2/11

RECEIVED
FEB 4 1985
Dept. of Construction & Land Use

AK-F11

4015 NE 46th
Seattle, WA 98105
January 29, 1985

Mayor Charles Royer
City Hall
Seattle, WA

Dear Mayor Royer:

I write re. Children's Hospital's proposed helipad. My husband + I are not some wealthy Laurelhurst homeowners. We live, literally, in the shadow of the hospital. The helicopters would fly directly over our homes day and night (emergencies happen at night too, in case the hospital will argue.)

There are many reasons for a hospital to desire a helipad. One might be the desire to save a few minutes from a baby's emergency trip. Others might include the increased competition for business among hospitals, in light of revised Medicare reimbursement policies.

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You have long been a proponent of maintaining the quality of Seattle's neighborhoods. As East coast transplants, we, too, value them. Does an institution which began and has grown up in a residential neighborhood have unlimited rights? Do the neighbors have no rights?

We hope you'll consider the desires of all parties involved in this issue, not just the large + powerful ones. We appreciate your concern for the quality of life in Seattle.

Yours,
Patricia L Scanlon

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Office Of The Mayor
City of Seattle

Charles Royer, Mayor

February 8, 1985

Ms. Mary Virginia Ballard
4613 - 41st Avenue N.E.
Seattle, Washington 98105

Dear Ms. Ballard:

Thank you for your letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. There have been numerous phone calls and letters to me and to the Department of Construction and Land Use (DCLU) from COH neighbors who are concerned that the proposed helistop may adversely affect their neighborhood.

William Justen, Director of DCLU, tells me that before a permit can be issued, there must be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by the City Council. Your letter and letters from other citizens of the community are included in the official file (CC 84-002), and you will be notified of future public hearing schedules and decisions.

I appreciate your interest, and I am glad you took the time to write. If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Sincerely,

Charles Royer

CR:his

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8511.6 1/29

Log #1311
CHU - Mayor's response due 4/1

4613 41st Avenue N.E.
Seattle, Washington 98105
January 29, 1985

AK-FII

RECEIVED
JAN 30 1985
MAYOR'S OFFICE

RECEIVED
FEB 4 1985
Dept. of Construction & Land Use

Mayor Charles Royer
600 4th Avenue
12th Floor
Seattle, Washington 98104

Dear Mayor Royer:

I wish to express my concern about the planned helipad on the grounds of Children's Orthopedic Hospital which as you know is in the middle of a residential area.

In spite of promises not to enlarge, the hospital has more than doubled in size, added an unattractive garage and is planning an office building. These have affected traffic and our sunlight, but the noise of helicopters arriving from five states would be much more destructive to the Neighborhood.

If they need to have a helipad for an emergency regional hospital, it seems to me the place for it would be at the C.O.H. section of Valley General Hospital near Renton. This is in a less populated area nearer an industrial part of the valley.

I hope you will give all of us in the neighborhood your support in this matter.

Very sincerely yours,
Mary Virginia Ballard
(Jan)

Mary Virginia Ballard

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Office Of The Mayor
City of Seattle

Charles Royer, Mayor

February 8, 1985

Ms. Ernestine J. Rombouts
Apt. 4675, 41st Avenue N.E.
Seattle, Washington 98105

Dear Ms. Rombouts:

Thank you for your letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. There have been numerous phone calls and letters to me and to the Department of Construction and Land Use (DCLU) from COH neighbors who are concerned that the proposed helistop may adversely affect their neighborhood.

William Justen, Director of DCLU, tells me that before a permit can be issued, there must be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by the City Council. Your letter and letters from other citizens of the community are included in the official file (CC 84-002), and you will be notified of future public hearing schedules and decisions.

I appreciate your interest, and I am glad you took the time to write. If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Sincerely,

Charles Royer

CR:his

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log #1314

CLU-Mayor's response due 2/11

AK-F1I

S11.6 2/1

RECEIVED
FEB 4 1985
Dept. of Construction & Land Use

Ernestine J. Rombouts
Apt. 4675, 41st Avenue N. E.
Seattle, Washington 98105

RECEIVED
FEB 1 1985
MAYOR'S OFFICE

Dear Mayor Royer—

I am writing in regards to the proposed building of a helipad at Childrens Orthopedic Hospital. I live directly below the hospital on Sand Point Way and I am very concerned about the noise, amount of helicopter traffic, safety and the possible effect on the value of my home.

I have attended the meeting presented by the Laurelhurst Community Club- and they have been thorough in presenting information about the proposed plan. As a concerned citizen and homeowner, I greatly oppose the building of the helipad for a number of reasons: environmental, personal, safety and financial.

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11.6.71

I chose to live in the Laurelhurst area because of its attractiveness safeness and standard of living and I resent late to see the area destroyed and contaminated by the building of an unnecessary helipad. If the proposal goes through, I'm very sure that helicopter traffic & noise will increase & this I cannot tolerate.

I oppose this project very strongly and from any angle or point of view, I cannot and will not support it.

Sincerely,
Ernestine Rowlands

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Office Of The Mayor
City of Seattle

Charles Royer, Mayor

February 8, 1985

Ms. Nancy J. Philips
1788 Grevelia Street
South Pasadena, California 91030

Dear Ms. Philips:

Thank you for your letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. There have been numerous phone calls and letters to me and to the Department of Construction and Land Use (DCLU) from COH neighbors who are concerned that the proposed helistop may adversely affect their neighborhood.

William Justen, Director of DCLU, tells me that before a permit can be issued, there must be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by the City Council. Your letter and letters from other citizens of the community are included in the official file (CC 84-002), and you will be notified of future public hearing schedules and decisions.

I appreciate your interest, and I am glad you took the time to write. If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Sincerely,

Charles Royer

CR:his

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log #1315

CLV - Mayor's response due 2/1

85 11.6 1/29

January 29, 1985

1788 Grevelia St.
South Pasadena, CA 91030

RECEIVED
FEB 4 1985
Dept. of Construction & Land Use

RECEIVED
FEB 1 1985
MAYOR'S OFFICE

AK - FYI

Mayor Charles Royer
600 - 4th Avenue
12th Floor
Seattle, WA 98104

Dear Mr. Royer:

I love children.

For 20 years I taught 4 & 5 yr. olds in Sunday School.

When I retire to my condo in Seattle in two years I intend to volunteer at the Children's Orthopedic Hospital.

I am in favor of doing things to promote the wellbeing of our children.

I am not in favor of building a helipad at CHO because:

1. There is already a helipad in the U of W intramural field just three minutes from CHO.

2. I think the millions of dollars it will cost to build and operate the helicopter service to decrease the children's arrival time by just a couple of minutes could be put to much better use doing other things for the children.

3. It is not fair to submit us homeowners and residents to the disruption and dangers of helicopters flying overhead in our retirement years when the children already have their helipad 3 minutes away.

Before making your decision, will you please pray and ask God what His will is in this matter.

With prayers that your
hearts will help you
make the right decision,

Nancy J. Philips

Nancy J. Philips
Homeowner
4635 - 41st N.E.
Seattle, WA 98105

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Office Of The Mayor
City of Seattle

Charles Royer, Mayor

February 8, 1985

Mr. Scott Cobb
4654 - 41st Avenue N.E.
Seattle, Washington 98105

Dear Mr. Cobb:

Thank you for your letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. There have been numerous phone calls and letters to me and to the Department of Construction and Land Use (DCLU) from COH neighbors who are concerned that the proposed helistop may adversely affect their neighborhood.

William Justen, Director of DCLU, tells me that before a permit can be issued, there must be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by the City Council. Your letter and letters from other citizens of the community are included in the official file (CC 84-002), and you will be notified of future public hearing schedules and decisions.

I appreciate your interest, and I am glad you took the time to write. If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Sincerely,

Charles Royer

CR:his

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8511.6 1/29

Log #1317
Ch V - Mayor's response due 2/11

RECEIVED
FEB 4 1985

SCOTT COBB
4654 - 41ST AVENUE N. E.
SEATTLE, WASHINGTON 98105

January 29, 1985

Dept. of Conservation & Land Use

AK-FII

Dear Mayor Royer,

I am writing to protest the proposed construction by Childrens Orthopedic Hospital of a heliPad.

As a nearby resident, I am distressed by changes in our neighborhood: office construction, the Burke-Gilman housing project, Ronald McDonald House, as well as other C.O.H. construction, all of which add to traffic congestion, noise and a shift away from quiet single-family residences.

C.O.H. has failed, in my opinion, to demonstrate a clear need for the heliPad on the proposed site.

Please do all you can to protect the homeowners in our neighborhood.

May I hear from you? Thank you.

Sincerely,

Scott Cobb

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Charles/Arnoldy/DP

FYI

RECEIVED

FEB 11 1985

Dept. of Construction & Land Use

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

February 8, 1985

Ms. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

Dear Ms. Spangler:

Thank you for your letter and suggestions on the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on hospital grounds. I have asked William Justen, Director of the Department of Construction and Land Use, to respond to your specific concerns, and if you have not already heard from him, I'm certain you will soon. I have also asked Mr. Justen to provide me with a copy of his reply.

I appreciate your interest in the development and environment of your neighborhood and, again, thank you for taking the time to write.

Sincerely,

CHARLES ROYER

Charles Royer

CR:hil

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Jessie

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

February 8, 1985

Ms. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

Dear Ms. Spangler:

Thank you for your letter and suggestions on the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on hospital grounds. I have asked William Justen, Director of the Department of Construction and Land Use, to respond to your specific concerns, and if you have not already heard from him, I'm certain you will soon. I have also asked Mr. Justen to provide me with a copy of his reply.

I appreciate your interest in the development and environment of your neighborhood and, again, thank you for taking the time to write.

Sincerely,

Charles Royer

CR:hil

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Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

February 4, 1985

Ms. Maryann E. Spangler
4013 N. E. 46th Street
Seattle, Washington 98105

Dear. Ms. Spangler:

The Mayor has asked me to respond to your specific questions regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on hospital grounds. There have been numerous phone calls and letters to this Department from COH neighbors who are concerned about the particular location of the helistop, which they feel may adversely affect their neighborhood.

Before a permit can be issued, there must be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by City Council. Puget Sound Health Systems Agency has been asked to provide us with health policy guidance on the development of emergency helicopter landing facilities at hospitals in the City of Seattle. While the City of Seattle has the responsibility to address the land use implications of hospital helipads, we rely on the health planning experts to determine the need and cost effectiveness of such facilities in medical practices. Mr. Larry Thompson, Executive Director of the Agency, has indicated to me that the agency's preliminary opinion will be available by February 15, 1985. If you wish to contact Mr. Thompson's office, you may telephone 464-6143 (601 Valley St., Seattle, Washington 98109).

Further, you may contact the State Department of Social and Health Services regarding the requirement of a Certificate of Need for the proposal. This agency is in the process of determining whether a Certificate is necessary or not. The contact person is: Christiana Sparks, Certificate of Need Program, State Department of Social and Health Services, Mail Stop ET-33, Olympia, Washington 98504; phone number (206) 753-5857.

Your letter and letters of other citizens of the community are included in the official file (CC 84-022), and you will be notified of future public hearing schedules and decisions. I appreciate your interest, and I am glad you took the time to write.

If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Very truly yours,

WILLIAM J. JUSTEN, P.E.
Director

HI:vg

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Hermia Ip Copy

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

February 13, 1985

Ms. Joy Scott
Business/Asia
4339 Northeast 45th Street
Seattle, Washington 98105

Dear Ms. Scott:

Thank you for your letters regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. There have been numerous phone calls and letters to me and to the Department of Construction and Land Use (DCLU) from COH neighbors who are concerned that the proposed helistop may adversely affect their neighborhood.

William Justen, Director of DCLU, tells me that his staff is reviewing the environmental impacts of the proposal, based on State rules and City ordinances, and your suggestions will be given careful consideration. Before a permit can be issued, there must also be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by the City Council. Your letter and letters from other citizens of the community are included in the official file (CC 84-002), and you will be notified of future public hearing schedules and decisions.

I appreciate your interest, and I am glad you took the time to write. If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Sincerely,

Charles Royer

CR:his

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8511.6 1/9

Log #1285

CLU-Mayor's response due 2/5

JOY SCOTT

MBA Programmes
The Chinese University of Hong Kong
Shatin, N.T.
Hong Kong

Business/Asia
4339 NE 45 Street
Seattle, WA 98105
USA

RECEIVED
JAN 22 1985
MAYOR'S OFFICE

January 19, 1985

AK-fyi

RECEIVED
JAN 28 1985
Dept. of Construction & Land Use

Charles Royer, Mayor
Office of the Mayor
600 4th Avenue
Seattle, WA 98104

Dear Mayor Royer,

Thank you for your concern for

1. Cost-effective health care
2. The safety of Seattle's citizens

evidenced in your letter to Larry Thompson of Puget Sound Health Systems Agency concerning projected hospital helicopter use.

You recognize the marketing potential of helicopter use in your statement on the competitive pressures in the health care industry.

If Seattle's hospitals would publicize their future development plans (i.e. C.O.H. plans to become a trauma center), it would be more possible to coordinate the special strengths of each institution and to award helicopter service where it will be most cost-effective and least dangerous to Seattle's population. With careful planning, Seattle could become the nation's showplace of city-wide integrated health care.

Thank you again for your concern. I look forward to your response to P.S.H.S.A.'s policy recommendations.

Sincerely,

Joy Scott

Joy Scott
Steering Committee
Citizens Concerned About
Helicopter Transport

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JOY SCOTT

MBA Programmes
The Chinese University of Hong Kong
Shatin, N.T.
Hong Kong

Business/Asia
4339 NE 45 Street
Seattle, WA 98105
USA

RECEIVED
JAN 28 1985
Dept. of Construction & Land Use

January 23, 1985

Mayor Charles Royer
Office of the Mayor
600 4th Avenue
Seattle, WA 98104

Dear Mayor Royer,

On January 19, I wrote to thank you for the concern for cost-effective and safe health care that you presented in your timely letter to Larry Thompson of the Puget Sound Health Systems Agency.

You state "This trend (helicopter landing facilities at hospitals) could...create severe environmental problems for neighborhoods with medical facilities nearby."

Mayor Royer, you are undoubtedly aware that, during these last two weeks in January, William Justen and the Department of Construction and Land Use will decide whether or not a helipad at COH is environmentally significant and whether an EIS should be made.

Without an EIS, the severe environmental problems that you mentioned in your letter will never be addressed. What other business could begin flying helicopters into a heavily populated residential area without an EIS?

Mayor Royer, please use your influence wherever possible to help the D.C.L.U. decide upon the necessity of an EIS for the projected COH helipad.

Thank you!

Sincerely,

Joy Scott

Joy Scott

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Hermia Ip Copy

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

February 13, 1985

Ms. Joy Scott
Business/Asia
4339 Northeast 45th Street
Seattle, Washington 98105

Dear Ms. Scott:

Thank you for your letters regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. There have been numerous phone calls and letters to me and to the Department of Construction and Land Use (DCLU) from COH neighbors who are concerned that the proposed helistop may adversely affect their neighborhood.

William Justen, Director of DCLU, tells me that his staff is reviewing the environmental impacts of the proposal, based on State rules and City ordinances, and your suggestions will be given careful consideration. Before a permit can be issued, there must also be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by the City Council. Your letter and letters from other citizens of the community are included in the official file (CC 84-002), and you will be notified of future public hearing schedules and decisions.

I appreciate your interest, and I am glad you took the time to write. If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Sincerely,

Charles Royer

CR:his

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CHARLES R. HOUGH
5054 - 44TH AVENUE N. E.
SEATTLE, WASHINGTON 98105

24 January 1985

RECEIVED
JAN 25 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dept. of Construction & Land Use
Attn Municipal Bldg.
600 4th
Seattle Wa. 98104

Re: Application # CC 84-022
Helicopter Pad - Children's Orthopedic Hospital -

To Whom It May Concern -

My wife and I live in close proximity to Children's Hospital and we wish to be good neighbors, as we wish them to be to us -

This is a residential neighborhood where we expect a reasonable peace and quiet. To have helicopters flying in and out, with all their noise is simply not acceptable. I don't think the Hospital has really proved its point that the University playfield is not sufficient -

I hope you will deny the Hospitals application or let the helicopters land as they have been doing for years on the University playfield or at the University Hospital -

Thank you - Charles R. Hough -

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Jan 10, 1985

Office of Construction & Land Use
600 4th Ave, Seattle 98104

RE: application #CC 84-022

RECEIVED
JAN 25 1985
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

We oppose the helipad installation at Children's Orthopedic Hospital.

The noise and land use around COH is at maximum now!

As property owners at Laurelon, where my elderly mother lives, and View Ridge area we remind you that we have supported and worked for the addition of Ronald McDonald housing for handicapped, the addition to COH itself and the garage - Enough!

Barbara L Erak
6807 54 NE
Seattle 525 5759

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Hugo W. Schimmelbusch
Gisela H. Schimmelbusch
4702-45th Ave. N.E.
Seattle, Wa. 98105

January 23, 1985

RECEIVED
JAN 25 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Attn: Mr. William Justen, Director
Department of Construction
and Land Use
Room 400, Municipal Building
600-4th Ave.
Seattle, Wa. 98104

Re: Application for Helipad at Cildrens Orthopedic Hospital and Medical Center (COHMC), Application No. CC84-022.

Dear Mr. Justen:

This letter concerns our opposition to the proposed helipad at CHOMC. We have been residing at above address for over 20 years. Our residence is located on 45th Ave. N.E., directly East of CHOMC, and we have been enjoying our neighborhood in the absence of noise, except when coast guard and military helicopters were landing on CHOMC grounds occasionally in past years (approximately up to 10 years ago). Granting permission of a helipad with several helicopter flights day and night, threatens to disrupt living and sleeping patterns in the neighborhood.

We do believe that with modern life saving and transport techniques other than helicopters, just as many lives can be saved. We believe that helicopter technology is too expensive and represents nothing but a flashy status symbol to the hospital using them. We believe that the use of the UW meadows of landing (presently used) should be continued. If children are too sick to be transported by any other means, helicopters should take them to the UW hospital helipad for treatment at that facility.

Sincerely,

Hugo W. Schimmelbusch
Hugo W. Schimmelbusch

Gisela H. Schimmelbusch
Gisela H. Schimmelbusch

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RECEIVED
JAN 25 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Kathleen McHugh Johnston
4200 N. E. 50
Seattle, Washington 98105

January 23, 1985

Re: Appl. # 8084-82

This is to tell you I am against the above land use application.

The noise factor would be detrimental not only to residents of the area but to the children confined to the hospital as well.

Please consider this objection from one of many land owners. Sincerely,

Kathleen McHugh-Johnston

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October 21, 1985

Dr. Nicola,
Health Officer

Dear Dr. Nicola,

We, the members of the Florence Ewing Guild, would like to express our concern about the proposed Children's Orthopedic Hospital Helipad to you and the City Council.

Representatives from our Guild attended a Helipad Information meeting on Oct. 9, 1985. The COH Board of Trustees and Dr. John Neff represented COH. Liz Anderson and Kate Hermer represented the concerns of the community.

We feel that the COH speakers left many questions unanswered. We are not convinced that a helipad is needed to save lives or that it would be used only

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in life-threatening situations if built. Enough issues about helicopter transport in general were raised to warrant postponement of the Council's decision until the State has their hearing in January.

As a Guild, we remain committed to raising money for the children at COH. But we want the institution to be truthful with its neighbors. And we hope that COH will be willing to wait until the State establishes its policy.

Sincerely,

Maureen Bitterman, President
Diane Adam, Secretary

The Florence Ewing Guild

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ALBERT A. FELDMANN
P. O. BOX 85568 UNIVERSITY STATION
SEATTLE, WASHINGTON 98105

Nov. 11. 1985

Dr. Bud Nicola
Health Officer of the City of Seattle
Municipal Bldg.
600 4th Ave.
Seattle, ,WA 98104

Ref : Helipad of Childrens' Orthopedic Hospital

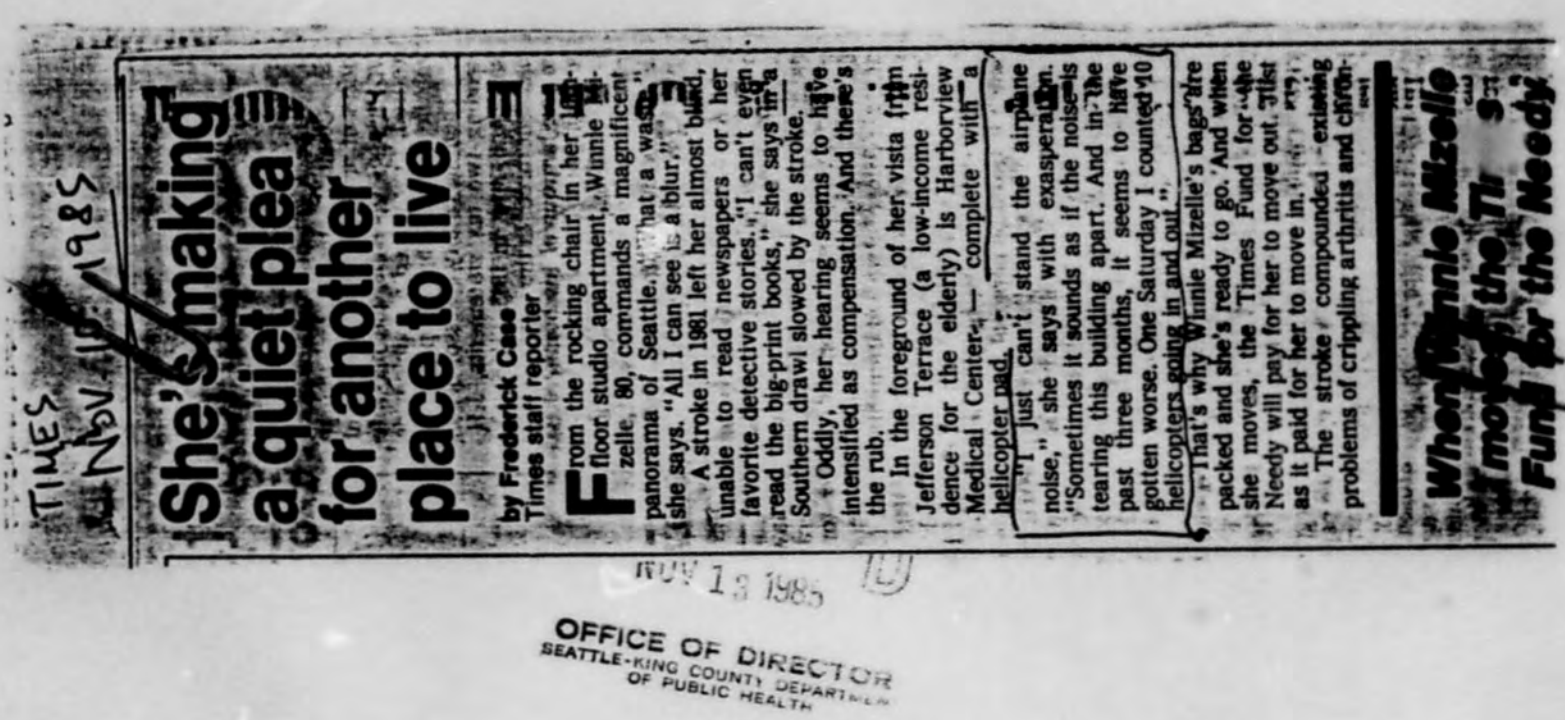
Dear Dr. Nicola,

I am enclosing a clipping from the Seattle Times of Nov. 10. ,i.e. yesterday. Here is unsolicited testimony of how close proximity to an existing helipad at Harborview Medical Center affects one elderly person .At that Harborview Hospital is located in a noisy area of town next to the Freeway ,quite unlike the quiet, purely residential area of Laurelhurst .

Sincerely yours

Albert A. Feldmann

Encl.



TIMES
NOV 11 1985

She's making a quiet plea for another place to live

by Frederick Case
Times staff reporter

From the rocking chair in her ... floor studio apartment, Winnie Mizelle, 80, commands a magnificent panorama of Seattle. "All I can see is a blur," she says. A stroke in 1981 left her almost blind, unable to read newspapers or her favorite detective stories. "I can't even read the big-print books," she says in a Southern drawl slowed by the stroke. Oddly, her hearing seems to have intensified as compensation. And there's the rub.

In the foreground of her vista (from Jefferson Terrace (a low-income residence for the elderly) is Harborview Medical Center — complete with a helicopter pad.

"I just can't stand the airplane noise," she says with exasperation. "Sometimes it sounds as if the noise is tearing this building apart. And in the past three months, it seems to have gotten worse. One Saturday I counted 10 helicopters going in and out."

That's why Winnie Mizelle's bags are packed and she's ready to go. And when she moves, the Times Fund for the Needy will pay for her to move out. First as it paid for her to move in.

The stroke, compounded existing problems of crippling arthritis and chron-

When the Mizelle ... the Times ... Fund for the Needy.

NOV 13 1985

OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT OF PUBLIC HEALTH

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dent. It meant an ambulance trip to the airport, an airplane trip to Boeing airfield and then another ambulance trip to Children's Orthopedic Hospital. When we left Boeing airport it was about 5:30 p.m. Although the ambulance had its lights and siren on, it seemed to be to no avail in the evening rush traffic. I remember the rain, the darkness and the slowness. People moved to [illegible] er and stopped or just stopped in [illegible] t was very difficult maneuvering [illegible] From the time we left OMH until [illegible] H was probably one and one-half [illegible] pter trip could have cut that time [illegible]

[illegible] g outside of our son's intensive [illegible] ticed a young boy of about 11 in the next room. Later his grandmother came out and comforted me and told me they were from the Yakima area. He was suffering from a rare disease. The COH is [illegible]

I will never understand the concern in the COH neighborhood over a helipad. It is much quieter than the Boeing planes that fly over Seattle or the sirens of the ambulance coming in. Next time it could be the life of a child of THEIR friend or relative that they could be flying in.

Pamela Hillstrom
Beaver

A6 The Daily News
Port Angeles, Wash., Friday, Oct. 18, 1985

[illegible] memory of our experience. [illegible] Nearly two years ago our son was flown to [illegible] eattle after being stabilized at Olympic [illegible] Memorial Hospital as a result of an [illegible]

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October 21, 1985

Dr. Nicola, Health Officer
King County
503 Smith Tower
Seattle, WA 98104

Dear Dr. Nicola:

I would like to support strongly the provision of a helipad at Childrens Orthopedic Hospital. As coordinator of most transfers during my four years as Patient Services Coordinator at Olympic Memorial Hospital in Port Angeles, Washington I found the provision of air transport to bring safe, efficient access for neonates and children to regional medical centers.

During the past several months the helicopter has landed at our hospital, but its landing at Boeing Field with the subsequent transport to Childrens Orthopedic by ambulance have made for unecessary delay in reaching the hospital as well as added financial expense for the family. A hospital-to-hospital helicopter service would allow for safer continuity of care.

Enclosed you will find a letter written to the editor of the Port Angeles "Daily News" which supports the case very well.

If you have any further questions, please feel free to call me at my present employer, The Clallam County Health Department, 452-7831 X276.

Sincerely,

Mary Lou Machle

Mary Lou Machle, RNBS CHN

cc m copass

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OCT 28 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

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4250 N. E. 50th
Seattle
Nov 4, 1985

Bud Nicola, Health Officer
Public Health Service
700 Yesler Blvd.
Seattle, 98104

Dear Sir:

I wish to express my view about the possible helipad at Children's Orthopedic Hospital.

I am truly concerned about actual emergency case-, and do not want any child to be deprived of that possibility of service in the minimum time possible.

But I'm sure you are considering alternatives and consequences, and weighing them carefully.

Cost, as you know is such an

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important factor damage to existing military transport is another, and possibly damage to a residential community.

If there is another way to serve these children without a heliport, I hope you find it.

Sincerely

Claire Marston

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SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

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THE CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER

RECEIVED
NOV 1 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

October 29, 1985

Dr. Bud Nicola
Health Officer, City of Seattle
7th Floor, Yesler Building
Seattle, Washington 98104

Dear Dr. Nicola:

I want to thank you for the excellent job you did in holding the hearing last week concerning the medical justification for the helipad at The Children's Orthopedic Hospital and Medical Center. You gave all sides a chance to aire their opinions and feelings, and you were absolutely impartial in the process. Personally, I don't enjoy this adversarial role with the community. I am sure that they also feel equally uncomfortable in being viewed as opposing good health care for children and will be glad when this process is over.

After I went home and reflected on the hearing, I felt there were some things I would liked to have said, not so much to you but in answer to some of the community concerns and to the lawyer that represented Laurelhurst. While these thoughts are still fresh in my mind, I would like to share them with you.

The first concerns our abilty to provide objective data concerning the need for the helipad. During the hearing it was stated that the City in the past has been able to study helicopters for police use. I hope that the community understands that a study of helicopters for health related use would be difficult to do. I imagine that the police use of helicopters was studied by choosing two similar neighborhoods and providing for one patrol cars, and for the other helicopters. At the end of a given time period the City probably looked at crime incidence figures. The only way I would know to perform a similar study involving helicopters for medical use would be to take two similar communities such as Port Angeles and Bremerton and provide direct transport to COHMC by helicopter for one and another combination of transportaion for the other, or to do a study using alternate forms of transportation for compa.able cases. In a very short time the community that did not have the direct helicopter service would ask very soon why their patients could not be transported directly by helicopter to COHMC and minimize as much as possible the risks to that child. Not only would it be difficult to control such a study but there would be real ethical and legal problems involving the first death or complication of a child for whom we denied direct helicopter transportation to COHMC. A case by case control study would be even more difficult. That is why it is nearly impossible to perform any type of prospective study.

Scientific retrospective studies also are equally difficult. In a situation where we do not have a helicopter, you cannot compare the different modes of transportation in a retrospective fashion and can only conjecture on a case by case basis whether or not a helicopter would or would not have made a difference.

P.O. BOX C5371 • 4800 SAND POINT WAY N.E. • SEATTLE, WASHINGTON 98105 • (206) 526-2000

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During this past year, for your review, we have identified three children who died and were transported either by ambulance or a combination of fixed wing and ambulance.

I can go back in subsequent years and probably find three approximately similar cases each year. Although I feel that each of these children would have benefited by direct helicopter transport to COHMC, I can't prove this but only can use my clinical judgment and conjecture that we should have given each child an optimal chance for survival. This type of review is further complicated because medical-legal questions will come up whenever we have alternative forms of transportation, and the death of a child is associated with a less direct mode of transportation.

During this past year we also have transported four children directly to COHMC because of the emergency condition of that child. Two of these children died. One will have some degree of undetermined persistent brain damage, and one child is perfectly healthy. The mortality of 50 percent for the helicopter is not a measurement of success or failure of that form of transportation, but reflects only the fact that we are selecting out the most critically ill children for helicopter transportation.

Finally, a retrospective case review, even if we had alternate modes of transportation, is extraordinarily difficulty because of the incredible variety of illnesses which we confront and the variability of each individual child. That is why I emphasized in my testimony the fact that of our 18 helicopter transports since May, the children transported represented 12 different diagnoses. The two repeating diagnoses, meningitis and head trauma were sufficiently different in age and the type of pathology involved that these cases can't be compared within those diagnostic groups. Thus, we are left with the problem of not having enough cases in any one category to allow us to provide a scientific evaluation. Again, I am left with having to make a clinical judgment in each individual case, and according to the individual cases I would say that the children were young enough and had illnesses of sufficient acuity that transportation by helicopter was justified.

I don't believe that we are unique in having difficulty in coming up with hard scientific data that would justify our proposal for a helipad, and we must use clinical judgments on a case by case basis. It is hard to refute that a critically ill child or infant requires rapid transportation and quick transport to the nearest and best intensive care unit in order to have the optimal outcome for that individual child. That is what our patients and our referring physicians demand of us, and we expect it of ourselves. Unless we have the ability to land safely a helicopter at COHMC, we will never be able to prove to you its benefit. We could only present to you on a year by year basis the number of children who died while in transport, or died shortly after arrival at COHMC, and conjecture that the outcome would have been better if there had been a helipad at COHMC. There is no question in my mind that the risk of helicopter transport for emergency situations is far less than the risk of ground transport through the congested and slippery streets of King County. I am glad we did not have an emergency from the east side last week when I-90 was completely blocked because of a multi-car accident. That sort of event is far more frequent than the rare, but very newsworthy, helicopter accident.

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The concern from the neighborhood that was most difficult to respond to last week was the elderly lady whose husband has a heart condition and who lives in the apartments immediately adjoining COHMC. I wish I could remove or alleviate the fear and anxiety factor that goes along with the use of helicopters. I personally don't believe that the noise from the few helicopter landings is a significant factor when one already considers the noise that exists in the neighborhood from traffic and overhead planes. Most of our flights would be in the daytime and very few at night. Although I can't prove it, it seems to me that the noise from an ambulance at code red along Sand Point Way is just as disruptive as a helicopter. The only difference is that we as a society have become accustomed to the ambulance and accept that as a part of our background noise. From a health standpoint, although again I can't prove it, I would imagine the danger of a local resident being hit by a speeding ambulance is as great or greater than the danger of a crash of a helicopter or a heart attack because of alarm from a helicopter noise. Unfortunately, our society has become more accustomed to car accidents and almost accepts those as given risks, yet there seems to be a greater fear of the more dramatic but extraordinarily infrequent helicopter crash. The one argument that I cannot abide by is that because of these factors the helicopter should go to Harborview rather than to COHMC. I believe that there are many apartments in which the elderly live around the Harborview campus, and the Harborview campus seems to be more congested than the COHMC campus. The only differences between the two communities are the socio-economic factors, and I don't think that those should bear a role in the decision as to where a helicopter should or should not land.

Let me end by indicating to you once again my commitment to review with you the use of helicopters at COHMC on an ongoing basis and to assure you and the community that we have no intention of utilizing this service unnecessarily. I do make a plea, however, to let us build a safe and protected area at COHMC where we can land children by helicopter and have direct access to the Emergency Room and Intensive Care Units. Liz Anderson in her testimony indicated that she is not against landing critically ill children at COHMC and I sincerely believe she speaks for the majority of the community.

I hope we can come to a resolution on this issue relatively soon. There are too many critical issues involving the health care of children that we must work together to solve. I look forward to a long and rich association with you and I thank you again for your patience and understanding.

Sincerely yours,

John M. Neff, M.D.
Medical Director

JMN:dn
cc: Nancy Greenawalt

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AIRLIFT NORTHWEST

325 9th Avenue
Seattle, Washington 98104
1-800-542-1646
(Inside Washington)
1-800-426-2430
(Outside Washington)
■ Children's Orthopedic Hospital and Medical Center 206-526-2131
■ Harborview Medical Center 206-223-8427
■ Providence Medical Center 206-326-5691
■ University Hospital 206-543-5300
■ Virginia Mason Hospital 206-624-1144

24 October 1985

Bud Nicola, MD
Director
Seattle/King County Health Dept.
7th Floor
400 Yesler Bldg.
Seattle, Wa. 98104

Sir:

I write in support of the application of Children's Orthopedic Hospital of Seattle, Washington for the construction of a Helistop on the campus of Children's Orthopedic Hospital.

Transportation of the critically ill or injured child is a challenge to all emergency personnel. In recent years advances in technology, treatment, and transport modalities have contributed to a decrease in pediatric mortality secondary to acute illness, poisonings and trauma. While over 100,000 children die each year in the United States, they are widely scattered throughout the country. Each community thus accumulates little experience in caring for the critically ill child. The necessity for adequate, efficient resuscitation and rapid transportation has been clearly demonstrated in patients with severe illnesses or injuries. A response to the need for prompt, efficient delivery of proper medical care has been the development of regional centers to care for specific problems including regionalization of pediatric critical care to children's hospitals. Early reports indicate that regionalization of some facets of critical care may result in lower rates of pediatric morbidity and mortality, particularly trauma. Many cities, Seattle included, have pediatric centers dedicated to the special needs of children. Development of these services is costly and clearly not available in every community, therefore it is imperative that these services are available to all children regardless of their location. The speed and efficiency with which the child is delivered to the regional center may make the difference in outcome.

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Children's Orthopedic Hospital is a regional center. It has a national reputation for excellence in pediatric critical care. It provides the physicians practicing in the region with quick access to its critical care units by means of a regional critical care air transport system called Airlift Northwest (ALNW). Airlift Northwest is a consortium activity of four Seattle area hospitals. Airlift Northwest provides medically configured, ventilator-equipped turboprop jet and rotary winged aircraft, with a medical team of ICU physician and ICU nurse to resuscitate and provide proper medical care en route to critically ill children.

The COH medical teams and ALNW transport very sick children. Children's Orthopedic Hospital accounts for one-third of the use of Airlift Northwest fixed wing activity. It accounts for 12% of the ALNW rotary winged acitivity. In the preceding fiscal year 83% (175 children) of those transported to COH were admitted to an ICU secting. 100% of the children transported by rotary winged aircraft were ICU admissions. 39% (88 children) transported by fixed wing were intubated. 71% of the rotary winged transports were intubated. 11% of the children had central venous lines. 4% had chest tubes; 8% had vasopressor and/or prostoglandin infusions. 3% (6 children) had on-going CPR!.

The children were very young as well as being very sick. 40% of the children were newborns. 50% of the children were less than 6 months of age; 75% were less than 5 years of age. One third (35%) of the children under 6 months of age brought by the helicopter required endotracheal intubation in addition to IV infusions and the administration of medications. These medical interventions are delicate and cannot be disrupted by unnecessary additional transfers. Thus the ALNW service provides an intensive care support to a large number of very small and very fragile patients.

To summarize, Children's Orthopedic Hospital is a regional pediatric center with nationally known critical care excellence. It receives critically ill patients referred by local physicians from the Pacific Northwest region, many of whom are transported by air. Speed of transfer for patients from around the Puget Sound region, a majority of whom need continuous advanced life support, has been accomplished by using a helicopter. The number transported from within the region by helicopter is estimated to be 42 per year or less than one per week.

The continuous delivery of critical care justifies the need to fly a relatively small number of critically ill children directly to the door of the regional pediatric critical care center. COH has, in the helicopter, extended its critical care capabilitites to the smaller communities of the region. It must be argued that any disruption of the components of the critical care transport system extend unwarranted risk to the child and detracts from the level of service provided by Airlift Northwest.

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I ask that you permit the placement of the Helistop on the COH campus thus allowing Children's Orthopedic Hospital to have quick access to the critically ill children of the region transported by Airlift Northwest.

Respectfully your,

Michael K Copass

Michael K. Copass MD
Professor of Medicine/Neurology
Medical Director, Harborview Emergency Room

Medical Director
Airlift Northwest
Harborview Medical Center
Seattle, Wa. 98104

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5003 45th N .E.
Seattle, Wa 98105
October 31, 1985

RECEIVED
OCT 31 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

Dr. Bud Nicola
Seattle-King County Health Dept.
400 Yesler Building
Seattle, WA 98104

Dear Dr. Nicola:

Here are some comments for your consideration in forming your opinion about the COH heliport proposal. We realize your time is limited so we will be as brief as possible.

1. An experienced, knowledgeable Seattle land use attorney, in informal conversation with us, has stated his opinion that the process of fact-finding and deciding on this COH heliport conditional use permit is being conducted in the wrong sequence. Specifically,he feels that "medical need" should not be the first decision or opinion in the sequence, but that environmental impacts, which include the important issue of safety and accident risk, should precede the medical need questions. After receiving the environmental checklist report for Childrens Hospital prepared by Shapiro and Associates (the Shapiro report) we can now understand the lawyer's logic. Much of the information presented in the report is erroneous. There are serious problems with the methodology they have used in regard to determining noise and safety impacts specifically. For example, the accident rate figures are based on a ridiculous amount of flight time (45 minutes). Although we are in the process of addressing the obvious flaws in the report and forwarding this information to the City, you probably do not have accurate, well-documented information on which to consider the safety impacts to the community. Therefore it seems that any decision in regard to this issue is premature. Is there any way of postponing your opinion about medical need until the environmental impact questions are investigated?

Also, we hope that you are not using the information about accidnet risk as stated in the environmental checklist report for Childrens Hospital prepared by Shapiro and Associates (the Shapiro report), since that report has many flaws which will be revealed during the environmental review process. The current version of the Shapiro report is a preliminary draft of a full environmental impact statement We question the helicopter accident rate figures and other assertions made in that report.

2. In determining "medical need", as stated in the City Code, it must be shown that the heliport is needed to save lives and it not just more convenient, or nicer, but actually needed for life-saving.(For reference, see Katy Chaney's letter to Childrens Hospital of June 5, enclosed.) The criteria by which you decide whether the helipad at the COH emergency room door is needed to save lives are obviously very

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important.

RESEARCH on this point is extremely limited. One study showed that the lives of only 10% of(i.e, the worst) trauma cases were actually saved by the use of a helicopter. (Baxt and Moody,1984). Further, the authors surmise that, if the ground ambulance had had a highly skilled team as did the helicopter, even the 10% difference in life-saving by the helicopter might have been less. We have found no other articles which deal with this point. As Baxt and Moody point out, the sometimes-used comparisons of combat-wounded lives saved as helicopter use increased between the Korean and Vietnam Wars are not valid since medical practice and technology had also changed in many significant ways between those 2 wars.

At the medical need hearing, Dr.Copass mentioned work done at Denver and Salt Lake City which he said gives support to the idea that lives are saved by helicopter use. We called him to get references to this work and finally have gotten them but so far have been not had time to conduct the critical review of those research findings that is obviously warranted. We will be submitting that review to you in a few days.

Research about the value of NEONATAL TRANSPORT BY HELICOPTER apparently does not exist. The (enclosed) article about neonatal transfer repeatedly points out that stabilization of the neonate, and not speed of getting to a tertiary care center, is the key to improving survival. Indeed, one study found that survival of neonates was enhanced by transport to a tertiary care center, even with an ambulance that was not specially equipped (much less a helicopter).

It appears that research evidence is sparse, and does not clearly support the need for helicopter service--and especially not to the emergency room door at Childrens Hospital. Most TRAUMA cases go to Harborview; with COH getting NEONATES AND SEVERELY ILL CHILDREN. I could find no published research on the value of helicopter transport for these latter categories of cases.

Your review of ALNW records plus your interviews with physicians who have been involved (flown?) with ALNW--including those involved in the past (noted on the list sent to you by the COH physician)-- is about the only sort of evidence available regarding life-saving medical need. We would like to ask that you share your evidence about this key matter with us.

3. A number of questions are also pertinent which relate to the likelihood that there will be problems in restricting the use of the helipad to life-threatening emergencies.

--It is not clear which cases will go to which hospitals, so we cannot come up with an estimate of the number of cases to expect. COH's estimates vary from 5 to 40 per month (the latter estimate is in the Shapiro report,Attachment B, Helipad Noise Evaluation, page 1). If the number of cases to be expected by COH is quite small, overuse to make up necessary revenues becomes more likely, as Katy Chaney has pointed out (letter to COH, June 5). But if the number of cases is very large,

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the safety risks and environmental impact would be significant, especially since each case represents 4 flights over the neighborhood, due to the location of the helicopter and the flight crew. (This is confirmed by Shapiro report, page 14). Therefore, careful evaluation of the number of cases expected is warranted and should be up to COH to supply. They must have done a study like this to determine the feasibility of the project.

It seems imperative that Harborview, University Hospital, and COH develop a plan to cooperate on patient allocation. In COH's "Shapiro report", page 14, examples of types of emergencies that could require helicopter transport to COH include "severed arteries..." These trauma cases are currently taken to Harborview; so clarification is needed as to whether COH is now planning to expand into the care of children with trauma, directly competing with Harborview.

In this same listing of "examples of emergencies that would require helicopter transport are cases with "hypoplastic heart and lungs". Since the survival rate for this condition is nil, we wonder what can be the value of flying such cases in to COH. Unfortunately, flying them it will not save their lives.

5. It is probably not possible to restrict the use of the helipad at Childrens Hospital emergency room door to the ALNW helicopter. Other emergency helicopters such as used by the Coast Guard, MAST, etc. would use it too, although the soccer field at UW has served adequately for years. We have been told that MAST will probably get Blackhawk helicopters, which are much heavier and noisier than ALNW's helicopter and are two times as heavy (as noisy) as a "huey" chopper. A consideration of their "right to use the helipad" is appropriate, too, since they will use it once it is in place.

6. If COH gets a heliport, why won't this set a precedent that every other hospital in town also needs one?

7. We would like to invite you to a fact finding tour of the proposed helipad site from the citizens' perspective. We would want to show you:

A. The homes near the proposed heliport, especially Laurelon Terrace, with firsthand reports from residents as to what it is like in their homes when the helicopter lands.

B. The different flight paths that have been taken by the helicopter pilots over various residences--not just the "minimal path" which they say they will take.

C. The location of the elementary school, which has been under some of the flight paths in the past few months.

D. The location of the "usual landing place" of the helicopters at the UW soccer field--not very far from the main road through that field, and not the same place the helicopter landed on October 15 for the "fact-finding"demonstration for you.

E. The traffic flow problem on the COH grounds whenever a helicopter lands. The proposed landing site is only a few feet from COH's major traffic lane. The traffic can be very heavy there, as it

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was on the day you visited COH for the helicopter landing, with many school busses, school children running around, parents of sick children walking though, etc. When a helicopter landed at St.Luke's Hospital in Bellingham recently, there were 2 auto crashes due to the distraction caused by the landing. The landing place at the UW soccer field is a much saner place from the standpoint of traffic (auto and foot traffic) alone.

Dr. Nicola, thank you for considering our concerns. We realize you have a difficult task before you and we do not wish to make it any harder. We feel that this is a much more complex issue than COH tries to present it as and we think that since it is precedent-setting it does require very careful consideration. It is likely that the right approach to this problem on the part of City and County officials can be instrumental in preventing the kind of acrimony (including lawsuits) that is going on in other parts of the country over this issue.

Parenthetically, Jerry Schneider did manage to reach an administrator at the Lehigh County Hospital who is sending him information on their 3-year, successful effort to reach a resolution of helicopter use for a 6-county EMS region in Pennsylvania.

Please call us if you would consent to a citizens fact-finding tour. Although you have taken the tour with Childrens Hospital, we are concerned that pertinent, important information was left out.

Sincerely,

Liz Anderson

Liz Anderson

Anita Francis

Anita Francis

(with Ruth Engelberg and Jerry Schneider)

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RECEIVED
OCT 30 19[illegible]
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT OF PUBLIC HEALTH

ALBERT A. FELDMANN
P. O. BOX 85568 UNIVERSITY STATION
SEATTLE, WASHINGTON 98105 (206) 525-5610

28. October 1985

Dr. Bud Nicola
Health Officer of the City of Seattle
Municipal Building
600 4th Ave.
Seattle, WA 98104

Ref : COH helipad facility hearing
24. October 1985

Dear Dr. Nicola ,

I want to take this opportunity to reaffirm my statement at the hearing that The Sandpoint Naval Base facility ,which offers a well lit,allweather,year round hard landing place for helicopters ,is about one mile from Childrens Orthopedic Hospital . A careful check established that the distance is actually 1.5 miles and not "over 3 miles " as claimed by Dr. Abelson in his rebuff . There is no rush hour traffic on Sandpoint Road and a helicopter can make its approach and land coming in from Lake Washington ,without endangering the safety of the residents and by keeping the noise problem at an acceptable level. The distance from the U. of Washington playing field ,which was used for landing of helicopters for COH until the hospital decided to violate city ordinances and land them on its parking lot , is 0.9 miles toothe admission wing of the hospital.

Not one shred of evidence was produced by COH that any of the children landed at the U. of Washington playing field and transferred to the hospital by ambulance had suffered injuries or deaths because of that procedure . The point of contention was that the field was badly lit and provided poor access in bad weather .The use of the Sandpoint Naval base will ,ofcourse nullify such complaints .

Judging from the statements made by senior personnel of Childrens Orthopedic Hospital at the hearing ,the hospital intends to use helicopter transportation well beyond the alleged occasional emergency case . Obviously ,even one admission per day by means of helicopter would entail 4 flights (pickup of med. team at hospital, pickup of patient ,delivery of patient and departure of helicopter) and would constitute a nuisance . The figure of one admission a day would tally with the mentioned 30 cases per month . But both the U. of Washington and the U.S. Navy might balk if COH were to turn their landing facilities into a heliport instead of a resort for emergencies only. If surface transportation will indeed become more and more impossible because of traffic problems then perhaps COH should make longrange plans to move out of a heavily residential part of town like Laurelhurst ,which was one of Seattle's finest neigborhoods long before COH moved in. Contrary to statements by COH's administrator that the hospital wants to be a good neighbor ,Dr. Copass declared at a meeting held at the hospital : "we hope you will go along with this but we are going to do it whether you agree or not ". Hardly the picture of a good neighbor.

I urge you to consider the application for the helipad construction very carefully. Once obtained ,even with a promise of use for emergencies only, there will be no means of effective monitoring of such a promise and nothing short of a major accident, such as a helicopter crash involving death and injuries of residents,could reverse the process. And we don't want that, do we ?

Sincerely yours
Albert A. Feldmann

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HERBERT T. ABELSON, M.D.
Pediatrician-in-Chief
CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER
4800 Sand Point Way N.E. / P.O. Box C-5371
Seattle, WA 98105 / Phone: (206) 526-2150

Professor and Chairman
UNIVERSITY OF WASHINGTON
School of Medicine
Department of Pediatrics / RD-20
Seattle, WA 98195 / Phone: (206) 543-3180

October 28, 1985

Dr. Bud Nicola
7th Floor
400 Yesler Bldg.
Seattle, WA 98104

RE: Helicopter Meeting of October 24, 1985 at the Municipal Court Building

Dear Dr. Nicola:

When I spoke at the hearing on October 24, 1985, I took issue with Mr. Albert Feldmann's statement that a helicopter landing at the Sand Point Naval Base would be one mile from COHMC. I said that it was about three miles and my statement generated comments from the audience. On October 28, 1985, I asked Captain Lewis at the Sand Point Naval Base to allow me to drive my car to the helicopter landing site and retrace the only exit route from there through the base to Sand Point Way and subsequently to COHMC. The distance according to the odometer on my 1984 VW Jetta was 2.6 miles. I bring this to your attention to insure that misrepresentations of data as suggested by the audience would not reflect on any other comments that I made.

Sincerely yours,

Herbert T. Abelson, M.D.

HTA:dw

cc: John Neff, M.D.
Medical Director
COHMC
Mr. Albert A. Feldmann
Laurelhurst Condominium Assoc.
4873 Terrace Drive NE
Seattle, WA 98105

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SEATTLE-KING COUNTY DEPARTMENT OF PUBLIC HEALTH

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ALBERT A. FELDMANN
P. O. BOX 85568 UNIVERSITY STATION
SEATTLE, WASHINGTON 98105

30. October 1985

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SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

Dr. Bud Nicola
Health Officer of the City of Seattle
Municipal Building
600 4th Ave.
Seattle, WA 98104

Ref : Letter by Dr. Herbert T. Abelson
COH ,dated 28. Oct. 1985

Dear Dr. Nicola ,

By a curious coincidence Dr. Abelson and I had the same afterthought after the hearing last week .We both got into our respective cars (mine is a Honda Civic '83) and checked the distance between Childrens' Hospital and the Sandpoint Naval Base. I never thought of getting the commandant of the Naval Base into the act but simply checked the distance on my odometer from portal to portal . Maybe the road from the entrance of the base to the helicopter landing pad is convoluted enough to add another mile . But a distance of 2.6 miles as against 1 mile (to the U. of W. playing field) is obviously of no consequence for an ambulance in an area that never has any dense traffic. The complaint by hospital personnel was about the poor lighting and the muddy condition of the U. of W. playing field ,which allegedly made access difficult for an ambulance. Obviously ,the Naval base landing pad presents none of these drawbacks.

As I said in my previous letter to you ,there is grave suspicion that COH wants its own helipad to generate a steady traffic of bringing in patients by air and will not restrict it to emergencies . Who will "bell the cat" and monitor the abuse of its privilege by COH when not a single physician could be prevailed upon to testify at the hearing against Childrens' Hospital ,even though a number of them expressed themselves that way privately?

Isn't it strange that COH and the helicopter service would jointly put on such a massive and expensive lobbying effort for a few emergency landings ? How much does it cost to produce a 20 minute color film ? And 1½ hour's worth of prepared statements on top of that .Was it just coincidence that the statements were long in listing the pedigrees and professional connections of the speakersbut short in addressing the problem, i.e. setting up a round the clock air corridor to COH over quiet residential streets of the city ?

Far be it from me to judge Dr. Abelson's veracity in general on the basis of one statement .He based his on jogging along the road ,I based mine on walking along the Gilman trail to 65 th and Sandpoint Naval Base. Perhaps the lesson is to check each statement and all data presented ,very carefully.

Sincerely yours

Albert A. Feldmann

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5043 Sand Point Place N. E.
Seattle, Wa 98105
October 29, 1985

Dr. Bud Nicola
Health Offices
700 Yesler Building
Seattle, Wa 98104

RECEIVED
OCT 31 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

Dear Dr. Nicola:

It is apparent that much has been said about the construction of a Heliport at the Childrens Orthopedic Hospital on Sand Point Way. We believe that much of what has been said is due, in part, to irresponsible reporting by the news media, and we would like to take this opportunity to voice our opposition to the Heliport at that location based on some rather basic thoughts on the subject.

1. We are not convinced that Helicopter Service such as that proposed will be instrumental in saving lives.

   A. The Hospital has not been altogether truthful when presenting their facts. We find it difficult to believe that the three minutes it takes to transport the patient from the University of Washington Intermural Field to the hospital is that critical, when so much time has already been saved in transporting the patient by Helicopter from distant points.

2. The citizens voted against using Sand Point Naval Air Station Airfield for airplanes because of the risk of air traffic in the vicinity of the residential areas.

3. It is understood that the University Hospital also wishes to implement Helicopter Service for their patients. This would certainly increase air traffic in the entire area.

   A. Would it not be more practical to establish a Heliport at the Intermural Athletic Field to serve both hospitals? It would certainly be easier to control the air traffic and such flights could come in across the Lake and present minimal hazard to the residential areas.

Please understand that we, as residents in this area, are all for saving lives and believe that some sort of Helicopter Service may be instrumental in serving that purpose. However, let us not create additional hazards to meet that demand when a safe solution is so readily available.

Thank you.

Very truly yours,

Harald S. Kurtz

Mildred S. Kurtz

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29 October 1985

5007 -44th N.E.
Seattle, WA 98105

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OCT 30 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

Dr. Bud Nicola
Health Officer
700 Yesler Building
Seattle, WA 98104

Dear Dr. Nicola:

I am writing you to urge you to advise DCLU not to allow COHMC to construct a helistop at their location.

I attended the October 24, 1985 meeting in Council Chambers at which time I heard various COH employees render oral and visual support to this project. I viewed the 20 minute video they showed. I noticed they chose to tune out the noise of the helicopter and instead incorporate the sound of the microphone in the interview of Dr. Mel Morse, showing the helicopter running in the background. Under normal circumstances conducting such an interview with someone so close to a running helicopter would be impossible. Even simple phrases must be shouted to be audible at such a range.

Also, I must take exception to Dr. Alan Morgan's testimony on the taped interview that this is merely a matter of nuisance to a "few" of the area's neighbors. On the contrary there are many, many neighbors opposed to this project. The community surrounding COH is mostly residential in nature. There is a senior citizen housing project nearby and also the Laurelon Terrace condominums, 80% of which are occupied by senior citizens. These unfortunate people will receive the major impact of the noise since the flight pattern dictates that the helicopter would most times fly in and out right over their Homes. It is not easy at all for these people to up and move at their age. There is also an elementary school 1 block from the hospital.

COH personnel testified repeatedly of the hazards encountered in transporting a patient on a cold, wet, windy night. However, they stop short of considering the landing of that helicopter at COH, in a residential area, on such a stormy night.

COH has also refused to do a Certificate of Need. This reinforces an apparent lack of concern that they have regarding this project and its impact on this neighborhood, and the well being of it citizens.

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The physical and emotional effects of noise caused by the helicopters, or any such equally loud noise on the human body is well documented in many studies, as I am sure you are aware. Increased stress, increased blood pressure, hearing damage, lack of sleep to the body and just the very anxiety in knowing that every transport will involve 4 trips of the helicopter to and from COH are just part of the problems that could lead to serious health disease.

I feel the best solution to this is to upgrade the IMA field at the UW. It would be relatively easy to provide decent paved area with the appropriate lighting and direct road access. COH has not been able to prove that any patient's lives that were transported from the IMA field have been compromised because of such a transport. Indeed, their complaints have been mainly the traffic and the poor conditions of the field. I would think it would be relatively easy for the helicopter pilot to radio ahead for a police escort to assure a speedy, unimpeded, safe trip to the COH Emergency Room at heavy traffic times, or on game days.

I do not feel the flight nurses, nor the flight physicians should be forced into making the decision on how critical a patient really is, thus allowing the very critical ones to go ahead and land right at COH, and the not so critical patients to land at the IMA field and then be transported via ground transport up to the hospital. Not only would this be next to impossible to monitor, but it is grossly unfair to the patients, and could have horrendous legal implications.

I honestly do think that there exists instances where our geography and the critical, life-threatening, illness of a child/infant dictates the use of a helicopter transport. I do not feel that it should be as often as 15-30 times a month. I definitely feel that increased usage of the helicopter transports for non-life threatening emergencies will increase in order for the hospital to justify the cost of the helicopter expense. On October 15, 1985, the helicopter landed at the COH Emergency Room bringing in an infant that was already DOA to the Boeing field, where it had come via fixed wing transport from Wenatchee. This, obviously, was an example of abuse in the use of the helicopter.

COH steadfastly claims that the helistop is not a marketing tool as they are an already proven primary provider for the pediatric patient. This is true, but I think the concept goes beyond this. One can see the value of a helistop to a facility that is seeking to be upgraded to an Acute Trauma Center, which is what COH is planning on becoming. Not to receive the status of an Acute Trauma Center in the near future would possibly mean pediatric patients will be flown directly into UW and Harborview Hospitals for their primary care, since both of these fine facilities have a highly qualified pediatric staff also. The UW also has a level III infant intensive care, the same as COH, which does operate at this time in direct competition to COH for the care of the critically ill infant.

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If COH, UW & Harborview had no choice but to share helicopter facilities surely they could arrive at a viable plan for care to these critically ill patients. Perhaps the solution lies in expanding the already affiliated pediatric program at Harborview whereby more experienced COH staffing & equipment is available to render immediate stabilizing care. After the patient is no longer in a life-threatening situation they could be safely transported to COH for extending care via ground ambulance. This would negate the need of transporting the patient initially by helicopter to COHMC as Harborview already has a helistop in place.

Dr. Nicola, for all the above reasons I urge you to reject COH's bid for the helistop. In this day and age of trying to curtail the ever sky rocketing costs of medical care, the idea that 2 hospitals located within a 3 mile radius of each oth , both needing helistops, is at best, ludicrous. Please, as an alternative, consider the combined use of a new fully equipped helistop located at the IMA field for both the UW and COH patients.

Thank-you for your time.

Sincerely,

Kathryn L Peterson

Kathryn Peterson
Laurelhurst resident &
COH employee.

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November 8, 1985

RECEIVED
NOV 12 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

Dr. R. M. Nicola, Director
Seattle-King County Health Dept.
Public Safety Bldg.
Seattle, WA. 98104

Dear Dr. Nicola:

Since writing to you last, and since the public hearing held on October 24, 1985, my concern about a helicopter landing at Children's Orthopedic Hospital in Seattle has continued and increased--not decreased.

I fully support and welcome a state review and state regulations as well as a full certificate of need filing as reported in an article in the Seattle Times of November 7, 1985.

As a ten-year resident of Laurelon Terrace contiguous to the planned site of the helipad and in path of diagonal flight plan, too, I am especially concerned about the safety factor and also the detrimental effect on residents' health who live in this condominium complex of 136 units. It was alarming and distasteful to find that Mr. Truman Katz of COH, when asked about the effects on Laurelon Terrace, did not even know where Laurelon Terrace was, and when told just shrugged it off. Are Laurelon residents considered expendable?

As a thirty-two year resident of Laurelhurst, I among many others highly resent being represented as uncaring and as a wealthy, selfish citizen. Generalizations and stereotyping by news media is dangerous and careless--yes, libelous--and untrue. Hundreds and hundreds (and upwards) of hours, thousands of dollars over many, many decades have been contributed to COH by residents of Laurelhurst.

However, these same residents do not believe that the horrendous expense of a helicopter (purchase, maintenance, salary, insurance) is necessary; nor is a helicopter necessary when three other hospitals --one within short distance of COH--have identical landing facilities and trauma services already in place--this is duplication of services; since no problems are recorded (present and/or past) of landings at the UW soccer field, it seems that there is no medical justification for this COH plan; and finally, the residents do not believe that further institutional encroachment in a family-residential neighborhood is wise or fair.

Please proceed carefully and slowly in final assessment of all assertions and merely implied needs by COH. Please ponder seriously why COH does not want a certificate of need, a state review, and/or open communication with Laurelhurst and Laurelon Terrace residents.

Thank you.

Sincerely,
Maryann E. Spangler
Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

(206) 524-4151

cc:

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CIVILIAN MAST

MILITARY ASSISTAN
IN SAFETY & TRAFF
COMMITTEE OF STA
OF WASHINGTON,

801 Broadway Suite 927 Seattle, Wash 98122 (206) 682-6

September 3, 1985

Representative Joanne Brekke
6525 Sycamore N.W.
Seattle, Washington 98117

Re: September 9, 1985 Hearing

Dear Representative Brekke:

I am a general surgeon in private practice with consulting or clinical arrangements with most of the facilities and agencies discussing this issue. I am most useful to you, however, as the Medical Director of MAST since its inception in 1969. MAST is a military helicopter medical evacuation (Medevac) service provided to the civilain community by a military facility. While other uniform services do some medevac work, the 54th Medical Detachment at Fort Lewis provides more than 90% of the helicopter medevac missions in Western Washington. This detachment has 7 helicopters and sufficient crews to provide 24 hour, 7 day immediate response with a "second up" crew and helicopter as well.

As I understand it, the question is whether the medical needs of helicopter medevac patients justify the hazards of locating a helipad in a residential area.

First, let me say that my professional bias is that within a radius of about 75 miles, excluding off roads and island sites, most emergency patients can be transported more promptly, more safely, more smoothly, and certainly more cost effectively by paramedic ground ambulances than by helicopter.

Regarding the size of the need for helciopter medevac, MAST does about 200 field pickup missions a year, and before the availability of a reliable inter-hospital fixed wing air ambulance, an additional 200 inter-hospital transfers were done. An average of 14 patients per year are transported to Childrens Orthopedic Hospital (COH) including 2 premature infants per year. Although this incidence of helicopter use/unit population is about 1/10 of that reported by hospital based helicopter's (Emmuanuel Hospital in Portland excluded), the years in business, the availability of helicopters and crews, free service and the requirement by state regulation that the MAST phone number be posted in hospitals, this estimate of the size of of the need seems to be reliable

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September 3, 1985

Representative Joanne Brekke
6525 Sycamore N.W.
Seattle, Washington 98117

Re: September 9, 1985 Hearing

It is difficult to project changes. Peripheral hospitals are becoming better staffed and better equipped, but there may be some trend towards shifting complicated patients who will lose money to central hospitals. While I am not expert in neonatology, I understand that the trend is towards transporting high risk undelivered women electively, rather than transporting high risk infants urgently. I would guess that the size of the need for helicopter medevac will slowly increase over the coming years and conforming to population growth.

Regarding the quality of the need for helicopter medevac, two years of activity was reviewed. 24 pts 60% of the missions to COH were inter-hospital transfers with patients presumably stable. These transfers occurred days or hours after the onset of the illness or injury. 9 patients were picked up in the field: 3 were probably unnecessary, 2 involved the same child with congenital pulmonary problems who lives on the other side of Puget Sound, 2 patients with head injuries of undetermined severity and 2 patients from Bainbridge Island one thought to have meningitis and a 1 year old in coma. The question of whether or not 5 minutes of transport either way would have altered the outcome of any of these patients is not positively answered by these records, or in fact by the medical literature. Presumably the outcome of patients who are transferred from hospital to hospital is not minute dependent because of the length of time already past since the onset of their illness or injury. Records of the patients picked up in the field are necessarily limited and we do not regularly follow up with these patients. However, the helicopter flight crews do accompany the patient to the hospital in the ambulance and they have not, to my recollection, mentioned that they should have been able to land on the hospital lawn for any reason. Likewise, neither the private ambulances nor the medic I gound ambulances that transport patients from the helicopter to COH have reported any problem in these transports which have caused them to suggest a change in landing zones. Our pilots, on the other hand, are always concerned that the Graves Field landing zone is not secured and they would prefer not to land on soccer players.

The issue of the importance of transferring a patient from a helicopter to an ambulance has been mentioned. Again I cannot speak to the importance of this in the outcome of the patients care. We deliver our most critically injured patients to Harborview where it is necessary to [illegible] transfer from helicopter to an ambulance then to the Emergency Department and this is the situation in most hospitals in the State. While it does stand to reason that avoiding this additional transfer should be helpful to patient outcome, I do not know of any evidence to that effect.

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September 3, 1985

Representative Joanne Brekke
6525 Sycamore N.W.
Seattle, Washington 98177

Re: September 9, 1985 Hearing

Whether or not the future needs will include patients whose care is more time critical than those in the past is dependent to some degree on local ground rules. MAST delivers patients consistant with the desires of the referring physician, or in the event of critically injured victims, to the hospital indicated by local EMS agencies. In King County, as you know, local EMS agencies have directed that critically injured patients be delivered to Harborview and the question of age is not addressed.

Regarding the hazards of locating a helicopter landing zone in a residential area, I have only anecdotal information. Since MAST has been operating, 7 air ambulance crashes have been brought to my attention. One of these was a fixed wing aircraft and the other 6 were helicopters. None of these accidents have been at the hospital landing zone.

I hope this information will be helpful in your deliberations.

Warm regards,

Jay M. Kranz, M.D.
Chairman, MAST Coording Committee
JMK:sb
cc: Mr. John E. Welsh, Jr.

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Lothar H. Pinkers, M.D.

GENERAL SURGERY
TRAUMA

1201 - 116TH NORTHEAST
BELLEVUE, WA 98004
206 - 454-5331

10 September 1985

Representative Joanne Brekke
Chair, House Comm on Social & Health Svcs.
6525 Sycamore NW
Seattle, WA 98117

Dear Representative Brekke,

I was troubled by the portions of the House hearing on helicopter usage as each group tried to emphasize the justness of its position. I would like to share these additional thoughts with the committee as they apply across the State as well as in the King County area.

Stripped of all of the flag waving and marketing flak, helicopters still are a very useful and sometimes necessary adjunct to the delivery of health care, both in moving patients from one hospital to another in a timely fashion and in prehospital field pick-up. They are expensive instruments to buy, expensive to maintain, expensive to operate and under ideal medical considerations require multiperson crew for the patient care. Individual hospitals are probably not the best operating agency for regional helicopter services. They have an extreme conflict of interest when they use the helicopter as a marketing tool. We need, as a society, to examine other avenues of funding since the expense of operating costs need a broader regional base, if we do not have an actual government subsidy.

Since the utility of the helicopter is really undisputed, I believe that there should be regional planning and cooperation between various agencies that would utilize such a service. The best system would result from mutual discussion and would include an integration of a helicopter service with private air and ground transportation and with prehospital services that exist in radii greater than 30 minutes of ground driving time.

Part of the problem in the "helicopter war" is the fact that there are no agreed upon medical criteria for transport, either in

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the prehospital setting although this is really more uniform, nor in the interhospital setting. If the medical community can agree upon criteria for transport, then some of these other factors may dissipate. I will raise this question with the State Medical Association and see if we can make some progress there.

With respect to the central portion of Western Washington, Airlift Northwest, maybe the most logical local agency to operate a non military helicopter service providing it meets the criteria I state above. Your committee showed remarkable insight in cutting through the emotional flag waving and the imperious nature of the University system with the questions the members asked. I believe that the University needs to have this aspect of its community commitment even further opened up, so that it plans with the community, instead of telling the community what it needs according to the most recent professorial fad.

Lastly, mutual planning and community wide discussion would describe the most appropriate hospitals for helipads. I know of no way to prevent interrupted sleep for neighbors that live in an area adjacent to the hospital that might receive night time flights. Still, if a limited number of medically designated hospitals are agreed to receive patients at all hours by helicopter, it makes much more sense to deliver those patients directly to the hospital, rather than to intervene with some form of helter skelter ground transportation. When I surveyed hospital mounted helipads I was impressed by the complexity of the structure with respect to patient access, fire safety, structural integrity of the building, etc. It's not an easy thing to simply stick a helicopter on top of a building. Ground landing pads are cheaper, but even these require FAA approval for the safety of the landing patterns. They also require the dedication of land where land may not be easily available.

I suspect that the Certifcate of Need unit did not exercise its most appropriate authority in examing existing helicopter services. I hope that they can be impressed on the necessity for doing so and can make retrospective reviews of their prior decisions.

In summary then, helicopters are a very useful and sometimes necessary adjunct to patient care. There should be medically agreed upon criteria for who is transported between facilities and who is transported to facilities. Regional planning is necessary to insure the best use of limited patient care dollars and interrupt the marketing hype currently associated with helicopter services. I hope you will share these thoughts with other members of your committee.

Sincerely yours,

L.H. Pinkers, M.D. FACS

LHP:ys

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P.S.: Talk with Representative Ballard about this thought. RCW18.73.080 is in need of revision because there have been so many changes in the prehospital emergency medical field since the original bill was written. The EMS division of DSHS and the WSMA probably will be recommending some amendatory legislation in a comprehensive rewrite. Since the original air transportation legislation is in that RCW and since there may be a place for more aggressive planning and service designations, helicopter and other air ambulance would be a logical part of this. Planning and service allotments could then be made upon demonstrated need, distances, medically logical patient destinations, etc.

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October 23, 1985

Dr. Bud Nicola
Director, Health Department
7th floor
Yesler Building
Seattle, Washington 98104

Dear Dr. Nicola:

I am writing this letter in response to an inquiry from Children's Orthopaedic hospital concerning my professional judgement as to the placing of helipads near selected and designated institutions for the management of the critically ill.

By way of background I am a Board Certified General Surgeon who had been working in trauma for approximately five years. My previous employment was within the state of Maryland as the state medical Director for Emergency Medical Services and as such coordinated the response of the Maryland State Police Helicopter Program which transferred approximately 2,700 critical patients last year. They transported these victims to designated centers for trauma, neonates, pediatric trauma, burns, spinal cord injuries, penetrating eye injuries and replantation centers. During my tenure in Maryland the majority of hospitals upgraded helipads to enable them to access this rapid air transport service.

At this time I am the Medical Director and Chief Executive Officer of Boston Med Flight - a helicopter program, originating in Boston and serving the New England region. This hospital consortium represents Boston University Hospital, New England Medical Center (to include the Kiwanis Pediatric Trauma Institute), Massachusetts General Hospital, the Massachusetts Eye and Ear Infirmary, Boston City Hospital, Beth Israel Hospital, Brigham and Women's Hospital and Children's Hospital Boston. Within Boston there are concerns from various agencies as to the need for the receiving centers to have adequate helicopter landing areas.

Following the designation process hospitals begin to receive not only inter-hospital referrals but also patients directly from scenes of accidents. Patients who previously would have succumbed in the prehospital phase now, because of the emergence of E.M.S. systems and helicopter availability, survive to reach hospital. For many institutions there is a learning process to be able to manage these injuries. There is no doubt that the time from accident to definitive care is at a premium in managing these types of patients and that any increase in time from scene to trauma center may translate out to an increase in mortality or morbidity. Many agencies in their R.F.P.'s for specialty center designation mandate the close proximity of a helipad to decrease transit time to a minimum.

BOSTON
Med Flight

Peabody 1 818 Harrison Avenue Boston, MA 02118 (617) 424-5208

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There are concerns other than that of time which may be of critical importance. An unstable patient should not be handled unnecessarily or transferred from one vehicle to another in their critical state. The experience with pediatric trauma in Baltimore may illustrate this point. At the time of implementation of the program Johns Hopkins did not have a well-equipped helipad and indeed the state police helicopters used to land a few blocks away from the hospital and rely on surface ambulance to complete the transfer. The physicians working within the pediatric trauma center recognized this deficiency and collaborated with community groups, architects and health planners and built a helipad directly on the roof of the hospital. This is served by a dedicated elevator which now takes patients from the helipad directly into the pediatric rescusitation area. Within this area all pertinent expertise immediately is available so that the patient has immediate access to the radiology suite, the CAT scanner or the operating room.

Although no community polls were conducted during the implementation of this program, during my stay in Maryland I received no complaints from community groups concerning the helicopter program. They were made aware that air transport was reserved only for those critical patients in direst need. Even with a busy day at the pediatric trauma center in Baltimore only five or six helicopter transports would be flown during a 24 hour period; this did not seem to cause community concern.

I hope that this brief letter addresses some of the points that will be raised at the public hearing on Thurday. If I can provide any further information please don't hesitate to let me know.

Thank you,

Sincerely,

Alasdair Conn, MD
Medical/Executive Director

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DR Nicola

Testimony of the Citizens Concerned About Helicopter Transport at the DCLU Medical Need Hearing, Municipal Building, Oct. 24, 1985

My name is Anita Francis. I have a Ph.D. in medical sociology and health services research and am a graduate nurse. I reside at 5003 45th N.E. and speak for the organization: Citizens Concerned About Helicopter Transport.

We have been concerned about the issue of hospital use of helicopters and have been investigating the successes and problems associated with this use for over a year. We have interviewed 20 to 30 physicians and about 10 nurses from this area, most of whom have had experience in neonatal transport and/or pediatric emergency care. We have also interviewed experts in emergency medicine around the U.S. Our library work has involved reviewing professional journals and various other research literature concerning emergency transport and related issues.

Based on this effort, we strongly recommend that a careful study of the role of the helicopter be required. Although the problem currently before us is whether Childrens Orthopedic Hospital should have a helipad, we cannot separate this question from the larger question of what is appropriate for the system as a whole. Giving COH permission to have a helipad without requiring them to do a careful study will set a precedent that other hospitals will eagerly follow. Thus, both the question of COH permission and permission for University Hospital and other hospitals must be addressed now.

It is of critical importance that the role of the helicopter in the existing emergency medical services (EMS) system and neonatal care system be well-defined. The helicopter's role must be carefully planned, well-conceived, and, if allowed to proceed, should be continually monitored. To do this, a justification study should be done. This type of study has been asked for by numerous individuals--local and community physicians and nurses, experts in EMS throughout the U.S., and others concerned that our current, excellent ground transportation system not deteriorate and that issues of cost containment and cost-effectiveness be considered.

Some suggested objectives for such a study are as follows:
1. Determine an optimal allocation of emergency transportation resources.
2. Avoid disruption of the current nationally-recognized EMS system in the Central Puget Sound Region, which includes Medic One, Fire Department Aid Units, private ground ambulance companies, MAST military helicopters, Airlift Northwest's fixed-wing airplane service and also includes emergency care which is available at many of the region's community hospitals.
3. Forecast, as accurately as possible, the economic feasibility of the helicopter service, so that overuse in order to increase revenue is less likely to occur. It is possible that, as Dr. John Neff from COH has suggested, this helicopter service is so vital that there should be public subsidies of the service. A careful projection of its expected utility is needed in order to justify that claim.
4. Explore the concerns expressed by local and community physicians, nurses, and other residents of the Seattle area toward helicopter

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service and its secondary impacts in order to elicit their support, trust, and cooperation. There should be a full range of participants involved in the study, so that both the public and private sector providers and a wide range of consumers are represented.
5. Show whether the proposed plan of increased helicopter usage will have tangible benefits, with specific numbers to indicate that the proposed plan represents a worthwhile addition to the already well-developed current system.

Some specific recommendations as to scope and content are as follows:

1. Describe the current EMS and neonatal transport systems. Include findings on patterns of usage, capabilities and deficiencies, referral patterns, and the components of the system including existing prehospital care transport, caregivers, and institutions. Distinguish between getting care to the patient and transporting the stabilized patient to a hospital for treatment.

2. Include in a geographical framework a description of the current and projected population to be served, its demographic characteristics, and the transportation problems unique to certain parts of the Puget Sound region.

3. Estimate the optimal role and level for each mode of transport. One method of doing this is described by Rhee, et al., Annals of Emergency Medicine, 13:10, October, 1984, as follows:

a. Define which medical conditions are appropriate for each transport mode, e.g., for which medical conditions would patients benefit significantly from helicopter transport to a referral center? These findings can become guidelines for use in deciding on transport if and as the system evolves.
b. Determine the incidence of each of the medical conditions
c. Define the population to be served.
d. Calculate the need for service by multiplying the population to be served by the incidence and by the fraction of the population that will require the transfer. Do this for each of the transport modes.
e. Estimate the fraction of patients with demonstrated need who will actually use the service.

In estimating the need for each mode of transport, it is particularly important to identify in what situations and for what types of cases the helicopter is preferrable and when it is not. A comparison of patients who were transported by helicopter and their outcomes with similar cases moved in other ways is very important to do. About 30 cases would be sufficient to allow some useful estimates to be made.

Ideally, the role of the helicopter in the EMS system should be examined in 2 situations. One should determine how the existing system works, and then what changes the availability of a helicopter service would make, especially its possible impact on ground ambulance capability. Estimates should be made for 5 and 10 years time horizons, at a minimum. From such results, credible estimates of the expected number of flights, based on specific criteria, can be made.

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4. Introduce cost factors. How much do these services cost and how will they be paid for? As is well known, the economics of helicopter transport are weak and results from this component may have a profound impact on the current perceptions and the future evolution of our EMS sytem.

Once this justification study has been conducted, and if use of the helicopter is shown to be warranted, and its role in the overall EMS system as been carefully defined, a set of rules for monitoring its use should be adopted. These rules would need to be agreed upon by all participants, and would include information as to who will be transported, who will make transport mode deicisions, methods for identifying and assessing penalties for misuse of the helicopter, and who has legal responsibility for the care of the patient during each part of the transport.

In contrast to the kind of careful study I have just outlined, is the case study approach, relied upon by COH, at least in its public presentations. A case study approach is of questionable value. I know from personal experience in my research that generalizations based on a few observations are not often true. As the methodologists Campbell and Stanley point out, "Any appearance of absolute knowledge, or intrinsic knowledge, about singular, isolated events, is found to be illusory upon analysis." Only by making carefully measured comparisons is knowledge reliable. And that is what we are asking for here.

A study such as we have suggested here would produce the kind of knowledge base needed to determine where and how the greatest impact on life-saving can be accomplished. Helter-skelter, piecemeal approaches are simply not adequate.

Thank you for giving us this opportunity to speak.

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Testimony of the Laurelhurst Community Club at the DCLU Medical Need Hearing, Municipal Building, October 24, 1985

My name is Liz Anderson. I live at 4746 45th N.E. I am here tonight to represent the Laurelhurst Community Club Board.

First, we would like to clarify that we are not opposed to air transport for emergency cases nor to Childrens Orthopedic Hospital. Our community supports the hospital and the good work which it does;many in this community are volunteers, employees, and Guild members, and we are grateful for the fine work done in the hospital. We have difficulty taking an adversarial position against the hospital but feel that the helipad proposal is one that requires, at the least,open, careful, and honest scrutiny.

The goal of the LCC Board and many in the community has been to secure answers to a number of questions which should be addressed before approval for a helipad on the COH premises is granted. Tonight, we will just focus on questions concerning medical need. They are as follows:

1. Helicopter transport is relatively new. What data, prior to 1984, are available that indicate there are problems with the existing system of emergency ground transport? If local data are unavailable, what evidence is available from other comparable metropolitan areas?

2. Is there evidence that there are portions of the population that are currently not receiving satisfactory emergency medical treatment? We are certainly aware that the geography of this state makes ground transport difficult and we would understand that helicopter service could provide a useful adjunct to emergency care transport service in these areas. However. it is also clear that there are many areas that contain large populations that are well-served by ground transport and do not need helicopter service. It is very important that the ground transport system not be allowed to deteriorate because of competition from Airlift Northwest.

3. If emergency medical need can be defined, how many cases would meet the criteria for emergency delivery to the door of COH? Given the predominantly residential character of the COH location, what restrictions could be put upon helicopter landings at COH?

4. If a helipad is sited at COH, how will the service be integrated into a comprehensive regional plan based on a credible projection of need and standards of use and accountability?

5. How can a balance be found between the health needs of the community's residents (Laurelon Terrace, students in the elementary school) and the emergency medical needs of the hospital?

6. Can the emergency medical needs of patients be met by alternative

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landing sites? Some possible alternatives are:

a) one helipad at the UW Soccer Field shared by UW and COH

b) one helipad at COH for extreme emergencies and another helipad at UW Soccer Field that both hospitals can share for non-emergency, stable interhospital transfers.

c) one helipad at COH and another helipad at the Sand Point Naval Air Station.

Our preferred alternative is to have all emergency cases that require helicopter transport sent initially to Harborview for evaluation and stabilization. There is simply no clear reason why patients cannot be taken to this region's acknowledged regional trauma unit, Harborview Hospital. Some of these patients would then be transferred to other adjacent hospitals by ground transport as indicated by theirk particular requirements. If Harborview's current staff, equipment and space is not wholly adequate for this role, it should be upgraded appropriately with the assistance and cooperation of both University and Children's Hospitals. This might involve the development of some joint practice agreements between University, Children's and Harborview to make such an arrangementk fully workable. We fe[illegible] confident that such a mutually satisfactory arrangement can be developed by the three hospitals if they are required to do so. Perhaps financial support from King County would be appropriate to make this concept a reality and to ensure that the helicopter service is integrated into the county-wide EMS system.

We on the LCC Board have discussed these alternatives as solutions to this dilemma and would be willing to poll the neighborhood to see how much support each might have. We would truly like to work out a compromise that would satisfy the needs of both the hospital and the community.

There is one additional topic that we, as representatives of this community, would like to address. Gathering information on this helipad proposal, both generally and as it pertains to the medical need issue, has been difficult. As you know, COH refused to complete a Certificate of Need application for helicopter service. As a result, important information which might have been provided through that procedure will not become available. Further, while many discussions have been held with COH personnel, it has been very difficult to get any hard data which would prove that there is a compelling need for the helipad. Over the past year we have been given much confusing and often contradictory information by COH. Some of this information has to do specifically with the utilization expectations of the helipad. Originally, we were told that we could expect 1-3 flights a month. Currently, Dr. Neff states that 15-20 might be a more realistic prediction. Other COH representatives have been quoted in the paper as anticipating 25-30 flights. When one stops to consider that each transport will require four flights over our community because of the different locations of the helicopter and flight team, any prediction becomes significant in terms of impacts on our community. Personal and professional connections have made it impossible for individual physicians to speak publicly about the complexities and uncertainties surrounding this issue. Many of the people who have expertise in emergency and neonatal medicine, and whom we have contacted recently, were not even aware of this medical need hearing. It is a sad

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commentary that some of the best, unbiased, and disinterested but expert opinions on this issue are not being heard at all tonight. Although Dr. Nicola is no doubt acutely aware of this situation, it is unfortunate that a more open presentation of the numerous facets of these issues is not available for us all to hear.

In summary, we ask tonight, Dr. Nicola, the same thing that we have asked of the CQH administration and Board of Trustees--that the people associated with making this request and those associated with granting and denying such requests act thoughtfully and responsibly with regard to this issue and that a multi-county comprehensive plan for emergency medical transportation be developed that will address our questions and those of other consumers of EMS services. Such a plan should be developed in an open and participatory manner that will allow all points of view to be heard and balanced in rational ways. We hope our participation at this hearing will assist Seattle, King County, the Puget Sound Health Systems Agency, and other responsible parties move a step closer to the achievement of such a goal.

Thank you.

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UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

School of Public Health and Community Medicine
Department of Environmental Health, SC-34

October 24, 1985

To: Hearing Officer, Heliport for Children's Orthopedic Hospital

From: P.A. Breysse, Associate Professor Emeritus

A group of citizens residing in the area adjacent to Children's Orhopedic Hospital are concerned about the effects of noise levels resulting from operation of the proposed heliport.

In the past I have conducted noise surveys associated with landings and take-offs of helicopters. Noise levels ranged from 95 dBA to over 110 dBA.

There is no doubt that exposure to noise (unwanted sound) can result in mental distress in some individuals. People do respond emotionally to noise. Mood music is intentionally utilized to elicit certain psychological responses during movies. Many are affected by military marches. On the other hand unintentional sounds also evoke responses. A dripping faucet, a sudden scream, a scratching piece of chalk all involve different yet characteristic emotional responses. Psychologic responses are related to intensity, frequency, intermittancy, as well as the unexpectedness, of the noise, the inappropriativeness f the stimulus, and interference with speech or communications.

One of the most significant and damaging effects of noise involves interference with sleep. Effects of noise on sleep disturbances has been accomplished by studying brain wave patterns utilyzing electro-encephalographs for monitoring subjects' stages of sleep.

Indications are that the quality and the quantity of sleep may be impaired by shifts from deeper stages of sleep to shallower stages, by interruption of dream sequences which are believed to be important for sleep and by premature awakening.

In a noise study conducted in schools located in close proximity to the Sea-Tac Airport, teachers often remarked that students in class who resided in homes located in the north and south ends of the runway would often fall asleep in class.

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A series of sleep interference studies indicated that at:

70 dBA - most probable reaction, awaken.

50 dBA - probability that 50% of subjects will change to a lower level or awaken.

40-45 dBA - 10% of subjects will change depth of sleep or awaken.

J.D. Miller of the Central Institute for the Deaf concluded that, all facts considered, one must tentatively assume that sleep disturbance by excessive noise will reduce one's feeling of well being. Furthermore, when noise conditions are so severe as to disturb sleep in a regular unrelenting basis, then such sleep disturbance may constitute a hazard to one's physical and mental health.

The startle effect of helicopter operations, especially at night is an additional important noise effect and is undoubtly more disturbing than a steady state noise.

In summary, community noise is a serious problem having both a physical and mental aspect. As mentioned previously, sleep disturbance is critical and noise levels associated with heliport operations will certainly adversely affect the sleep of exposed individuals. Furthermore the startle also involves mental stress.

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THE JOHNS HOPKINS UNIVERSITY
SCHOOL OF MEDICINE

DEPARTMENT OF SURGERY
J. ALEX HALLER, JR., M.D.
Robert Garrett Professor
of Pediatric Surgery

Please address reply care of
THE JOHNS HOPKINS HOSPITAL
BALTIMORE, MARYLAND 21205

October 23, 1985

To Whom It May Concern:

I understand that Children's Orthopedic Hospital and Medical Center in Seattle, Washington is considering an off-site landing pad for the helicopter transport of infants and children into the Medical Center. Experience has accumulated over the last 5 - 10 years which clearly indicates that the ideal location for helicopter transport landing pads are either on the roof of the receiving childrens and general hospital or immediately adjacent to it so that there will be minimal exposure of the patient to the elements and the least possible distance for this secondary and dangerous transport. While this is not as critical in the newborn infant who is usually in a transport isolate and thus more protected; nevertheless, even with such small babies, the secondary transport adds additional dangers in the system of delivery. Especially for older children and young adults with multiple system injuries, protection of the airway during transport and management of skeletal fractures as well as exposure to possible hypothermia in bad weather strongly supports the concept that delivery directly to the hospital is far safer and medically advisable than to a remote landing site where secondary transport including a secondary transport team would be necessary. It is my opinion that in the planning phase, it would be unwise to consider an off-site landing pad for helicopter transport to the Children's Orthopedic and Medical Center if there is any option for transport directly to the Children's Center or immediately adjacent to it.

J. Alex Haller, Jr., M.D.
Robert Garrett Professor
of Pediatric Surgery

Director, Maryland State Regional
Trauma Center for Children

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Original Contributions

JAMA
THE JOURNAL of the American Medical Association
June 10, 1983 — Vol 249, No. 22

The Impact of a Rotorcraft Aeromedical Emergency Care Service on Trauma Mortality

William G. Baxt, MD, Peggy Moody, RN

• The mortality of 150 consecutive trauma patients treated at the site of injury and transported to a trauma center by standard land prehospital care services was compared with that of 150 consecutive trauma patients treated at the site of injury and transported to the same trauma center by a rotorcraft aeromedical service staffed by a physician and nurse. A statistical analysis designed to predict mortality based on injury severity revealed that the mortality of the land group was statistically no different from that of a large index trauma patient population treated at a major trauma center. There was a 52% reduction in predicted mortality of the aeromedical group, which was highly significant.

(*JAMA* 1983;249:3047-3051)

A REPORT in 1966 by the National Academy of Science termed accidental injury "the neglected disease of modern society."[1] This report led to a generalized realization that the medical care of trauma, both at the prehospital and hospital levels, was in need of change. The passage of the National Highway Safety Act and other federal legislation paved the way for the eventual upgrading of prehospital care by the funding of emergency medical technician (EMT) and paramedic training programs and the improvement of hospital trauma care by funding systematized and regionalized trauma care systems.

For editorial comment see p 3074.

In the ensuing years, most major population centers have obtained paramedic or EMT prehospital care services, and many areas have developed formalized regional trauma care systems. Today, however, trauma remains the third leading cause of death and the leading cause of death between the ages of 1 and 35 years. Because of these persisting, grim statistics, there have been recent attempts to upgrade the national approach to the treatment of trauma. To this end, there has been a reemphasis on improving prehospital care and extending organized regional hospital trauma care systems. One recent development has been the use of hospital-based rotorcraft staffed with advanced medical treatment crews that respond directly to the actual site of injured patients and provide major semidefinitive interventive care. This work is devoted to an analysis of the effect of such a system on patient mortality.

The first major use of rotorcraft as an adjunct to medical care took place during the Korean conflict. Although it has been said that the pronounced drop in mortality from 4.5 deaths per 100 casualties in World War II to 2.5 deaths per 100 casualties in the Korean conflict was partly due to the rapid treatment afforded casualties by use of rotorcraft,[2] this is difficult to confirm in view of the advancements in clinical expertise between these years and the important introduction of front-line surgical hospitals. The use of rotorcraft was further developed during the Vietnam War, when casualties were moved inside the craft and treated en route to definitive care. Mortality fell to less than one death per 100 casualties,[3] but again, with improved trauma care, it is impossible to totally attribute this to the utilization of rotorcraft. The use of rotorcraft for patient care in the civilian sector began in the late 1960s, when rotorcraft were utilized in dual-purpose law enforcement systems that had a limited commitment to medical response.[4] Although helicopters were first dedicated totally to patient care in Europe in the mid-1960s,[5,6] it was not until 1972 that rotorcraft were put into such service in the United States.[7,8] These craft were based at hospitals and responded within minutes with physician and/or nurse medical crews who were trained in advanced life support. They responded both to the scene of ill or injured patients and to other hospitals to transport patients rapidly to more advanced treatment centers. These services brought about several radical changes in prehospital care: (1) A higher level of medical expertise was rapidly brought to the patient at the site of injury or illness over a broad geographic area; the acute care crews were trained to place endotracheal tubes, central access intravenous catheters, and thoracostomy tubes. They were also certified to

From the Division of Emergency Medical Services, University of California, San Diego, School of Medicine, La Jolla.

Reprint requests to Emergency Medical Services, University of California Medical Center, 225 Dickinson St, San Diego, CA 92103 (Dr Baxt).

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administer all medications used in the hospital. None of these interventions had traditionally been practiced by existing prehospital care systems. (2) Critically ill and injured patients were transported at speeds two to three times faster than land ambulances. (3) The services could gain access to patients who either could not be reached at all by ground transportation or who would be forced to wait an inordinate amount of time for land emergency medical services (EMS) response.

Since the inception of rotorcraft services, numerous similar systems have emerged throughout the world. To date, only five studies have attempted to evaluate the impact of such service on patient mortality.[5-9,12] Since none of these studies statistically analyzed their data or compared the outcome of their patient group with a control group of patients treated by standard land care and transport services, the potential advantage of aeromedical care service could not be appreciated. Since these programs are extremely costly, it seems appropriate to examine this question.

Until recently, it has been virtually impossible to compare the outcome of injured patients treated at different medical facilities. With the development of a severity scoring system for acute head trauma by Teasdale and Jennett,[11] the mortality and morbidity of patients who suffered major head trauma could be compared among different medical centers. Although similar types of indexing systems for generalized trauma were developed, a statistically sound system was not derived until the development of the Trauma Score (TS).[13,14] The TS has been applied to a large number of patients and has been shown to be a reliable predictor of patient outcome.[15] In addition, the predictability of survival (P_s), derived from the TS by regression analysis of a large index population of trauma patients, provided a specific way in which patient outcome at one treatment facility could be compared with that at another center. Recently, Champion et al further refined this approach by using the Injury Severity Score (ISS)[16] and age as additional variables to compute the probability of survival.[17]

Table 1.—Prehospital Treatment Modalities

Emergency Medical Technician	Paramedic	Aeromedical
CPR*	CPR*	CPR*
Advanced first aid	Advanced first aid	Intravenous therapy
	EOA†	Fluid replacement
	Intravenous therapy	Drugs
	Fluid replacement	MAST suit
	Drugs (limited)	Oral intubation
	MAST suit‡	Nasal intubation
		Cricothyroidotomy
		Open venous catheter placement
		Central venous catheter placement
		Arterial catheter placement
		Transvenous cardiac pacemaker placement
		Transthoracic cardiac pacemaker placement
		Thoracostomy tube placement
		Open thoracotomy
		Open cardiac compression
		Aortic cross-clamp placement

*CPR indicates cardiopulmonary resuscitation.
†EOA indicates esophageal obdurator airway.
‡MAST indicates military antishock trousers.

We used this methodology" to compare the mortality of 150 consecutive blunt trauma patients treated by land EMS systems and taken to a trauma center with the mortality of 150 consecutive blunt-trauma patients treated by a rotorcraft aeromedical emergency care system staffed by a physician and nurse and transported by air to the same center.

METHODS

The land EMS system was comprised of ambulances staffed by two EMTs and mobile intensive care units staffed by two paramedics. The rotorcraft system utilized a small cadre of acute-care physicians and nurses trained to perform oral or nasotracheal intubation and to administer a broad spectrum of medications. The medical teams were airborne in an average of four minutes after being requested and traveled at 100 mph to the site of injury. The medical interventions provided at the scene of injury by each of the three potential medical response services are listed in Table 1.

Two groups of patients were compared in this study: 150 consecutive patients who had sustained blunt trauma, were treated at the site of injury, and transported to the study trauma center by land EMS units and 150 consecutive patients who sustained blunt trauma, were treated at the site of injury, and taken to the same trauma unit by the rotorcraft aeromedical service. Only patients who had no spontaneous respiration and pulse at the site of injury and [illegible] whom no resuscitative measures we[illegible] were excluded from the study. T[illegible]re no patients in either group [illegible] cardiopulmonary resuscitation them at any time in course. Mortality was defined as death caused by the original injury or complication of that injury. All patients were followed up to discharge from the hospital. The data of the two patient groups were collected during the identical 30-month period. The rotorcraft aeromedical service could only be utilized if the first public safety unit responding to the patient requested its use. In general, first medical responder units would request the use of the service when patients were injured in rural areas, while patients injured in urban areas were usually treated and transported by the land EMS system.

Trauma Scores were developed blindly on initial physician contact as described previously.[13,14] The TS was developed on land patients in the trauma resuscitation area immediately on arrival and on aeromedical patients on initial contact by the rotorcraft physician. Injury Severity Scores[16] were developed from patient charts and autopsy records at the completion of admission.

The P_s was computed as outlined by Champion et al,[16,17] using the following computations:

$$P_s = 1/(1+e^{-b})$$

where

$$b = b_0 + b_1(TS) + b_2(ISS) + b_3(Age)$$

where b_{0-3} are weights for each variable derived through use of the Walker-Duncan regression analysis[18] of a large index population of trauma patients treated at a trauma center[16,17] assumed to be operating at the accepted standard of care.[19] Age was coded as 0 for age younger than 60 years and 1 for age 60 years or older.

The statistical significance of any observed variation in mortality of a study group from that predicted by the P_s was accomplished by using the method of Flora[20] with the following approach:

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$$Z=\frac{D-\Sigma Q_i}{\sqrt{\Sigma P_i Q_i}} \quad (3)$$

Where Z is the statistic of comparison of predicted to actual survival, P_i is the probability of survival as derived from Champion et al,[9] and $Q_i=1-P_i$. D equals the actual number of patients that died in the test study. The significance of the observed variation in mortality between treatment groups was determined by using the Mantel-Haenszel test.[10]

RESULTS

Table 2 summarizes the data of the 150 blunt trauma patients treated and transported to the trauma center by land and the 150 blunt trauma patients treated and transported to the center by aeromedical service. The mean age, sex, association with motor vehicle accidents, and presence of closed head trauma were statistically similar in the two groups. More land patients were injured in urban areas while more aeromedical patients were injured in rural areas. More land patients were initially treated by paramedic services, while more aeromedical patients were initially treated by EMT services.

The average medical response time to the two treatment groups is summarized in Table 3. The average response time to the land treated and transported patients was seven minutes. The average time spent at the scene was 18 minutes, and the average transport time to hospital was ten minutes.

The average response time of the rotorcraft to the aeromedically treated and transported patients was 24 minutes. The actual time from injury to activation of the service was longer than the response time since the rotorcraft service could not be activated only after a first response unit had examined the patient. The approximate response time of these units in this setting was fifteen minutes. The time interval between injury and initial contact with a physician when the TS was developed was, on the average, 35 minutes for the land patients and 34 minutes for the aeromedical patients.

Table 4 gives an arbitrary stratification of the continuous P_i distribution of the two groups, and Table 5 gives the P_i means of the two groups. The mean P_i for the land group was 0.902. Nineteen of the 150 patients died, whereas 15 patients were predicted to die. The mean P_i of the survivors was 0.965, and the mean P_i of the nonsurvivors was 0.508. The mean P_i for the aeromedical group was 0.865. Ten of the 150 patients died, whereas 21 patients were predicted to die. The mean P_i of the survivors was 0.898, and the mean P_i of the nonsurvivors was 0.360.

Table 5 summarizes the statistics. A 2×6 contingency table χ^2 analysis of the P_i strata of Table 4 revealed $P>.05$ when the land and aeromedical sets were either compared with the standard index trauma patient population or when the two sets were compared with each other. Therefore, there was no significant difference in the distribution of severity among the three data sets. The Z statistic (equation 3) for the land transport group had a $P>.05$. The Z statistic for the aeromedical group had a $P<.001$. The stratification of the P_i as given in Table 4 can also be viewed as multiple data levels as defined by Mantel and Haenszel[10] and subjected to the Mantel-Haenszel test. The statistic obtained by comparing the observed difference in mortality between the land and aeromedical groups by this methodology had a $P<.001$.

Table 2.—Breakdown of Trauma Patients Treated Either by Land or Aeromedical Service

	Land	Aeromedical	P*
Age, yr			
Mean	29	29	
0 to 20	44	59	>.05
21 to 40	81	66	
>41	25	25	
Sex			
M	116	108	>.05
F	34	42	>.05
Associated with motor vehicle accident	131	139	>.05
Associated with closed head trauma	48	68	>.05
Associated with burn	1	1	
Location of injury			
Urban	134	114	<.001
Rural	16	136	
Initial treatment service			
EMT†	11	102	<.001
Paramedic	139	48	

*Obtained by χ^2 (Yates' correction where appropriate).
†EMT indicates Emergency medical technician.

Table 3.—Average Response Times to 300 Blunt Trauma Patients Treated Either by Land or Rotorcraft Service

	Land	Aeromedical
Arrival of first responder	7 min	10 min
Time of first responder on scene	18 min	24 min
Arrival of rotorcraft medical crew		24 min
Time en route to hospital	10 min	24 min
Time to initial physician contact	35 min	34 min
Time from injury to arrival at trauma center	35 min	58 min

COMMENT

Patients treated and transported to the study trauma center showed statistically similar injury severity distributions and mortality rates to patients treated at the index trauma center. Since the study trauma center was operating at the expected standard of trauma care, it is appropriate to compare the mortality of those patients brought to the center by the traditional land EMS system with those brought to the center by the aeromedical service.

Although it would be of interest to derive a direct numerical comparison between the mortality rates of the two treatment groups based on injury severity, such a contrast is fraught with problems because of the nature of this methodology. The most appropriate comparison is gained from reflection on the difference in the number of projected (ΣQ_i) and actual (D_i) deaths within each group. In the land set (Table 4), 15 patients were projected to die, while 19 patients died. In the aeromedical set (Table 4), 21 patients were expected to die, while ten patients died, which represents a 52% reduction in the predicted mortality. A more direct com-

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Table 4.—Summary of Distribution of the Probability of Survival of 300 Blunt Trauma Patients Treated Either by Land or Rotorcraft Service

P_s Strata	Land No.	Land %	Land D_s (Died)	Land ΣQ_s (Expected to Die)	Aeromedical No.	Aeromedical %	Aeromedical D_s (Died)	Aeromedical ΣQ_s (Expected to Die)
≥0.95	115	76.6	1	0.79	108	72.0	0	2.73
0.90-0.94	7	4.7	1	0.49	5	3.4	0	0.37
0.75-0.89	9	6.0	1	1.36	12	8.0	1	1.93
0.50-0.74	7	4.7	6	2.77	9	6.0	3	3.63
0.25-0.49	4	2.7	4	2.35	8	5.3	2	4.87
≤0.24	8	5.3	6	7.03	8	5.3	4	7.09
Total	150	100	19	14.79	150	100	10	20.62

*P_s indicates probability of survival.

Table 5.—Probability of Survival Means and Statistical Summary of 300 Blunt Trauma Patients Treated Either by Land or Rotorcraft Service

	Land	Aeromedical	Land v Aeromedical
Means			
Average P_s*	0.902	0.865	
Average P_s survivors	0.985	0.898	
Average P_s nonsurvivors	0.508	0.360	
P_s strata comparability	>.05†	>.05†	>.05
Mortality differences			
Z (equation 3)	>.05	<.001	
Mantel-Haenszel		<.001	

*P_s indicates probability of survival.
†Versus P_s strata of index population.

parison would be statistically invalid, in that the distribution of the severity of injury among the two treatment groups was not identical.

The statistical significance of the differences observed in the mortality of the land and aeromedical treatment groups was established by two independent means. The Flora methodology (equation 3) tests the statistical significance of the difference in the observed mortality from the predicted mortality based on the P_s. The Mantel-Haenszel approach tests the statistical significance of the overall observed differences in mortality within the severity stratifications between the treatment groups. The difference between the observed and predicted mortality of the land treatment group was not significant (equation 3, $P>.05$), while the difference between the observed and predicted mortality of the aeromedical treatment group was highly significant (equation 3, $P<.001$). The observed difference in mortality within the [illegible] was

[illegible]el,

major improvement in the mortality of patients treated and transported by the rotorcraft aeromedical service was in those patients with a $P_s<0.95$ (ten of 42 patients dying when 18 patients were expected to die). Patients who have scores between 0.99 and 0.95 are probably not critical enough to require rotorcraft intervention, and such intervention had less impact on their survival (no deaths when three patients were expected to die).

In addition, Table 5 reveals that the actual nonsurvivors in the land group had a mean P_s of 0.508, whereas the actual nonsurvivors in the aeromedical group had a mean P_s of 0.360. This suggests that not only was survival more likely in aeromedical patients in the more severe injury classifications, but that the aeromedical patients in those classifications who died were dying of more severe injuries than the nonsurvivors in the land group.

The major improvement in survivability occurred in the more severe classification groups, which represent only a fraction of all trauma patients. If the standard population is utilized, these groups represent less than 10% of [illegible] injured patients

brought to that medical center. This suggests that the efficacy of this type of rotorcraft care is appropriate only to a small subset of all trauma patients.

Before any conclusions about the value of the use of rotorcraft in this setting can be made, there are a number of weaknesses in this study that must be taken into consideration. Although the age, sex, nature of trauma, and distribution of the severity of injury of the two patient groups were statistically similar, there were a number of major differences between the two groups: (1) the location of injury (urban *v* rural), (2) the initial care rendered victims (paramedic *v* EMT), (3) the care after initial medical intervention, and (4) the route to the trauma center (paramedic *v* physician), and (4) the possible difference of patient handlings after reaching the trauma center.

The difference in the location of injury may have had two effects. Patients injured in rural areas had to wait slightly longer for the arrival of a medical first-response unit. If both rural medical first-response units took an average of three minutes longer to reach aeromedical patients than those that took the urban medical first-response units to reach the land patients. Patients injured in rural settings also had a longer transit time. On the average, it took 23 minutes longer for the aeromedical patients to reach the trauma center and definitive intervention. Both of these factors could have had a negative impact on the aeromedical patient's outcome.

The difference in the initial level of care rendered to each group may have also been a major factor. As noted previously, land patients were usually injured in urban settings where initial treatment was administered by paramedics, while aeromedical patients were injured in rural settings where initial treatment was usually administered by an EMT service. Due to the higher level of care administered by paramedics, it is conceivable that by the time the land patient reached the trauma center, they may have had been improved by therapy. On the other hand, because of the lack of semidefinitive care given to the aeromedical group, the TS of these patients may have worsened before contact by the aeromedical crews.

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the time of injury, the land patients may have been more severely injured and the aeromedical patients less severely injured than the actual TS indicated. This possible anomaly is partially mitigated by the inclusion of the ISS in the methdology and by the fact that the subset of the aeromedical patients who were treated initially by paramedic level service before contact by the aeromedical team were statistically indistinguishable from the patients treated initially by an EMT service (data not given).

The difference in the care after initial medical contact may also have affected these data. The land group was treated by a variable spectrum of different first responders, while the aeromedical group, after initial intervention, was treated by the same small group of flight nurses and physicians. It is conceivable that the improved mortality of the aeromedical group is not only a reflection of the more advanced modalities of treatment afforded by the aeromedical teams, but also a reflection of the continuity and standardization of care afforded by the highly trained physician-nurse teams. This may have also had a further effect on [illegible] ...ent after reaching the trauma center. Unlike the treatment teams on the rotorcraft service, the treatment teams in the trauma resuscitation area consisted of rotating physicians and nurses with a moderate turnover. Since the time it took patients in each group to be contacted by these two treatment teams was almost identical, a difference in the medical efficacy with which each respective team operated may also have accounted for the observed results. The aeromedical patients may have been better evaluated and more substantially stabilized, allowing for definitive treatment to have been provided more rapidly than to the land patients.

Due to the aforementioned factors, these data must be viewed with a great deal of caution. The conclusion cannot be made that the reduction in mortality observed in the aeromedical group was due strictly to the use of rotorcraft. It may be conceivable that placing the same physician-nurse teams on urban ambulances may afford similar or greater improvements in patient mortality. What rotorcraft do afford is the ability to move a highly skilled physician-nurse team rapidly over a far wider geographic area than possible by [illegible] transport, who can quickly sta... and transport patients to defi... care that can be prearranged by ra... before arrival. These results demonstrate that the use of rotorcraft staffed by a physician and nurse facilitate the provision of semidefinitive trauma care and improve patient mortality when compared with a patient population with similar injuries, at less distance and a longer time from definitive care, treated at the prehospital level by EMTs or paramedics.

In view of these data, it appears that physician-nurse staffed rotorcraft emergency care services may be a valuable adjunct to the prehospital care of patients who have sustained major blunt trauma. It seems warranted to study further the impact of such services.

The rotorcraft crews who made this work possible included James Dunford, MD, Lee Griffith, MD, Steven Guler, MD, David Guss, MD, Tom Neuman, MD; flight nurses Martha Bennett, RN, Mary Anne Bockman, RN, Janet Gill, RN, Catherine Kennedy, RN, Laurinda Martin, RN, Phillip Moomjean, RN; pilots Randall Mains, Joseph Hatley, and Howard Albecker. Charles Berry, PhD, and William Sacco, PhD, helped with the manuscript.

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JOY SCOTT

Business/Asia
4339 NE 45 Street
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College of Foreign Languages
Shanghai University
150 Pu Xi Road
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Shanghai, China

October 17, 1985

RECEIVED
OCT 18 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

Dr. Bud Nicola
Health Officer
700 Yesler Bldg.
Seattle, WA 98104

Dear Dr. Nicola,

Addressing the three points upon which the Council will base its decision for or against the COH helistop, I must say that

a. Not one life has been lost due to the present helistop in Graves Field. The time by private car from the field to COH, stopping at stop lights, is three minutes. The field surface could be improved inexpensively to meet all weather conditions. In addition, the director of Marybridge Hospital in Tacoma told me that an unstable patient should not be transported by helicopter in the first place.

b. The helistop is located in such a position that a crash could kill several people in the dense apartment area adjacent to the west, in the two grade schools adjacent to the east, and, most vulnerably, in the hospital itself. Unlike ambulances, which can turn off their sirens at the entrance drive to the hospital, the helicopters, with their considerable noise, would provide an unsettling, if not frightening, atmosphere for the children in the hospital.

c. There is no monitoring group in existence that would check the purpose of each flight. Even if there were such a group, they would be hard pressed to speak out against the COH authorities who would maintain the autonomy they have developed throughout this entire situation and against the marketing staffs of groups, such as Med-Flight of Boise, who encourage more flights by charging less for all flights over a minimum number.

Aside from the factual evidence above, I must say that, while I have four children of my own and fully support the care given to children <u>within</u> COH, I strongly believe that our cities are becoming unlivable because of projects such as the COH helistop. I further believe that COH feels that it must have the helistop in order to maintain its competitive edge against other Seattle hospitals, such as University, Swedish, and Harborview.

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JOY SCOTT

College of Foreign Languages
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4339 NE 45 Street
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USA

If, after the installation of a helistop at COH, it becomes obvious to all that it was a bad mistake, it will be very difficult, if not impossible, to get the helistop out.

I would say in closing that, not only is there no medical need for a helistop at COH, but that the establishment of such a helistop would provide a clear and present danger to the lives of people both in the hospital and in the homes and schools nearby.

Sincerely,

Joy Scott

Joy Scott

523-2941

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October 21, 1985

Dr. Bud Nicola, Director
Seattle-King County Health Dept.
Public Safety Bldg.
Seattle, WA. 98104

Re: Helicopter-helipad, COH

Dear Dr. Nicola:

Please seriously consider the many other medical needs at COH (and throughout Seattle and King County) which need funding and will be either under-funded or un-funded if hundreds of thousands of dollars are spent on purchase and maintenance, operation, crew and insurance for a helicopter and helipad.

Please seriously reconsider the advisiability and justification claimed by COH for the helicopter-helipad in light of the multiple other medical needs at COH, including up-dated care units, on-going care, staff, new equipment, special programs, specific diseses, and research.

Thank you.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

cc:

RECEIVED
OCT 23 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

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4416 54th NE
Seattle, WA 98105

October 24, 1985

Dr. Bud Nicola
Director, Health Department
7th Floor, Yesler Building
Seattle, WA 98104

Dear Dr. Nicola:

I wish to support the construction of a helipad at Children's Orthopedic Hospital very strenuously.

1. As a physician responsible for treating many of the children who could be transported by helicopter, I plead with you to give us the facility to most properly try to save lives. Without this proven advantage, our best efforts are reduced substantially. I do not participate in or initiate this transport, but am frequently the person called on to provide life preservation when it is no longer possible. The time and expertise provided by helicopter transport is essential to our mission as a tertiary care center.

2. As a Laurelhurst resident residing less than one mile from the Hospital, I refute charges of pollution and noise that were raised by neighbors residing further away. COHMC is a tertiary center. Airlift Northwest is an established entity. The supposed comfort of neighbors is not affected by these facts, and the city will be liable for the consequences if these considerations are placed ahead of the need to provide life support.

3. Denial of this otherwise available mode of care to children represents an attitude and behavior that shouts "descrimination" at its loudest.

I appreciate this opportunity to present my views. I hope that reason and good sense prevail.

Sincerely,

Eric B. Furman

Eric B. Furman, M.D.

EBF/kms

cc: File/LB

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Peninsula Children's Clinic

• EUGENE F. TURNER, M.D., F.A.A.P.
• JAMES E. MANTOOTH, M.D., F.A.A.P.
• JOHN D. WEGMANN, M.D., F.A.A.P.
• GORDON FAULKNER, M.D.

902 East Caroline Street • Port Angeles, Washington 98362 • Phone: 206/457-8578

October 24, 1985

TO: The Seattle City Council

My name is Eugene Turner and Iam a practicing Pediatrician in Port Angeles. I have practiced in that area for 15 years and am associated with three other full-time Pediatricians. We service the majority of the north Olympic Peninsula with a population of approximately 50,000. Being the regional referral center for our area, we deal with the majority of complicated pediatric problems. Our hospital is equiped and staffed only for primary and only for very temporary secondary critical care. Herein lies the problem with a relatively isolated rural area. The solution of this problem should be straight-forward. Childrens Orthopedic Hospital and Medical Center has been established as a tertiary care center for our larger region. This is rational, efficient, and economical, and, in fact, represents the ideal set-up for outlying areas such as ours. The comprehensive nature of their service is exemplified by such niceties as having a 24-hour toll free consultation access to anyone of the pediatric specialities. This allows us to make more rational and educated decisions relating to medical care in general, and especially in regards to the organization of our efforts in the transfer of our critically ill patients.

Throughout my 15 years as a contributor to this regional center, I can assure the service has been unfailingly consistent. The only flaw in the ointment, if you will, is the very inefficient transport system that is extant. We have three types of medical emergencies which require transport. First is the transport of premature and full term, newborn infants, who are in distress. This includes babies with hyaline membrane disease, neonatal seizures, apnea and the like. The second category is that group of patients with cardiopulmonary problems,such as congenital heart disease, heart failure and severe intractable asthma, as well as those children who have aspirated a foreign body into the pulmonary tree and are in need of urgent intervention. The above mentioned patients are usually in need of oxygen and oftentimes of assisted ventilation as well. The third category is the patient with a closed head injury, specifically one where there is active bleeding. I am sure that you can all appreciate there is nothing more delicate, more fragile and more stressful to all concerned than dealing with a two or three pound premature infant, hooked up to oxygen and IV and with a tube down the wind-pipe, requiring constant bagging for assistant ventilation during the transport.

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Until Airlift Northwest came into existence a very few years ago, we had the onerous task of accompanying these patients in a Coast Guard Helicopter to Graves Field, where a transfer to an ambulance took place. More often than not, the field was wet, muddy and this simply made the transfer a risky and sometimes dangerous undertaking. On one occasion a transport incubator was damaged beyond repair when dropped on the ground during this transport. Fortunately, the baby had been removed before this occurance. The most important point to emphasize here, however, is the critical time-loss due to this unnecessary transfer undertaking. It is virtually impossible to adequately monitor these sick children during this interval. This is especially true in the case of a closed head injury or the young premature infant with apnea, where active intervention could become necessary at any moment. Each minute lost can literally make the difference between life and death or, at least, allowing for a good versus poor quality outcome.

We are talking about anywhere from 20 minutes to an hour or more difference depending on weather and field conditions.

My partners and I have, indeed, lost patients due to this phase of the transport process. Even with the advent of the fully trained medical team that accompanies all of the Airlift Northwest evacuations in our case, these same transfer delays prevail. I would further stress that with the potential for direct helicoptor transfer to the medical building at COH that the above delays are nothing short of ludicrous.

In summary, we at the Peninsula Children's Clinic and in the area of Port Angeles, submit to you that transport directly to COH from the patient's point of origin, without a time consuming intermediate delay, almost always adding to the morbidity of the patient, is of critical importance. In fact, the decrease in morbidity and mortality that would be accomplished therein, should certainly outweigh the relatively minor inconvenience experienced by the relatively small number of persons affected by this proposal. I would very much like to see the efforts put forth by those opposed to the Helipad, shifted to more worthwhile public health problems which affect thousands of our youth daily - a prime example being the exposure of their youths to the uncontrolled noise pollution that occurs at rock concerts in every high school gym and/or auditorium and public places. The epidemic of permanent hearing nerve damage leading to permanent hearing loss is criminal in its present malignant form and could so easily be controlled with adequate citizen input and subsequent health legislation.

Thank you.

Gene Turner

Eugene F. Turner, M.D.

EFT/jg

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STEVEN P. WISNER, M.D., F.A.A.P.
Suite G-22
1800 C Street
Bellingham Medical Center
Bellingham, Washington 98225
Phone 733-7242

October 24, 1985

To whom it may concern:

Re: Helipad at Children's Orthopedic Hospital, medical need.

I am a pediatrician in private practice in Bellingham, Washington, and am the Medical Director of the Nursery and Pediatrics at St Joseph Hospital. We are a Level II facility and deliver 1500 babies each year. We take care of a number of sick neonates, from fullterm infants with pneumo to prematures with respiratory distress. Our hospital policies reflect the directives of the regional perinatal referral system in that we rely on maternal transports (15 per year) for those who are extremely high risk: gestations less than 34 weeks, complicated medical conditions like advanced diabetes, etc. We average about 22 neonatal transports each year for a variety of life threatening conditions: severe prematurity, respiratory distress syndrome, overwhelming sepsis, cardiac and surgical emergencies, need for mechanical ventilation, etc. From our pediatric department we can plan on about 10 transports annually. Thus total transports easily can approach 50 per year - half of these being extremely critical.

These numbers speak for themselves. Bellingham, 90 miles away from Level III care, needs, shall we say, demands, an organized, efficient transport service. Up to three years ago we relied upon our own ground based transport system. Our ambulance. Our staff of respiratory therapists and nurses. Our equipment. We felt pretty good; no obvious disesters. There was

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no alternative. It was clearly inadequate – precarious. There was no formal training program for transport personnel. No one team transported frequently. There were no backup protocols to rely on if something went wrong (pneumothorax). No physician attended the patient. 90 miles. At times heavy traffic delays. One mother ended up delivering in Everett. Another mother almost delivered her breech baby in the entrance way of the University as they unloaded her from the ambulance. Another baby arrived cold with low blood sugars. There are other cases. We were lucky.

Over the last 2 years Airlift Northwest, with their intensive care team of nurses and physicians, has greatly enhanced our abilities to give secure, high quality care to patients in transport. The standards of transporting sick babies in this state are finally catching up with those of other western states (Colorado, Utah, Arizona) who have had a highly skilled and efficient transport system for 8-10 years.

More to the point of the helipad issue. From our perspective in Bellingham, it is simple and logical. For those newborns and children who are critically ill, who have a stormy and deteriorating clinical course, they must be transported by an intensivist team AS FAST AS POSSIBLE AND WITH A MINIMUM of physical disturbance. A helipad at COH would accomplish this efficiency. The team could load the patient and equipment onto the helicopter at ST. Joseph Hospital and unload at COH's doorstep, accomplishing this in 2 patient moves. Without the helipad an extra, cumbersome, and time consuming transfer to a second vehicle is necessary for the patient and required equipment. Now, let's talk about this equipment for a moment. Equipment accompanying a critically ill child might include a

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respirator connected by ½" tubing to the child's windpipe, a plastic catheter that connects the transcutaneous monitor (for oxygen monitoring) to the patient's chest wall, an intravenous line that connects the IV pump to the patient's right arm (for fluids), a second IV line connected to the left arm (for medication), a third line that runs from a pomp to the child's left wrist artery (for blood gas analysis), ½" tubing connecting an air suction unit to the chest tube inserted between the ribs (to expand a collapsed lung), a line for temperature regulation, a foley catheter connecting a urine collecting bag to the baby's bladder (for urine volume measurement) the electrical wires that connect the cardiac monitor to the chest leads, and other items: Blood pressure equipment, medication boxes, respiratory equipment, attendant's ~~coat~~, jackets, etc

I think I've made my point. Transfer of a patient into and from a transport vehicle is clumsy, time consuming, ~~and time~~ hazardous to the patient. With a bit of dark humor one might imagine that this can be done easily and safely on a poorly lit, perhaps wet and muddy soccer field. Sound medical judgement mandates a well lit, reliably surfaced helipad that lies adjacent to intensive facilities at COTH.

As far as the question: Are we quibbling when we talk of shaving off 10, 20 or 30 minutes of time of transport? For the stable, moderately sick child, the answer is probably yes. But for the truly critically ill child the answer is NO; TIME makes a difference

As far as noise, neighborhood, or nuisance issues, for me, for my community of Bellingham, these are very secondary to the priority of having of having an excellent regional emergency transport service. I support a helipad at the COTH facility

Sincerely.

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WRITTEN TESTIMONY BY DR. WILLIAM A. MADDEN REGARDING THE IMPORTANCE OF HELICOPTER EVACUATION IN THE TREATMENT OF CRITICALLY ILL OR INJURED INFANTS AND CHILDREN.

My name is Dr. William A. Madden. I am a physician in the U.S. Army assigned to the Department of Pediatrics at Madigan Army Medical Center. I am Assistant Chief of the Department of Pediatrics, and Chief of Pediatric Intensive Care within the Department of Intensive Care Medicine at Madigan. My medical training includes a fellowship in both neonatology and pediatric pulmonary medicine. I have served in various capacities at military hospitals in Honolulu, Hawaii, Anchorage, Alaska, and Denver, Colorado. In addition, I was in private pediatric practice in Klamath Falls, Oregon.

During my fifteen years as a pediatrician I have practiced critical care medicine on neonates, infants, and children. During this time I have medically evacuated my patients by both ground and air transport. I have personally managed the transport of patients in the C-141, C-130, C-12, and Cessna 421 aircrafts, and in the UH-1, CH-53, and Dassault single turbine helicopters. These flights have varied in length from 30 miles to more than 2800 miles.

For the safe and rapid transport of critically ill infants and children, I believe it is essential that a helipad be placed at Children's Orthopedic Hospital (COH) in Seattle, Washington. COH is the pediatric referral center for much of Western Washington. Because of distance, ground transportation greatly increases travel time, particularly during peak traffic hours (0600-0900 and 1600-1900 hours) on weekdays, and on weekends during football games in fall and winter. This extra time could be significant in the transport of certain critically ill infants and children.

The importance of rapid transport for all ages of patients is demonstrated by the presence of a helipad at Harborview Hospital, the principle receiving hospital for critically injured or ill adults in King County; however, this helipad would not be suitable for COH. It would require both transfer to another vehicle (ambulance) and then a ride across town before the child could be brought to the hospital. As an example, I recently took a child with a critical, life-threatening condition to COH. Because of a football game at the University of Washington, we were forced to land at Harborview. After waiting for an ambulance we transferred the child to the ambulance, with the associated risks of dislodging the oxygen supply or the intravenous lines. Our trip to COH was delayed approximately 30 minutes, and was made more hazardous by traffic trying to enter the University District for the football game.

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The current landing area for COH, a playing field at the University of Washington, increases the danger to the patient and increases the transport time. Every time a critically ill patient is moved to a new conveyance, there is significant risk that intravenous lines, intra-arterial lines, urine catheters, endotracheal tubes, or monitoring equipment will be dislodged. The patient is exposed to the elements during the transfer when a transport isolette cannot be utilized because of the size of the patient. During the transfer to each vehicle there is no possibility of treating the patient should a life-threatening complication occur and, because of the complexity of the transfer from one vehicle to another, there is further delay in the movement of the child. The landing field is a playing field used by all age groups. The helicopter crews must depend upon these individuals utilizing the field to clear the area. A designated helipad would eliminate this hazard.

The views expressed above are my own views and are not to be construed as representing the views of Madigan Army Medical Center or the United States Government.

WILLIAM A. MADDEN, M.D.
Colonel, Medical Corps
Chief, Pediatric Pulmonology
Assistant Chief, Department of Pediatrics
Madigan Army Medical Center

Subscribed and sworn to before me this 23rd day of October 1985

Notary Public in and for
the State of Washington
residing in Tacoma

My Commission Expires:
15 March 1986

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October 23, 1985

Dr. Bud Nicola
Director, Health Department
7th floor
Yesler Building
Seattle, Washington 98104

Dear Dr. Nicola:

I am writing this letter in response to an inquiry from Children's Orthopaedic hospital concerning my professional judgement as to the placing of helipads near selected and designated institutions for the management of the critically ill.

By way of background I am a Board Certified General Surgeon who had been working in trauma for approximately five years. My previous employment was within the state of Maryland as the state medical Director for Emergency Medical Services and as such coordinated the response of the Maryland State Police Helicopter Program which transferred approximately 2,700 critical patients last year. They transported these victims to designated centers for trauma, neonates, pediatric trauma, burns, spinal cord injuries, penetrating eye injuries and replantation centers. During my tenure in Maryland the majority of hospitals upgraded helipads to enable them to access this rapid air transport service.

At this time I am the Medical Director and Chief Executive Officer of Boston Med Flight - a helicopter program, originating in Boston and serving the New England region. This hospital consortium represents Boston University Hospital, New England Medical Center (to include the Kiwanis Pediatric Trauma Institute), Massachusetts General Hospital, the Massachusetts Eye and Ear Infirmary, Boston City Hospital, Beth Israel Hospital, Brigham and Women's Hospital and Children's Hospital Boston. Within Boston there are concerns from various agencies as to the need for the receiving centers to have adequate helicopter landing areas.

Following the designation process hospitals begin to receive not only inter-hospital referrals but also patients directly from scenes of accidents. Patients who previously would have succumbed in the prehospital phase now, because of the emergence of E.M.S. systems and helicopter availability, survive to reach hospital. For many institutions there is a learning process to be able to manage these injuries. There is no doubt that the time from accident to definitive care is at a premium in managing these types of patients and that any increase in time from scene to trauma center may translate out to an increase in mortality or morbidity. Many agencies in their R.F.P.'s for specialty center designation mandate the close proximity of a helipad to decrease transit time to a minimum.

BOSTON
Med Flight
Peabody 1 818 Harrison Avenue Boston, MA 02118 (617) 424-5208

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There are concerns other than that of time which may be of critical importance. An unstable patient should not be handled unnecessarily or transferred from one vehicle to another in their critical state. The experience with pediatric trauma in Baltimore may illustrate this point. At the time of implementation of the program Johns Hopkins did not have a well-equipped helipad and indeed the state police helicopters used to land a few blocks away from the hospital and rely on surface ambulance to complete the transfer. The physicians working within the pediatric trauma center recognized this deficiency and collaborated with community groups, architects and health planners and built a helipad directly on the roof of the hospital. This is served by a dedicated elevator which now takes patients from the helipad directly into the pediatric rescusitation area. Within this area all pertinent expertise immediately is available so that the patient has immediate access to the radiology suite, the CAT scanner or the operating room.

Although no community polls were conducted during the implementation of this program, during my stay in Maryland I received no complaints from community groups concerning the helicopter program. They were made aware that air transport was reserved only for those critical patients in direst need. Even with a busy day at the pediatric trauma center in Baltimore only five or six helicopter transports would be flown during a 24 hour period; this did not seem to cause community concern.

I hope that this brief letter addresses some of the points that will be raised at the public hearing on Thurday. If I can provide any further information please don't hesitate to let me know.

Thank you.

Sincerely,

Alasdair Conn, MD
Medical/Executive Director

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October 22, 1985

Seattle Department of Construction and Land Use
400 Municipal Building
Seattle, Washington
98104

Re: NOTICE OF PUBLIC HEARING File No. 84-022 (Master Use Permit No. 8402935)

I would like to make the following statements with regards to the proposed construction of a "Helistop" at the Childrens' Orthopedic Hospital.

I am a noise control engineer and a professor of .echanical engineering at the University of Washington. As such, I am concerned about the noise environment in the city in which I live. I, also, have served on the Mayor's (Seattle) Noise Task Force, which drafted the present Seattle Noise Ordinance. For these reasons, I have followed with interest the proposal to establish a heliport ("Helistop") at the Childrens' Orthopedic Hospital.

I am not a resident of the immediate neighborhood of COH, but I would like to voice my opposition to the proposal because I think that this action will have a detrimental effect on the quality of life for those neighbors, and this ultimately reflects on the quality of life in the greater Seattle community.

Noise directly affects more people in this country than any of the other form of pollution. For many years, noise has been the item identified by Americans in the U. S. Census as the most serious environmental pollutant. Are the neighbors of COH any different than the millions of other Americans who have raised their voices against this "Tyranical" pollutant? I think not.

Proponants of the proposed action claim that it will save lifes, but they give little consideration to the fact that it might destroy the life styles of the entire community, and could lead to serious health problems, even death, for neighbors of the hospital. Can you imagine being startled in the midst of a sound sleep by a thundering, thumping, whirring machine decending from the sky, shaking the very foundations of your home? This would happen to those unfortunate residents who live near the hospital, and the effects would be felt further away.

If you would like to get some idea of the problem that helicopter overflights create, I suggest that you talk to the Seattle Police Department and ask them about their experiences with their helicopter experiment. The complaints were numerous and continuous, and the aircraft that they used were small helicopters, not the large military type, that are expected at COH.

Laurelhurst is a quiet neighborhood as city neighborhoods go. The only major arterial in the area is Sand Point Way, which is a relatively underutilized street, and there are no major businesses or industries nearby. Nighttime noise levels in the community will be found to be on the order of 35 dBA, or lower. The introduction

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of a heliport at COH would introduce a new noise source to this quiet community that could range up to 105 dBA. The effects of such an increase in noise level would be astounding and far reaching. Because the helicopters would approach from the sky, the noise from these hidious machines would be heard and felt over the entire Laurelhurst Community.

Noise will affect the adjoining neighborhoods, as well, but to a lesser degree, but it is my contention that any unnecessary increase in community noise deteriorates the quality of life in that neighborhood, and should be avoided if at all possible.

Respectfully,

James D. Chalupnik

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Testimony of the Laurelhurst Community Club at the DCLU Medical Need Hearing, Municipal Building, October 24, 1985

My name is Liz Anderson. I live at 4746 45th N.E. I am here tonight to represent the Laurelhurst Community Club Board.

First, we would like to clarify that we are not opposed to air transport for emergency cases nor to Childrens Orthopedic Hospital. Our community supports the hospital and the good work which it does;many in this community are volunteers, employees, and Guild members, and we are grateful for the fine work done in the hospital. We have difficulty taking an adversarial position against the hospital but feel that the helipad proposal is one that requires, at the least,open, careful, and honest scrutiny.

The goal of the LCC Board and many in the community has been to secure answers to a number of questions which should be addressed before approval for a helipad on the COH premises is granted. Tonight, we will just focus on questions concerning medical need. They are as follows:

1. Helicopter transport is relatively new. What data, prior to 1984 are available that indicate there are problems with the existing system of emergency ground transport? If local data are unavailable, what evidence is available from other comparable metropolitan areas?

2. Is there evidence that there are portions of the population that are currently not receiving satisfactory emergency medical treatment? We are certainly aware that the geography of this state makes ground transport difficult and we would understand that helicopter service could provide a useful adjunct to emergency care transport service in these areas. However. it is also clear that there are many areas that contain large populations that are well-served by ground transport and do not need helicopter service. It is very important that the ground transport system not be allowed to deteriorate because of competition from Airlift Northwest.

3. If emergency medical need can be defined, how many cases would meet the criteria for emergency delivery to the door of COH? Given the predominantly residential character of the COH location, what restrictions could be put upon helicopter landings at COH?

4. If a helipad is sited at COH, how will the service be integrated into a comprehensive regional plan based on a credible projection of need and standards of use and accountability?

5. How can a balance be found between the health needs of the community's residents (Laurelon Terrace, students in the elementary school) and the emergency medical needs of the hospital?

6. Can the emergency medical needs of patients be met by alternative

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landing sites? Some possible alternatives are:

a) one helipad at the UW Soccer Field shared by UW and COH

b) one helipad at COH for extreme emergencies and another helipad at UW Soccer Field that both hospitals can share for non-emergency, stable interhospital transfers.

c) one helipad at COH and another helipad at the Sand Point Naval Air Station.

Our preferred alternative is to have all emergency cases that require helicopter transport sent initially to Harborview for evaluation and stabilization. There is simply no clear reason why patients cannot be taken to this region's acknowledged regional trauma unit, Harborview Hospital. Some of these patients would then be transferred to other adjacent hospitals by ground transport as indicated by theirk particular requirements. If Harborview's current staff, equipment and space is not wholly adequate for this role, it should be upgraded appropriately with the assistance and cooperation of both University and Children's Hospitals. This might involve the development of some joint practice agreements between University, Children's and Harborview to make such an arrangementk fully workable. We feel confident that such a mutually satisfactory arrangement can be developed by the three hospitals if they are required to do so. Perhaps financial support from King County would be appropriate to make this concept a reality and to ensure that the helicopter service is integrated into the county-wide EMS system.

We on the LCC Board have discussed these alternatives as solutions to this dilemma and would be willing to poll the neighborhood to see how much support each might have. We would truly like to work out a compromise that would satisfy the needs of both the hospital and the community.

There is one additional topic that we, as representatives of this community, would like to address. Gathering information on this helipad proposal, both generally and as it pertains to the medical need issue, has been difficult. As you know, COH refused to complete a Certificate of Need application for helicopter service. As a result, important information which might have been provided through that procedure will not become available. Further, while many discussions have been held with COH personnel, it has been very difficult to get any hard data which would prove that there is a compelling need for the helipad. Over the past year we have been given much confusing and often contradictory information by COH. Some of this information has to do specifically with the utilization expectations of the helipad. Originally, we were told that we could expect 1-3 flights a month. Currently, Dr. Neff states that 15-20 might be a more realistic prediction. Other COH representatives have been quoted in the paper as anticipating 25-30 flights. When one stops to consider that each transport will require four flights over our community because of the different locations of the helicopter and flight team, any prediction becomes significant in terms of impacts on our community. Personal and professional connections have made it impossible for individual physicians to speak publically about the complexities and uncertainties surrounding this issue. Many of the people who have expertise in emergency and neonatal medicine, and whom we have contacted recently, were not even aware of this medical need hearing. It is a sad

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commentary that some of the best, unbiased, and disinterested but expert opinions on this issue are not being heard at all tonight. Although Dr. Nicola is no doubt acutely aware of this situation, it is unfortunate that a more open presentation of the numerous facets of these issues is not available for us all to hear.

In summary, we ask tonight, Dr. Nicola, the same thing that we have asked of the COH administration and Board of Trustees--that the people associated with making this request and those associated with granting and denying such requests act thoughtfully and responsibly with regard to this issue and that a multi-county comprehensive plan for emergency medical transportation be developed that will address our questions and those of other consumers of EMS services. Such a plan should be developed in an open and participatory manner that will allow all points of view to be heard and balanced in rational ways. We hope our participation at this hearing will assist Seattle, King County, the Puget Sound Health Systems Agency, and other responsible parties move a step closer to the achievement of such a goal.

Thank you.

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DR Nicola

Testimony of the Citizens Concerned About Helicopter Transport at the DCLU Medical Need Hearing, Municipal Building, Oct. 24, 1985

My name is Anita Francis. I have a Ph.D. in medical sociology and health services research and am a graduate nurse. I reside at 5003 45th N.E. and speak for the organization: Citizens Concerned About Helicopter Transport.

We have been concerned about the issue of hospital use of helicopters and have been investigating the successes and problems associated with this use for over a year. We have interviewed 20 to 30 physicians and about 10 nurses from this area, most of whom have had experience in neonatal transport and/or pediatric emergency care. We have also interviewed experts in emergency medicine around the U.S. Our library work has involved reviewing professional journals and various other research literature concerning emergency transport and related issues.

Based on this effort, we strongly recommend that a careful study of the role of the helicopter be required. Although the problem currently before us is whether Childrens Orthopedic Hospital should have a helipad, we cannot separate this question from the larger question of what is appropriate for the system as a whole. Giving COH permission to have a helipad without requiring them to do a careful study will set a precedent that other hospitals will eagerly follow. Thus, both the question of COH permission and permission for University Hospital and other hospitals must be addressed now.

It is of critical importance that the role of the helicopter in the existing emergency medical services (EMS) system and neonatal care system be well-defined. The helicopter's role must be carefully planned, well-conceived, and, if allowed to proceed, should be continually monitored. To do this, a justification study should be done. This type of study has been asked for by numerous individuals--local and community physicians and nurses, experts in EMS throughout the U.S., and others concerned that our current, excellent ground transportation system not deteriorate and that issues of cost containment and cost-effectiveness be considered.

Some suggested objectives for such a study are as follows:
1. Determine an optimal allocation of emergency transportation resources.
2. Avoid disruption of the current nationally-recognized EMS system in the Central Puget Sound Region, which includes Medic One, Fire Department Aid Units, private ground ambulance companies, MAST military helicopters, Airlift Northwest's fixed-wing airplane service and also includes emergency care which is available at many of the region's community hospitals.
3. Forecast, as accurately as possible, the economic feasibility of the helicopter service, so that overuse in order to increase revenue is less likely to occur. It is possible that, as Dr. John Neff from COH has suggested, this helicopter service is so vital that there should be public subsidies of the service. A careful projection of its expected utility is needed in order to justify that claim.
4. Explore the concerns expressed by local and community physicians, nurses, and other residents of the Seattle area toward helicopter

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service and its secondary impacts in order to elicit their support, trust, and cooperation. There should be a full range of participants involved in the study, so that both the public and private sector providers and a wide range of consumers are represented.
5. Show whether the proposed plan of increased helicopter usage will have tangible benefits, with specific numbers to indicate that the proposed plan represents a worthwhile addition to the already well-developed current system.

Some specific recommendations as to scope and content are as follows:

1. Describe the current EMS and neonatal transport systems. Include findings on patterns of usage, capabilities and deficiencies, referral patterns, and the components of the system including existing prehospital care transport, caregivers. and institutions. Distinguish between getting care to the patient and transporting the stabilized patient to a hospital for treatment.

2. Include in a geographical framework a description of the current and projected population to be served, its demographic characteristics, and the transportation problems unique to certain parts of the Puget Sound region.

3. Estimate the optimal role and level for each mode of transport. One method of doing this is described by Rhee, et al., Annals of Emergency Medicine, 13:10, October, 1984, as follows:

a. Define which medical conditions are appropriate for each transport mode, e.g., for which medical conditions would patients benefit significantly from helicopter transport to a referral center? These findings can become guidelines for use in deciding on transport if and as the system evolves.
b. Determine the incidence of each of the medical conditions
c. Define the population to be served.
d. Calculate the need for service by multiplying the population to be served by the incidence and by the fraction of the population that will require the transfer. Do this for each of the transport modes.
e. Estimate the fraction of patients with demonstrated need who will actually use the service.

In estimating the need for each mode of transport, it is particularly important to identify in what situations and for what types of cases the helicopter is preferable and when it is not. A comparison of patients who were transported by helicopter and their outcomes with similar cases moved in other ways is very important to do. About 30 cases would be sufficient to allow some useful estimates to be made.

Ideally, the role of the helicopter in the EMS system should be examined in 2 situations. One should determine how the existing system works, and then what changes the availability of a helicopter service would make, especially its possible impact on ground ambulance capability. Estimates should be made for 5 and 10 years time horizons, at a minimum. From such results, credible estimates of the expected number of flights, based on specific criteria, can be made.

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4. Introduce cost factors. How much do these services cost and how will they be paid for? As is well known, the economics of helicopter transport are weak and results from this component may have a profound impact on the current perceptions and the future evolution of our EMS sytem.

Once this justification study has been conducted, and if use of the helicopter is shown to be warranted, and its role in the overall EMS system as been carefully defined, a set of rules for monitoring its use should be adopted. These rules would need to be agreed upon by all participants, and would include information as to who will be transported, who will make transport mode deicisions, methods for identifying and assessing penalties for misuse of the helicopter, and who has legal responsibility for the care of the patient during each part of the transport.

In contrast to the kind of careful study I have just outlined, is the case study approach, relied upon by CDH, at least in its public presentations. A case study approach is of questionable value. I know from personal experience in my research that generalizations based on a few observations are not often true. As the methodologists Campbell and Stanley point out, "Any appearance of absolute knowledge, or intrinsic knowledge, about singular, isolated events, is found to be illusory upon analysis." Only by making carefully measured comparisons is knowledge reliable. And that is what we are asking for here.

A study such as we have suggested here would produce the kind of knowledge base needed to determine where and how the greatest impact on life-saving can be accomplished. Helter-skelter, piecemeal approaches are simply not adequate.

Thank you for giving us this opportunity to speak.

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UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

School of Public Health and Community Medicine
Department of Environmental Health, SC-34

October 24, 1985

To: Hearing Officer, Heliport for Children's Orthopedic Hospital

From: P.A. Breysse, Associate Professor Emeritus

A group of citizens residing in the area adjacent to Children's Orhopedic Hospital are concerned about the effects of noise levels resulting from operation of the proposed heliport.

In the past I have conducted noise surveys associated with landings and take-offs of helicopters. Noise levels ranged from 95 dBA to over 110 dBA.

There is no doubt that exposure to noise (unwanted sound) can result in mental distress in some individuals. People do respond emotionally to noise. Mood music is intentionally utilized to elicit certain psychological responses during movies. Many are affected by military marches. On the other hand unintentional sounds also evoke responses. A dripping faucet, a sudden scream, a scratching piece of chalk all involve different yet characteristic emotional responses. Psychologic responses are related to intensity, frequency, intermittancy, as well as the unexpectedness, of the noise, the inappropriativeness of the stimulus, and interference with speech or communications.

One of the most significant and damaging effects of noise involves interference with sleep. Effects of noise on sleep disturbances has been accomplished by studying brain wave patterns utilyzing electro-encephalographs for monitoring subjects' stages of sleep.

Indications are that the quality and the quantity of sleep may be impaired by shifts from deeper stages of sleep to shallower stages, by interruption of dream sequences which are believed to be important for sleep and by premature awakening.

In a noise study conducted in schools located in close proximity to the Sea-Tac Airport, teachers often remarked that students in class who resided in homes located in the north and south ends of the runway would often fall asleep in class.

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A series of sleep interference studies indicated that at:

70 dBA - most probable reaction, awaken.

50 dBA - probability that 50% of subjects will change to a lower level or awaken.

40-45 dBA - 10% of subjects will change depth of sleep or awaken.

J.D. Miller of the Central Institute for the Deaf concluded that, all facts considered, one must tentatively assume that sleep disturbance by excessive noise will reduce one's feeling of well being. Furthermore, when noise conditions are so severe as to disturb sleep in a regular unrelenting basis, then such sleep disturbance may constitute a hazard to one's physical and mental health.

The startle effect of helicopter operations, especially at night is an additional important noise effect and is undoubtly more disturbing than a steady state noise.

In summary, community noise is a serious problem having both a physical and mental aspect. As mentioned previously, sleep disturbance is critical and noise levels associated with heliport operations will certainly adversely affect the sleep of exposed individuals. Furthermore the startle also involves mental stress.

PAB:rm

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October 22, 1985

Seattle Department of Construction and Land Use
400 Municipal Building
Seattle, Washington
98104

Re: NOTICE OF PUBLIC HEARING File No. 84-022 (Mas' Use
Permit No. 8402935)

I would like to make the following statements with regards to the proposed construction of a "Helistop" at the Childrens' Orthopedic Hospital.

I am a noise control engineer and a professor of mechanical engineering at the University of Washington. As such, I am concerned about the noise environment in the city in which I live. I, also, have served on the Mayor's (Seattle) Noise Task Force, which drafted the present Seattle Noise Ordinance. For these reasons, I have followed with interest the proposal to establish a heliport ("Helistop") at the Childrens' Orthopedic Hospital.

I am not a resident of the immediate neighborhood of COH, but I would like to voice my opposition to the proposal because I think that this action will have a detrimental effect on the quality of life for those neighbors, and this ultimately reflects on the quality of life in the greater Seattle community.

Noise directly affects more people in this country than any of the other form of pollution. For many years, noise has been the item identified by Americans in the U. S. Census as the most serious environmental pollutant. Are the neighbors of COH any different than the millions of other Americans who have raised their voices against this "Tyranical" pollutant? I think not.

Proponants of the proposed action claim that it will save lifes, but they give little consideration to the fact that it might destroy the life styles of the entire community, and could lead to serious health problems, even death, for neighbors of the hospital. Can you imagine being startled in the midst of a sound sleep by a thundering, thumping, whirring machine decending from the sky, shaking the very foundations of your home? This would happen to those unfortunate residents who live near the hospital, and the effects would be felt further away.

If you would like to get some idea of the problem that helicopter overflights create, I suggest that you talk to the Seattle Police Department and ask them about their experiences with their helicopter experiment. The complaints were numerous and continuous, and the aircraft that they used were small helicopters, not the large military type, that are expected at COH.

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of a heliport at COH would introduce a new noise source to this quiet community that could range up to 105 dBA. The effects of such an increase in noise level would be astounding and far reaching. Because the helicopters would approach from the sky, the noise from these hidious machines would be heard and felt over the entire Laurelhurst Community.

Noise will affect the adjoining neighborhoods, as well, but to a lesser degree, but it is my contention that any unnecessary increase in community noise deteriorates the quality of life in that neighborhood, and should be avoided if at all possible.

Respectfully,

James D. Chalupnik

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FORKS WOMEN'S CLINIC
SUSAN SHANE, CRN
P.O. BOX 1022
FORKS, WASHINGTON 98331

TELEPHONE (206) 374-3143

RECEIVED
OCT 16 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

Dr. Nicola, Health Officer
700 Yesler Building
Seattle, WA. 98104

Dear Dr. Nicola:

Please register my support of a helipad at Children's Orthopedic Hospital. After caring for neonates for many years, I feel very strongly that the present system of landing elsewhere does take a terrific toll on these fragile babies and may make the difference between life and death.

As we treat younger and more delicate newborns, we have to make provisions for minimizing the stress, temperature changes, noise, and other factors that are tolerated poorly by these babies.

Life saving equipment--IV lines, endotracheal tubes, etc.-- are in place before the infant leaves the hospital where he/she was born. Making two transfers could very easily dislodge or cause misplacement of a tube or line which would greatly jeopardize the life of the baby. A single transfer at the door of COH would eliminate this threat as the damage could be repaired immediately.

In my opinion, the residents of the surrouding area have not presented any compelling reasons to restrict helicopter access to the hospital. I am proud of Childrens and the care available there. It definitely means the difference between life and death for children born in rural areas. Let's take the next step in providing the best care humanly possible.

Sincerely,
Susan L. Shane
Susan L. Shane CRN
Perinatal Nurse Clinician

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To Whom it may concern:

I am writing in support of the helipad for Childrens Orthopedic Hospital. I am the mother of a child with hydrocephalus and a severe seizure disorder. We live 5 hours from Seattle in Forks Wa. and our son has had 8 brain surgeries, 3 of them emergencies. We have also had numerous hospitalizations for seizure controll, one of these emergency.

When I look at my son and know that without the expert help and services of Childrens Orthopedic he would not be alive I grieve for those parents that have been less fortunate. I cannot imagine life without him. I cannot understand the comparrison between a childs life and well being and the occasional interuption of peace that wouldcome with the helipad.

Our lives have been interupted many times with long tiresome, and stressful trips to Seattle. We have many more such interuptions to look forward to and a lifetime of dealing with a child with severe handicaps and all the restrictions that carries with it.

When a child with medical problems is born it is born without choise to the parents, you have a choice, to help those less fortunate than yourselves. Please make that choice, isn't it a small price to pay for such a great reward.

Sincerely:

Linda Middleton

Linda Middleton

RECEIVED
OCT 16 1985
OFFICE OF DIRECTOR
SEATTLE-KING COUNTY DEPARTMENT
OF PUBLIC HEALTH

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October 10 85
3305-43rd Ave
Seattle Wash
98105

Dear Sir,

This is the second letter I have written to protest COH Heliport
as a resident of Laurelhurst for
over since 1954 I am strongly
opposed to this concept. COH
has not lost leiny do for
(in using the playfield Ogden
This is another idea by COH
administration to compete
with various hospital (Harborview
Dg is make it No 1 We
have discussed with physicians
friends and neighbors
week for the heliport
Between COH NS this Wednesday

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Washington Lawmakers on feeling pressured by their Constituents Residents and developers there is so much competition between hospitals now

Why is Lawmakers choose not protect cities. One would or should be concerned about the safety factor: don't tell us that Helicopter never crash — ?

Very Truly Yours
Shirley Dawson

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1984
1981

3650 42nd Ave NE
Seattle, Wa. 98105
1/25/84

RECEIVED
JAN 28 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justen
DCLU
600 4th Ave
Seattle, Wa.
98104

Dear Mr. Justin:

I noted with horror the Notice of COH's plans to construct a heliport on the grounds of the hospital. I urge you to require them to file an environmental impact statement. Their total disregard for the surrounding neighborhood is appalling -- it will clearly affect all of us with increased noise pollution and the possibility of property damage and destruction of life if one of the helicopters crashes.

Sincerely yours,

Carolyn Margon

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3638 42 NE
Seattle, Wash. 98105
January 26 th, 1984

RECEIVED
JAN 28 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justin
Department of Construction and Land Use
City of Seattle
6oo 4th Avenue
Seattle, 98104

Re: COH Helipad

Dear Sir:

It would be a travesty if Children's Orthopedic Hospital were not required to file an environmental impact statement for its proposed helipad.

The Hospital has more than once proved itself an untrustworthy neighbor. It uses the obvious appeal "for our children" to continually expand to satisfy its ego and build its prestige. It should be obvious that a helipad is unnecessary. Hospitals are installing them to increase the area they serve and to compete with each other by kidnaping patients from one another's traditional geographical areas.

As we all know, duplication of facilities and technological competition are major causes of rising hospital costs. Why should the city not require the most stringent environmental impact statement for something which is so unnecessary and which damages our neighborhood?

Please remember that the most important things to protect in Seattle are our neighborhoods and the people who live in them.

Sincerely,

John M. Maloof, Jr.

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3638 42 NE
SEattle, Wash. 98105

January 25, 1984

RECEIVED
JAN 28 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justin
Department of Construction and Land Use
600 Fourth Ave
Seattle 98104

Re: COH helipad

Dear Mr. Justin,

As a resident of Laurelhurst, I very much object to the COH helipad.

I do insist that the hospital file an Environmental Impact Statement.

Sincerely,

Katharina Maloof

Katharina Maloof

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2L
C- 84-

4300 N,E. 44th Street
Seattle, Washington
January 10,1984

RECEIVED
JAN 22 1985
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Willian J. Justen, Director
Dept. of Construction & Land Use

Dear Mr. Justen:

As a neighbor of the Children's Orthopedic Hospital I am writing to communicate my concern that a helipad located on the hospital grounds would be a definite negative influence in our neighborhood. I a m concerned because of the noise and safety issues involved in this proposed plan.

Sincerely,

Dorothy Peterson

Dorothy Peterson

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January 6, 1984

Dear Guild Members,

As many of you may already know, this fall Children's Orthopedic Hosipital announced plans to build a helipad on their hospital grounds. There is much public concern over this issue not just in Laurelhurst, but throughout the city as well and justifiably so.

The media and C.O.H. would have you believe that those who oppose the helipad are selfish, affluent people who would have children and infants die rather than suffer a little excess noise in their neighborhood. This simply is not the case. The group of people who oppose the building of the helipad is comprised of people from all over the city, most of whom have a modest income and lifestyle. Many of us are members of Orthop ic guilds like yourselves and have spent years actively fundraising for an institution that we believe enhances the quality of our lives in this region. Most importantly, the majority of us are parents as well, who have at one time or another engaged the services of C.O.H. and have appreciated and been thankful for the exceptional care our children have received. In spite of this, the building of a helipad at the proposed site is something that we cannot support because so many of our questions concerning the helipad and its service remain unanswered and our concerns, which go far beyond the issue of noise, have not been addressed.

C.O.H. has written a form letter entitled <u>COHMC Helipad Justification</u> in which they describe the two main advantages to having a helicopter transport system as 1. <u>Critical Time Saved</u> and 2. <u>Decreased Patient Manipulation</u>. C.O.H. proposes that time lost between diagnosing and initiating treatment of critically ill patients may result in death. They also suggest that various other medical emergencies require immediate intervention. We certainly do not dispute these facts, but two things are overlooked. Seattle already has a trauma facility, that being Harborview Medical Center, and they already have a helipad and provide helicopter service to emergency victims. Secondly, it is usually the ground ambulance that will arrive at these emergency sites first. It is only after stabilizing a patient and assessing a situation that a helicopter is called. With two or most likely more helicopter services available, which will be called? This will result in increased competition for patients between hospitals, crowded skies as more and more hospitals purchase or lease the helicopters, and a greater potential for mid-air collisions and loss of lives. Since 1980 the number of hospitals offering helicopter services has tripled in this country. What is to prevent physicians and medic teams alike from abusing the system and calling for helicopters to expedite transfer of even the most local and routine injury? How does one determine which patients will benefit most from an airlift? Who will feel comfortable with making these judgements? With the costs involved

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in operating a service such as this you can be sure that a helicopter will never leave an emergency site empty. With malpractice insurance rates continuing to skyrocket, what physician in his right mind wouldn't call for the aid of a helicopter if it were available to him- just to protect himself from the possibility of a lawsuit?

C.O.H. compared time involved in aiding a patient in Enumclaw by helicopter to that of one assisted only by ground ambulance. They showed that they could save on hour and six minutes usir the proposed helicopter service, a significant amount of time if the comparison were a valid one. We are not insisting or even encouraging C.O.H. to rely on ground transportation to outlying areas, only that they land the helicopters at an improved current site, the IMA field. Had C.O.H. done a "time saved" comparison between a helicopter landing on their property versus one landing at the IMA field, which is the only comparison that would be valid, the time saved would indeed be quite minimal.

The other major concern that C.O.H. expresses in its justification letter is that of Patient Manipulation. They say that each time a patient is loaded or unloaded from and emergency vehicle they risk the possibility of losing life support tubes. If these systems are so delicately placed and vulnerable it would seem that the turbulent ride in a helicopter is certainly not the best mode of transportation for these tiny patients. Dr. Paul Herndon, a C.O.H. staff physician, along with other colleagues, support this premise. Dr. Herndon feels that quality care can best be administered in a ground ambulance where at least one would have the option of pulling off of the road to tend to developments in a patient's condition as they occur. C.O.H. also discussed the possibilities of an infant's condition being compromised by opening the isolette to replace a tube. They explain in detail how a change in temperature in an isolette can result in hypothermia and other complications that can ultimately result in death. What they fail to tell you is that if the helipad is built on its proposed site, the Kitchen Gardens, these delicate isolettes will still have to be transferred from chopper to gurney and then be pushed or carried a distance of at least seventy yards down a sloping grade and ultimately into the emergency room. It seems that their present plan for the helicopter site does not eliminate the particular risks for which they have declared their current landing site unacceptable. Poor lighting and bad field conditions are obstacles that are easily and inexpensively overcome by upgrading the soccer field.

Please don't dismiss this as a Laurelhurst problem or even as a Seattle problem. If C.O.H. is successful in obtaining permits to build this helistop it will only be the first of many in our area to be built. There won't be a city or town in the State that will not eventually feel the adverse impact of this move toward patient transport by helicopter. The U.W. Plans on building a helipad on the top of its new wing just three to four minutes from C.O.H. Then it is suggested that the two hospitals work together and share

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a helipad, they insist that they each need their own. Virginia Mason Clinic already has a helipad on top of their facility. Providence and Swedish have plans to expand and no doubt will apply for helipad permits also. Harborview, as mentioned earlier, currently operates their own helicopter service. Can you think of a hospital that is not growing and expanding their services and that will be complacent to standby and watch other hospitals surpass them in resources and technology? We fear, and with good reason that this is only the tip of the iceberg.

The costs in establishing and operating a helipad for one year have been estimated by the A.M.A News to be in excess of a million dollars. One can only surmise that these costs will be passed along to the patients. Health care costs rose twenty per cent in Washington State alone this past year. It seems that this money could be better spent improving the existing quality of care given patients rather than providing a new mode of transportation to the hospital.

We have no idea of how frequently the helipad at C.O.H. will be used. Each time the question is asked of them the figure changes and the projections are only increasing. On their application to the F.A.A. for air space clearance they estimated there would be one or two trips per month. The current figures quoted in the University Herald (Dec. 12, 1984), were estimated at between twenty and twenty-five flights per month. Each of these cases would involve two trips to the hospital by helicopter, one to pick up the emergency equipment and team and a return flight with the patient. If the hospital cannot even project figures for its immediate usuage we can only assume that these figures will escalate dramatically over the next five to ten years.

With the increase in its use we can also expect an increase in the frequency of crashes. Those who would insist on the safety of helicopters should be reminded that the KIRO chopper crashed three times last year alone. According to the A.M.A News (Sept. 21,1984), "there is a serious helicopter crash every year." C.O.H. chose to locate its hospital in the midst of a residential neighborhood only blocks from two elementary schools and yet they seem indignant that we are concerned for our safety and the well being of our children. Who will be liable if one of these choppers crashes into a home or on the school playground? In addition to flying over our homes and schools these helicopters will hover over a group of apartments that happen to lie in its flight path. Eighty per-cent of Laurelon Terrace is occupied by elderly residents. Their sleep has already been disrupted by the flood lights of C.O.H.'s parking garage which shine directly into their apartments. As if to add insult to injury, C.O.H. now proposes to land helicopters barely 200 ft. from their units at all hours of the night and day. C.O.H. has refused to acknowledge that the noise generated by these helicopters will be of a significant health concern to surrounding residents. Because they are members of the health care profession they know better than most that dozens of studies have shown there to be a direct link between noise and

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physical and psychological stress. We even have a city ordinance set up to deal with the noise created by that of a barking dog. Everyone is aware that stress is directly linked with many common health problems and diseases such as heart disease, high blood pressure, headache, fatigue, and irritability. We are concerned for the health of the elderly residents in Laurelon Terrace and for the sick children at C.O.H. who will be sensitive to the disruptive and frightening sounds of helicopters landing and taking off. We question the sincerity and motives of hospital administrators who would work energetically to enhance the quality of care given premature babies, while at the same totally disregarding other factions of the population such as the sick and the elderly. We can only conclude that when one takes the time to think about this issue, and look beyond the seductive premise of saving lives, one would realize that C.O.H.'s motives for wanting a helipad may have more to do with revenue and promotion of their image in surrounding regions.

Finally we feel that there are many effective alternatives to locating a helipad a C.O.H. As we mentioned earlier, we feel that the IMA field can be easily upgraded to host a helipad that would serve both the U.W. and C.O.H. Sandpoint Naval Air Station is only six minutes away and is another feasible location for an area helipad. There could be one helipad located at Harvorview to serve all area hospitals or there could be two helipads in the city, one to serve Harvorview, Virginia Mason, and Swedish located at one of those hospitals and a second located at the I.M.A. field to serve both the U.W. and C.O.H.

In conclusion, we should consider it a privilege to be raising funds for an institution such as C.O.H. It is certainly worthy of our efforts, but let's not underestimate the amount of influence we have on decisions made by the hospital's administration. We should also be aware of the responsibility we have assumed in accepting financial contributions on behalf of the hospital. Can we assure our benefactors that their donations are not being used inappropriately by the hospital in acquiring a costly transport service that may not be necessary and may or may not improve the care emergency patients presently receive at C.O.H. At the same time C.O.H. will dramatically increase the cost of care to patients, jeopardize the health and well-being of neighboring residents and promote the deterioration of the quality of life in Washington State.

Enclosed you will find two recent articles on this topic that are very informative. Please take the time to read them and discuss this issue among yourselves. If you support our position as other guilds have done, then we urge you to follow their course of action. Please sign and return the enclosed petitions and send letters expressing your concerns about this helipad to the following people.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Mrs. Peggy Habegger, President
Board of Trustees, C.O.H.
4530 52nd N.E.
Seattle, Wa. 98105

Mr. William Justen, Director
Dept. Construction & Land Use
600 4th Avenue
Seattle, Wa. 98104

Sincerely,
Liz Anderson
Liz Anderson
Steering Committee
Citizens Concerned About Helicopter Transport
4746 45th N.E.
Seattle, Washington 98105

Same

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Support

Dear Councilpeople,

I would like to urge you to approve the permit for Children's Orthopedic Hospital to install their emergency heleport.

DEC 1984
JIM STREET
SEATTLE CITY COUNCIL MEMBER

My niece has been in this fine facility many times in the last 2 years and I have spent countless hours in the Emergency Room & hospital. I have met hundreds of parents from all over the Northwest United States who had children there. I have never heard anything but the most appreciative comments about an lifesaving community institution.

I am sure the neighbors can believe their airspace would only be used in the most critical cases as the hospital promises. They should join the rest of us thanking God COH is here.

Thank you.

Ann Reynolds
1020 W. Raye

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Office Of The Mayor
City of Seattle

Charles Royer, Mayor

December 19, 1984

Dupl.

Ms. Nancy Lawrence
10660 Lakeside Avenue N.E.
Seattle, Washington 98125

Dear Ms. Lawrence:

Thank you for your recent letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. I agree that providing emergency care for children is a City-wide concern, but there have been numerous phone calls and letters from COH neighbors who are concerned about the particular location of the helistop, which they feel may adversely affect their neighborhood.

William Justen, Director of the Department of Construction and Land Use (DCLU), tells me that before a permit can be issued, there must be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by City Council. DCLU has required the COH to put up a large sign to alert the community about the proposal and to submit a checklist on potential environmental impacts of the project. Your letter and letters of other citizens of the community are included in the official file (CC 84-002), and you will be notified of future public hearing schedules and decisions.

I appreciate your interest, and I am glad you took the time to write. If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Sincerely,

Charles Royer

CR:hir

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8411.6 12/10

NANCY LAWRENCE
10660 Lakeside Ave N.E.
Seattle, WA 98125

December 10, 1984
Log # 1136

CLU - Mayor's response due 12/19

TB
AK) FYI

Honorable Charles Royer
City of Seattle
Room 1200 - Seattle Municipal Bldg.
600 Fourth Avenue Bldg.
Seattle, WA 98104

RECEIVED
DEC 12 1984
Dept of Construction & Land Use

RECEIVED
DEC 11 1984
MAYOR'S OFFICE

Dear Major Royer:

I would very much appreciate it if you would write a letter to the Group living in the Laurelhurst Area trying to prevent the construction of a Helicopter Pad at Children's Orthopedic Hospital on the basis of noise caused by helicopters. Is it more important to have Laurelhurst quiet and thus prevent a helicopter from landing at the Hospital when it is carrying a child dying from poison?

I live north of the Sandpoint Naval Air Station. For all the years when it was an active Base, Air planes took off and landed one after another on Lake Washington every Friday and Saturday night - all night. The Navy never asked us whether the planes kept us awake. They did. A helicopter carrying a sick child may fly

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ravenna-bryant
community association

6504 ravenna n.e., seattle, wa 98115 621-8868

RECEIVED
NOV 26 1984
Dept. of Construction & Land Use

November 21, 1984

Department of Construction
and Land Use
City of Seattle
Municipal Building
Seattle, Washington 98104

Re: Childrens Orthopedic
Hospital Heliport
CUP Application

To Whom it May Concern:

We have been advised that COH has submitted an application for development of a heliport adjacent to a high density residential neighborhood. We are concerned with this proposal and request DCLU examine the proposal with great care prior to acting on the application.

We recognize, of course, that Childrens Orthopedic Hospital offers a great service to the community. However, like every good community neighbor, COH must not act in a manner which unreasonably interferes with the residential character of the surrounding neighborhood.

We are particularly concerned with the proposal for a heliport because it is not at all clear that there is a great need for this use. Landing facilities are already available in close proximity to COH. The University of Washington Hospital and the University of Washington Intramural fields both provide the same capacity which COH now wishes to duplicate a few minutes away.

Given the inappropriateness of daily helicopter landings in this residential neighborhood and the close proximity of existing landing facilities, a preliminary analysis indicates that the proposed heliport would be an unreasonable use.

We appreciate your consideration of our comments and request that we be provided with notice of any future hear-

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ings concerning the permit application.

Very truly yours,

RAVENNA-BRYANT COMMUNITY
ASSOCIATION

David A. Bricklin
President

DAB/b

cc: Ruth Engelberg

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From the desk of
Bev

November 23, 1[illegible]

Dear Sir's

I am Beverly Morris, located at 4720-44th N.E., Seattle 98105, directly across from the parking lot of the Orthopedic Hospital, I have been in my home for over 33 years.

I am very much against this helicopter trip some head nurse is going through-, over at the hospital. Yes, I have raised 2 kids, so I know what it is to have children.

Because of the pad for the helicopter being at the present location, they have Not , let me repeat myself, they have Not lost a child yet.

Please do not let this happen.

Beverly Morris

Beverly Morris

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RECEIVED
NOV 26 1984
Dept. of Construction & Land Use

Nnovember 20, 1984

Mr. William Justen, Director
Dept. of Construction & Land Use
600 4th Ave.
Seattle, WA. 98104

Re: Helipad plan, COH

Dear Mr. Justen:

You have my memo to you attached to copy of my letter to Mrs. Habegger of Children's Orthopedic Hospital dated November 15, 1984.

You know my reasons for objection to the ill-conceived plan for a helipad at Children's Orthopedic Hospital in a densely populated residential area. To summarize briefly:

1. Helipad is not needed. Present landing at nearby soccer field, corner of Union Bay, is completely workable, and safe--no lives have been lost; it is a three-minute distance to COH.

2. Environmental impact. Pollution from helicopter, and noise would be great.

3. Endangerment of the lives of thousands of individuals--patients and personnel at hospital, children at elementary school, senior citizens at Burke-Gilman Village, junior and senior citizens in Laurelon Terrace Condominiums, Laurel Crest Condominiums, Laurelhurst West Condominiums, as well as those in individual homes and other apartments nearby and in path of flight pattern.

4. Excessive duplication of expenditures of money with a helipad also being built at nearby University Hospital, within five minutes of COH. Landing facilities already available, too, at nearby Sand Point Naval Station within six minutes from COH make helipad unnecessary.

With this letter I state in writing my request to be notified of date, time, place of public hearing for this plan.

Thank you.

Sincerely,
Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

524-4151

cc:

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Ann Ormsby Copy

H1 - FYI

Your Seattle Department of Construction and Land Use

MEMORANDUM

DATE
December 10, 1984

To Carol Lewis, Deputy Mayor, City of Seattle

From William J. Justen, Director WJJ

Subject Children's Orthopedic Hospital (COH)

Hermia Ip, Land Use Specialist in the Land Use Review Section (X4509), has been assigned to review the COH permit application for a helipad. She has been advised that Tom Byers has lead responsibility from the Mayor's office on this issue and will keep him informed of progress on the application. Ann Ormsby has been in touch with Tom regarding some of the sensitive community issues and will continue to monitor and/or participate in the process as necessary.

AO:lld

cc: Tom Byers

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Your City, Seattle

Memorandum

RECEIVED DEC 4 1984 Dept. of Construction & Land Use

CS 25.3

To William Justen From Carol Lewis CL/re

Date 12/4/84 Subject

Because Tom Byers is chair of the Noise Committee, he will be assigned lead responsibility from the Mayor's office on the Laurelhurst helipad.

Please make sure your analysts stay in touch with him as this project progresses.

cc: Tom Byers
Al Kurimura
Mitchell Baker

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Nanette Mozeika Copy

Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

November 27, 1984

Councilmember Jeanette Williams
City Council
City of Seattle

Dear Councilmember Williams:

Thank you for your letter concerning the Children's Orthopedic Hospital (COH) application for a permit to install a helistop within the hospital grounds.

Before a permit can be issued, there must be an environmental review and Council Conditional Use approval. The first notice to the public will be of the environmental review. It will be published in the Land Use Bulletin that we mail twice a week to subscribers, and a large sign describing the project will be posted in a prominent place on the proposed site. At least fourteen days after the large sign has been posted (to allow time for citizen comment), we will determine if an environmental impact statement (EIS) is required. If we determine that an EIS is not needed and issue a declaration of non-significance, citizens may appeal that decision to the Hearing Examiner. If an EIS is required, citizens will have an opportunity to tell us what they think should be covered in the EIS.

When the environmental determination has been made, this Department will issue to the Council a report and recommendation on the helistop, and the Hearing Examiner will schedule a public hearing on the recommendation. Notices of that hearing will be mailed to all occupants and owners of property within a 300 foot radius of hospital boundaries, posted on placards around the site, and published in the Land Use Bulletin. Following the hearing, the Hearing Examiner will forward a recommendation to the Council for consideration.

We are aware of the controversy over the proposal, and have received numerous phone calls from Laurelhurst residents regarding the project and the applicable laws and regulations. Prior to making application, COH representatives met with my staff, and, at that time, noise was identified as a major impact.

I appreciate your interest, and if you have any other questions about the project, please call Ann Ormsby at extension 4509.

Very truly yours,

William J. Justen

WILLIAM J. JUSTEN, P. E.
Director

NM:11d

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hand delivered 10:20 a.m.

RECEIVED
NOV 15 1984
Dept. of Construction & Land Use

Seattle City Council

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

November 15, 1984

William Justen, Director
Department of Construction and Land Use
City of Seattle

Dear William:

The Laurelhurst Community Club alerted me to the fact that Children's Orthopedic Hospital (COH) has applied to DCLU for a permit to site a helicopter landing pad on their grounds off Sand Point Way.

This is to inquire as to the status of that application, what City laws and regulations apply, and what process will be followed.

The issue is not a new one. It has been under discussion and hotly debated for several years because of the negative impact this facility would have on the immediate and surrounding residential neighborhoods.

A meeting was held last evening at the Laurelhurst Community Center. The attendance was large and the opposition very vocal.

I would appreciate a prompt response to my inquiry.

Sincerely,

Jeanette Williams
Seattle City Council

JW:lm
cc: City Councilmembers

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4800 SAND POINT WAY. N. E. (16W) (I2-SF5000 / I4-SF5000) CC 84-022

11/13/84 CHILDREN'S ORTHOPEDIC HOSPITAL, By Dorothy Tecter, 4800 Sand Point Way N. E., P. O. Box C 5371 University Station, Seattle, 98105, 526-2004

To construct an emergency helistop facility accessory to an existing hospital/medical center.

COMPONENTS: Council Counditional Use.

Wishes to be on mailing list

- Mr Joy Scott
4339 NE 45TH ST
98105

early project notice

large sign confirmation

notice of application

end of comment period

notice of decision

end of appeal period

notice of appeal

date of appeal hearing

- MICHAEL D. PERLMAN
4500 NE 50th
SEATTLE WA 98105

- ANITA FRANCIS
5003 45 NE
Seattle WA 98105

- MRS. J. R. ANDERSON
4746 45th N.E.
SEA WA. 98105

Seattle City Council

RECEIVED
NOV 29 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Norman B. Rice
President of the City Council
625-2436

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Jim Street
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Jeanette Williams
Chair
City Operations Committee
625-2453

November 28th, 1984

Ms. Claire A. Marston
4250 N.E. 50th Street
Seattle, Washington 98105

Dear Ms. Marston:

Thank you for your letter to Mr. Kraabel regarding the proposal to build a helipad at Children's Orthopedic Hospital.

I am told that the application is for a Council Conditional Use permit which will ultimately require a decision by the City Council. Such applications are governed by the "Appearance of Fairness" Doctrine whose purpose is to prevent people representing one side or the other in a disputed case from gaining favor through special access to Councilmembers. No one should attempt to communicate directly with Councilmembers concerning the merits of the case outside open public hearings where all sides have an opportunity to present their views. Violation of the doctrine can result in the courts overturning Council decisions which are appealed.

So that your comments will be placed in the official record for consideration by the Councilmembers when the application comes before them, I am forwarding your letter to the Director of the Department of Construction and Land Use. The decision on the proposal will be made on the merits of the case contained in the official record.

If you have any questions regarding the above, do not hesitate to call me at 625-2447.

Respectfully,

Claire McKechnie

Claire McKechnie, Assistant to
Councilmember Paul Kraabel

Cc: William Justen, Director, DCLU

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4250 N.E. 50th
Seattle WA 98105

Council Member Paul Kraabel
Seattle City Council
600 4th Ave.
Seattle 98104

Dear Mr Kraabel,

I wish to tell you of my concern over the building of a helipad at Childrens Orthopedic Hospital. I think the hospital does a magnificant job in caring for sick children and their families. So does the whole of Seattle. I see it at first hand every week as I volunteer my services there But the necessity for helicopter service on the grounds escapes me, when the present service from Groves Field is available and more than adequate, and the helipad at U of W Hospital will soon be available.

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It seems very unfair to a residential neighborhood, that the Hospital chose to move into. You and I both know that the service will expand once it is established. Therefore the noise factor and the safety risks will as well. Night flights and extra lighting will become a necessity.

This is very troublesome to nearby residents, especially. We all care about sick children. I hope that you will also have some care for this neighborhood.

Sincerely yours,

Claire Marston

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natural?

Please send me a notification of hearing on the the childrens Orthopedic Hellystop Issue.

Thank you Helen Newman

HELEN NEWMAN
4252- NE 50th
SEATLE WN

RECEIVED
DEC 18 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

4714 - 44th Avenue NE
Seattle, Washington 98105
December 3, 1984

Mr. William Justen, Director
Department of Construction and Land Use
600 - 4th Avenue
Seattle, Washington 98104

RECEIVED
DEC 06 1984
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Dear Mr. Justen:

I am writing to let you know of my opposition to the proposed helipad at the Children's Orthopedic Hospital. I can't believe the administration of this hospital is asking our community to be subjected to such an unjust ordeal.

I feel there are other aternatives that are satisfactory. There are homes not more than 200 feet from the proposed landing site to the east, and a large group of condominiums one block west. These condominiums are occupied by a majority of senior citizens. I have enclosed a copy of a booklet published by the Environmental Protection Agency which states the health hazard noise can be to the elderly.

I have seen all of COH's slides of these tiny infants and have heard their same, rehearsed speeches. I find this an insult. As if one of our community would not want those children to live. I myself have suffered the loss of my seven day old daughter. To say I am not sympathetic and understanding of these babies and their families is ridiculous. But, because of money and politics this hospital is determined to disrupt our lives, destroy the character of our neighborhood, inflict possible health hazards to the elderly, and cause unknown havoc to the residents of Laurelhurst. Children's made a promise in the 1940's to be a small cottage hospital, with lots of lawn and flowering cherry trees. They have continuously lied to the community of their intentions of growth and will continue to do so.

I can only hope that you will see your way clear to deny them the helipad. I can't believe COH is asking this of the community. There are viable options that they refuse to even consider. I also find it interesting the Mr. Katz, Dr. Coppas, and the other proponents of the helipad are neatly tucked away as residents of Mercer Island and the like.

Please read the enclosed literature. It contains only a small portion of the booklet put out by the EPA. I did not include the portions of the booklet detailing the effects noise has on the unborn, learning in young children, and the effects disrupted sleep has on the physical and emotional well being of all age groups. This helipad is definately not meant for a neighborhood surrounded by homes, filled with aged, sick, young, and so varied residents.

Sincerely,

Ramy Hardwick Dept.

Ramy Hardwick
527-1610

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"It is truly a serious problem to escape from noise."
William Dean Howells, American Author

A Final Word

When unwanted sounds intrude into our environment, noise exists. We have all experienced to varying degrees the annoyance and irritation caused by noise. Sometimes this annoyance is brought about by disruption of our sleep or difficulty in falling asleep. At other times, it may be because we have to raise our voices over background noise to be heard or because we are distracted from our activities.

Except for the serious problem of hearing loss, there is no human illness known to be directly caused by noise. But throughout dozens of studies, noise has been clearly identified as an important cause of physical and psychological stress, and stress has been directly linked with many of our most common health problems. Thus, noise can be associated with many of these disabilities and diseases, which include heart disease, high blood pressure, headaches, fatigue and irritability.

Noise is also suspected to interfere with children's learning and with normal development of the unborn child. Noise is reported to have triggered extremely hostile behavior among persons presumably suffering from emotional illness. It is suspected to lower our resistance, in some cases, to the onset of infection and disease.

However, most Americans are largely unaware that noise poses such significant dangers to their health and welfare. The reasons for this lack of awareness are clear. Noise is one of many environmental causes of stress and cannot easily be identified as the source of a particular physical or mental ailment by the layman. Another reason is that biomedical and behavioral research is only now at the point where health hazards stemming from noise can actually be named, even though some specific links have yet to be found.

Dr. William H. Stewart, former Surgeon General, in his keynote address to the 1969 Conference on Noise as a Public Health Hazard, made the following point: "Must we wait until we prove every link in the chain of causation? I stand firmly with (Surgeon General) Burney's statement of 10 years ago. In protecting health, absolute proof comes late. To wait for it is to invite disaster or to prolong suffering unnecessarily. I submit that those things within man's power to control which impact upon the individual in a negative way, which infringe upon his sense of integrity, and interrupt his pursuit of fulfillment, are hazards to public health."

It is finally clear that noise is a significant hazard to public health. Truly, noise is more than just an annoyance.

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"The din of the modern city [includes] noises far above levels for optimum sleeping. Result: insomnia and instability."
Dr. Edward F. Crippen, Former Deputy Health Commissioner of Detroit

Sleep Disruption



Sleep is a restorative time of life, and a good night's sleep is probably crucial to good health. But everyday experience suggests that noise interferes with our sleep — in a number of ways. Noise can make it difficult to fall asleep, it can wake us, and it can cause shifts from deeper to lighter sleep stages. If the noise interference with sleep becomes a chronic problem, it may take its toll on health.

Human response to noise before and during sleep varies widely among age groups. The elderly and the sick are particularly sensitive to disruptive noise. Compared to young people, the elderly are more easily awakened by noise and, once awake, have more difficulty returning to sleep. As a group, the elderly require special protection from the noises that interfere with their sleep.

Other age groups seem to be less affected by noise at bedtime and while asleep. But their apparent adjustment may simply be the result of failing to remember having awakened during the night. Sleep researchers have observed that their subjects often forget and underestimate the number of times they awaken during sleep. It may be that loud noises during the night continue to wake or rouse us when we sleep, but that as we become familiar with the sounds, we return to sleep more rapidly.

Factors other than age can influence our sleep. Studies suggest that the more frequent noise is, the less likely a sleeper is to respond. Certain kinds of noises can cause almost certain responses, however. A mother may wake immediately at the sound of a crying baby, but may tune out much louder traffic noise outside.

Disruption of sleep does not necessarily include awakening. Shifting in depths of sleep may be more frequent than awakening. For instance, recent studies have shown that shifts from deep to light sleep were more numerous because of noise, and that light sleep became lengthened at the expense of deep sleep.

Studies have also been made of noise complaints and what kinds of annoyance led people to file them. Surveys taken in communities significantly affected by noise indicated that the interruption of rest, relaxation, and sleep was the underlying cause of many people's complaints.

When noise interferes with our sleep— whether by waking us or changing the depth of sleep — it makes demands on our bodies to adapt. The implications of these demands for our general health and performance are not well understood. Nonetheless, we need restful sleep and many of us are not getting it. As a result, for millions of Americans, trying to get a good night's sleep still means reaching for sleeping pills.

Noise affects the quantity and quality of sleep

The elderly and sick are more sensitive to disruptive noise

When sleep is disturbed by noise, work efficiency and health may suffer



cc 84,622

December 3, 1984

RECEIVED
DEC 10 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Councilmember Dolores Sibonga
Seattle City Council
600 4th Avenue
Seattle, Washington 98104

Dear Councilmember Sibonga,

Please add the following letter to the comments you have received reccommending further study, analysis, and consideration of alternate options for the Helipad requested by Children's Orthopedic Hospital. Since COH is such a vital and commendable institution in our community I want to acknowledge my respect for the services they deliver, but I am also anxious to urge you as a councilmember to remember that any strong, viable community is the result of more than one institution. To you goes the unenviable task of keeping a harmonious balance between all the elements that make Seattle the desirous community it is at present, and I plead with you to keep that balance in mind as you consider this request from COH.

When you make your decision on this helipad, I ask for analysis of its impact in four different categories: will this facility significantly improve the life-saving emergency care over the current procedure; will its influence on the surrounding residential neighborhood be acceptable; will the logistics, safety, and coordination of several helipads within one and a half miles of one another (one projected at the University Hospital and one at Sandpoint) be in conflict with the city's published desire to limit congestion in the University/Northend areas, as well as the desire to promote balanced growth in other parts of the city; and will the installation of a helipad at COH further concentrate care at that hospital to the exclusion and detriment of other hospitals whose facillities would be that much less than COH and less capable of attracting research monies and staff?

As an amateur in all these categories, I can do nothing more than speculate that the answers will corroborate the feeling I have that the request for the helipad is more a luxury than a necessity. No doubt each of us would like all the latest conveniences at our doorsteps, but would forego those for which the pricetag comes in irreversible, environmental damage. The challenge that tests all of us is striking the "quality of life" balance that will preserve our community.

Sincerely,

Elizabeth L. Morrison
3643 42nd N.E. Ave.
Seattle, Washington 98105

RECEIVED
DEC 10 1984
DOLORES SIBONGA
SEATTLE CITY COUNCIL MEMBER

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Seattle City Council

December 10, 1984

Norman B. Rice
President of the City Council
625-2436

George E. Benson, Chair
Transportation Committee
625-2441

Virginia Galle, Chair
Environmental Committee
625-2445

Michael Hildt, Chair
Energy Committee
625-2443

Paul Kraabel, Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga, Chair
Finance Committee
625-2451

Sam Smith, Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street, Chair
Land Use Committee
625-2438

Jeanette Williams, Chair
City Operations Committee
625-2453

Elizabeth L. Morrison
3643 42nd N.E. Avenue
Seattle, Wa 98105

Dear Ms. Morrison:

Thank you for your letter of concern regarding the proposed helipad at Children's Orthopedic Hospital.

As you may be aware, Councilmember Sibonga may not read this correspondence at this time as Council action on the development is quasi-judicial and must be conducted in accordance with the appearance of fairness doctrine. I will keep your letter on file until we are advised that the situation has changed.

Sincerely,

Eva Murphy

EVA MURPHY
Administrative Assistant to
Councilmember Dolores Sibonga

DS:em

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Monday Dec. 3rd

RECEIVED
DEC 04 1984
OF CONSTRUCTION & LANDUSE
LAND USE DIVISION

Dear Mr Justen

I oppose and object totaly to any Helipad landing and take off from C.O.H.

Please take notice of "N.O" in that matter —

Dyle

Edith Suyer
4671-41st N.E

P.S. I am a volunteer at the C.O.H. craft shop since 1971 and belong to the Margaret Cassidy guild —

Sincerely

Suyer

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3650 42nd Ave. N.E.
Seattle, Washington 98105
November 27, 1984

RECEIVED
NOV 28 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justen, Director
Department of Construction and Land Use
600 4th Avenue
Seattle, Washington 98104

Dear Mr. Justen:

I urge you to reject the application by COH for a helicopter pad on the hospital grounds for the following reasons:

1. COH has been successfully using an air transport system with an army helicopter which lands on an open field only 3 minutes from the hospital grounds.

2. The landing of the helicopter on the hospital grounds will force the vehicle to fly over a heavily residential neighoorhood.

3. The noise from the helicopter will frighten the children who are patients in the hospital.

4. There are 3 other sites within 6 minutes of COH where a helicopter can land safely.

Thank you for your consideration.

Sincerely,

Carolyn Margon

Carolyn Margon

THE PENINSULA
HONG KONG

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RECEIVED
DEC 10 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

December 5. 1984

Dear Ms. Justen;

I wish to question as to whether there is really a need to build a Helipad at Childrens Orthopedic Hospital? I live on 43rd DR two blocks from the hospital and understand from what in the landing pattern of the helicopter if the pad is installed. Therefore I am also concerned about the noise level.

It seems to me the hospital has done fine using the University playfield to pick up transfer patients. Using the field does not increase costs as the Helipad would, nor is much extra time lost. I would rather see that money go for new equipment.

You must remember Laurelhurst is primarily a residential neighborhood and the residents need it

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to stay that way. Noise is a pollutant. Helicopters make noise. I am very much against anything that pollutes my environment especially within my neighborhood.

Thankyou for listening

Sincerely,

Sara Jane Johnson
4221 43rd NE
Seattle, Wa. 98105
525-9117

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RECEIVED
NOV 26 1984
Dept. of Construction & Land Use

Seattle City Council

November 26, 1984

Norman B. Rice
President of the City Council
625-2436

George E. Benson
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625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Mrs. E. L. Boose, Secretary
Minna Parks Guild
Children's Orthopedic Hospital
3402 N. E. 45th Place
Seattle, Washington 98105

Dear Mrs. Boose:

Thank you for your recent letter to Councilmember Williams in opposition to the Children's Orthopedic Hospital (COH) proposed helipad.

The City Council will be the final decision maker on this application for a helipad. When considering specific land use issues, the Councilmembers sit as a quasi-judicial body. They are required to maintain an appearance of fairness to all parties and must limit their review of the issue to the official record and testimony received at an open, public hearing. For this reason, Councilmember Williams is unable to read your letter at this time.

Once the initial environmental review is completed by the City's Department of Construction and Land Use, a public hearing will be scheduled before the City's Hearing Examiner. A sign will be placed at the proposed helipad site, and notice will be sent to those who reside 300 feet from the Hospital boundaries 30 days prior to the public hearing. The community is encouraged to participate in the hearing because the testimony received will comprise a portion of the official record. I am forwarding a copy of your letter to Mr. William Justen, Director of the Department of Construction and Land Use to ensure it is included in the record and a hearing notice is sent to you.

The Hearing Examiner will recommend to the City Council whether or not the helipad should be approved, with the Council making the final decision. Even though Councilmember Williams is unable to read your letter at this time, thank you again for forwarding the opposition of the Minna Parks Guild.

Sincerely,

Lori Mayfield

Lori Mayfield, Assistant
Councilmember Jeanette Williams

cc: William Justen, Director, Department of Construction and Land Use

An equal employment opportunity—affirmative action employer
Eleventh Floor, Municipal Building, Seattle, Washington 98104

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Seattle, Washington
November 20, 1964

To the City Council
Seattle, Washington Atten: Jeanette Williams

Re: Helicopters for
Children's Orthopedic Hospital

Gentlemen:

The members of Minna Parks Guild of Childr n's Orthopedic Guild wish to express our disapproval of the proposed plan to purdhase and use a helicopter for, and from the Hospital grounds.

Thank you for your consideration when the matter is presented to you for action.

Members of Minna Parks Guild

Agnes Boose, Sec'y

Mrs. E.L.Boose, Sec'y
Minna Parks Guild
3402 N E 45th Place
Seattle, Wash 98105

Mrs. E. L. Boose
3402 NE 45th Place
Seattle, Washington 98105

NOV 2 1 1964

JEANETTE WILLIAMS
SEATTLE CITY COUNCIL MEMBER

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Seattle City Council

November 28, 1984

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DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

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625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Mrs. Wayne J. Timberlake
3335 43rd N. E.
Seattle, Washington 98105

Dear Mrs. Timberlake:

Thank you for your recent card addressed to Councilmember Williams in opposition to Children's Orthopedic Hospital's (COH) proposed helicopter landing pad.

The City Council has learned that it will be the final decision maker on COH's application for a helipad. When considering specific land use issues, the Councilmembers sit as a quasi-judicial body. They are required to maintain an appearance of fairness to all parties and must limit their review of the issue to the official record and testimony received at an open, public hearing. For this reason, Councilmember Williams is unable to read your letter at this time.

Once the initial environmental review is completed by the City's Department of Construction and Land Use, a public hearing will be scheduled on the helipad application before the City's Hearing Examiner. A sign will be placed at the proposed helipad site, and notice will be sent to those who reside 300 feet from the Hospital boundaries 30 days prior to the public hearing. The community is encouraged to participate in the hearing because the testimony received will comprise a portion of the official record. I am forwarding a copy of your card to Mr. William Justen, Director of the Department of Construction and Land Use to ensure it is included in the record and a hearing notice is sent to you.

The Hearing Examiner will recommend to the City Council whether or not the helipad should be approved, with the Council making the final decision. Even though Councilmember Williams is unable to read your card at this time, thank you again for forwarding your views.

Sincerely,

Lori Mayfield

Lori Mayfield, Assistant
Councilmember Jeanette Williams

cc: William Justen, Director, Department of Construction and Land Use

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Please do not allow Children's Orthopedic Hospital to build a helicopter landing pad near their emergency entrance. COH has impacted Laurelhurst far more than was their avowed original intention. Their present landing site, 3 minutes away, is adequate. The noise & danger of helicopters is too much! We residents protest the proposed landing pad very strongly. Our community is fast becoming a commercial development. Please help. Thank you. Mrs. Wayne J. Vath NO. 11-27-84 (Christy M.) Timberlake

Dupl.

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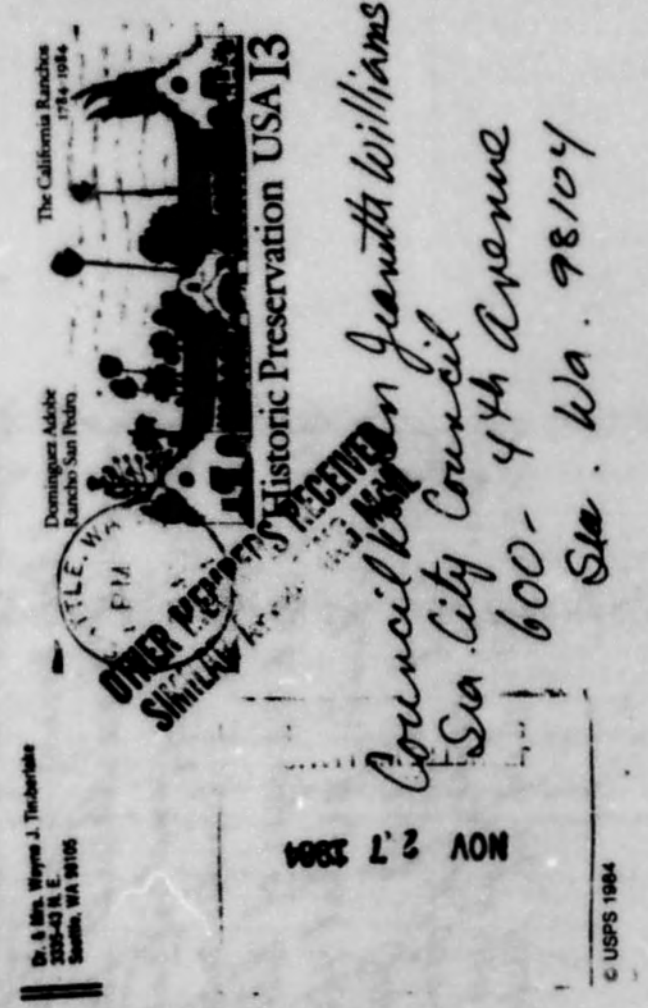

November 15, 1984

To: Jim Street, Council Member

From: Maryann E. Spangler

Re: Proposed plan for helipad at Children's Orthopedic Hospital

1. Attached is copy of my letter to the president of the Board of Trustees, COH.

2. Please read and consider it carefully.

3. I appeal to you as my elected representative to use the power of your office to stop this further institutional encroachment in our neighborhood.

4. Please file an injunction--or whatever other legal recourse you have available--to halt proceedings of this ill-conceived plan immediately.

5. Thank you.

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

524-4151

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

November 15, 1984

Mrs. Robert J. Habegger
President, Board of Trustees
The Children's Orthopedic Hospital
4530 52nd N.E.
Seattle. Washington 98105

Re: Proposed helipad COH

Dear Mrs. Habegger:

Please bear in mind as you read the following that I write to you as a concerned citizen and that I love children for whom I want the best possible care.

Are you aware of the extreme enmity and disapproval created by the COH and deeply felt by neighbors of COH relative to the proposed plans for a helipad and the method in which these plans have been handled? This is undesirable and unnecessary. Neither you nor I want this.

A helipad at COH in the heart of a residential, densely populated neighborhood is neither wise nor safe. This is true not only for the residents of the neighborhood but also for the hospital patients and personnel, the children at the nearby elementary school, the senior citizens of the future retirement home at the Villa, the residents of condominiums on both sides of Sand Point Way and nearby apartment buildings, residents of Ronald Macdonald House, and the city housing complex near it.

Environmental impact of noise is only one detrimental factor. Safety of landing and take-off of a helicopter in a high-density population area is a second factor to be taken very seriously. Lowering of property values is yet another factor to be considered. Environmental impact created by COH already is felt via ambulance and traffic generated in the residential neighborhood. This is further institutional encroachment in our neighborhood.

Emergencies to which a helicopter would respond could occur anytime during day or night hours. We in this neighborhood (as in others) experienced the low-flying helicopter during the gypsy moth spraying and know the uneasy feeling and noise factor first hand. To have a helicopter land in one's front yard or atop one's roof, so to speak, would be unbearable. It would create unnecessary upset to the patients at COH and to the children at the elementary school, to senior citizens, and to families nearby.

My request is that you and the Board take the necessary steps immediately to cancel the proposed plans for the helipad. I further request that COH and the University of Washington work in cooperation not competition for a helipad at University Hospital rather than at COH. Two helipads located so close together are not needed and constitute duplication of huge and unnecessary expenditures.

In addition, I request that you honestly pursue the following:

1. Research the difference between present helicopter landing in soccer field, UW, and ambulance taking patient to COH (reportedly three-minute run) vs helicopter landing atop roof, transfer to stretcher and down ramp to emergency entrance. Would three minutes really be saved? No, not really. Would handling of and moving of patient be minimized? No, not really.

   Further question here: How many, if any, patients have been injured or died as a result of present arrangement?

   It is the quality of care in ambulance or helicopter not the mode of transport, not the three-minute time differential that spells the difference between life or death outcome. The quality of care given by Seattle's ambulance service(s) is second to none.

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2. Examine the records of COH. You will find that initially in the building program COH stated there would be no further expansion. This has not been adhered to. In addition, at one time, COH stated that it would not build a helipad. This is now being ignored.

   The application for helipad construction contains incorrect and incomplete data. Also, no certification of need is on record. What is the perceived need?

   Credibility of the COH Board of Trustees is diminished and is at stake. Likewise, citizen support for COH will diminish and be at stake. Thus, even now the projected number of "approximately 15 flights a month" is not believed. Furthermore, the number of flights cannot be controlled once a service is offered, as you know.

3. Consider building an emergency unit on UW soccer field <u>if</u> this is needed to meet helicopter upon landing and before drive to COH by ambulance. There patient could be placed on stretcher, emergency measures administered, then taken to emergency entrance at COH with minimal moving. (Although this is an alternative possibility, this construction is very likely not needed.)

Do you care about what the neighbors of COH think? Do you care about alternatives to helipad at COH? Do you care about saving money by COH working cooperatively with the UW and University Hospital? Do you care that many citizens' rights are being abridged and disregarded?

To reiterate, please know that I am a concerned citizen and a person who loves children and cares about them. I also am concerned and care about the quality of environment and quality of life for the senior citizens as well as the young couples with children who live in close proximity to COH.

Please consider carefully these ideas, these opinions (held by me and many, many others). Please take necessary and positive action. Please contact me. Thank you.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

524-4151

cc: William Justen - Dept. of Construction & Land Use
Seattle City Council members: [with cover memo]
George Benson — Jim Street
Michael Hildt — Delores Sibonga
Paul Kraabel — Sam Smith
Virginia Galle — Jeannette Williams
Norm Rice
Anita Francis - Laurelhurst Community Club
Laurelon Condominium Board

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Hermia IP Copy

Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

December 21, 1984

Marjorie Kresge
4014 N. E. 46th Street
Seattle, Washington 98105

Dear Ms. Kresge:

Thank you for your letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. I believe that providing emergency care for children is a City-wide concern, but there have been numerous phone calls and letters from COH neighbors who are concerned about the particular location of the helistop, which they feel may adversely affect their neighborhood.

My staff is currently reviewing the merits of the proposal, and we have required the COH to put up a large sign to alert the community about the proposal and to submit a checklist on potential environmental impacts of the project. Before a permit can be issued, there must be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by City Council. Your letter and letters of other citizens of the community are included in the official file (CC 84-022), and you will be notified of future public hearing schedules and decisions.

I appreciate your interest, and I am glad you took the time to write. If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Very truly yours,

Katy Chaney

for WILLIAM J. JUSTEN, P. E.
Director

HI:lld

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November 15, 1984

RECEIVED
NOV 16 1984
Dept. of Construction & Land Use

William Justen, Director
Department of Construction and Land Use
600 4th Avenue
Seattle, Washington 98104

Dear Mr. Justen:

Yesterday evening I attended a meeting of the Laurelhurst Community concerning the introduction of a helipad at Children's Orthopedic Hospital.

I wish to add my objection to those of my neighbors against a helicopter pad in this all-residential neighborhood. From what I understand of the situation, in this time of surplus hospital beds, there is great competition among hospitals for patients and this is becoming true between COH and University Hospital. University Hospital will very shortly have a helipad on its roof and is capable of handling emergency care for children. The University Hospital has an entirely different neighborhood structure than COH and helicopter traffic should not be so disturbing to its neighbors. Children's Orthopedic Hospital, on the other hand, is entirely surrounded by residences whose owners should not be discomfitted so that COH can better compete with University Hospital for patients.

If this helipad is approved I can only foresee a future for Laurelhurst similar to that of the residents of SeaTac. For at least the past 20 years there has been intermittent disputation between the airport and the nearby residents: Agreements are reached only to be disregarded by the airport when the heat is off. The residents then go through the old petition, meetings, etc., routine to get only temporary reprieve. This should not be the fate of Laurelhurst residents, many of whom, I understand, were here before COH and since there are alternative emergency care facilities available at University Hospital.

Sincerely,

Marjorie Kresge

Marjorie Kresge
4014 NE 46th Street
Seattle, Washington 98105

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Nanette Mozeika Copy

Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

November 27, 1984

Councilmember Jeanette Williams
City Council
City of Seattle

Dear Councilmember Williams:

Thank you for your letter concerning the Children's Orthopedic Hospital (COH) application for a permit to install a helistop within the hospital grounds.

Before a permit can be issued, there must be an environmental review and Council Conditional Use approval. The first notice to the public will be of the environmental review. It will be published in the Land Use Bulletin that we mail twice a week to subscribers, and a large sign describing the project will be posted in a prominent place on the proposed site. At least fourteen days after the large sign has been posted (to allow time for citizen comment), we will determine if an environmental impact statement (EIS) is required. If we determine that an EIS is not needed and issue a declaration of non-significance, citizens may appeal that decision to the Hearing Examiner. If an EIS is required, citizens will have an opportunity to tell us what they think should be covered in the EIS.

When the environmental determination has been made, this Department will issue to the Council a report and recommendation on the helistop, and the Hearing Examiner will schedule a public hearing on the recommendation. Notices of that hearing will be mailed to all occupants and owners of property within a 300 foot radius of hospital boundaries, posted on placards around the site, and published in the Land Use Bulletin. Following the hearing, the Hearing Examiner will forward a recommendation to the Council for consideration.

We are aware of the controversy over the proposal, and have received numerous phone calls from Laurelhurst residents regarding the project and the applicable laws and regulations. Prior to making application, COH representatives met with my staff, and, at that time, noise was identified as a major impact.

I appreciate your interest, and if you have any other questions about the project, please call Ann Ormsby at extension 4509.

Very truly yours,

WILLIAM J. JUSTEN, P. E.
Director

NM:11d

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RECEIVED
DEC 06 1984

December 5, 1984

Mr. William Justen Director,
Department of Construction and Land Use,
600 4th Avenue,
Seattle, Washington 98104

Dear Mr. Justen:

The Childrens' Orthopedic Hospital is doing untold good for the people of our state; and the nighborhood residents are grateful to it. However, a time comes when the disturbing noises caused by the wailing ambulances and the prospect of helicopter rotors seem too much.

Since the alternatives for a helipad on the grounds are not harmful to the patients, it is time for us to object to the continuing encroachments, to which the hospital people feel they have a perfect right. The University intramural field has been a handy three-minute-away-pad,serv- the hospital for years. And the up-coming helipad at the University hospital will be five minutes away.

Once a helipad is built, there is no way to control the increasing noise of more and larger helicopters, day and night. This also increases the chance of accidents in a highly populated area.

So I am requesting that you do not give the COH permission to build a helipad on their grounds.

Sincerely yours,

Flora J. Ruggles

Mrs. Flora J. Ruggles,
4545 Sand Point Way N. E.,
Seattle, Washington 98105

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Seattle City Council

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment Committee and Public Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation & Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

November 19, 1984

RECEIVED
NOV 20 1984
Dept. of Construction & Land Use

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

Dear Mrs. Spangler:

Our office received your letter concerning the proposed plan for a helipad at Children's Orthopedic Hospital.

This is a Council Conditional Use question and presents an "Appearance of Fairness" issue. All letters concerning this subject are being sent to William Justen, Director of the Department of Construction and Land Use to be made part of the record.

Thank you for taking the time to write.

Sincerely,

Benita

Benita Staadecker
Administrative Assistant for
Councilmember George Benson

BS/s

cc: William Justen

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

November 15, 1984

To: George Benson, Council Member

From: Maryann E. Spangler

Re: Proposed plan for helipad at Children's Orthopedic Hospital

---

1. Attached is copy of my letter to the president of the Board of Trustees COH.

2. Please read and consider it carefully.

3. I appeal to you as my representative to use the power of your elected office to stop this <u>further institutional encroachment in our neighborhood</u>.

4. Please file an injunction--or whatever other legal instrument you have available--to halt proceedings of this ill-conceived plan immediately.

5. Thank you.

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

524-4151

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

November 15, 1984

Mrs. Robert J. Habegger
President, Board of Trustees
The Children's Orthopedic Hospital
4530 52nd N.E.
Seattle. Washington 98105

RECEIVED
NOV 19 1984

Re: Proposed helipad COH

Dear Mrs. Habegger:

Please bear in mind as you read the following that I write to you as a concerned citizen and that I love children for whom I want the best possible care.

Are you aware of the extreme enmity and disapproval created by the COH and deeply felt by neighbors of COH relative to the proposed plans for a helipad and the method in which these plans have been handled? This is undesirable and unnecessary. Neither you nor I want this.

A helipad at COH in the heart of a residential, densely populated neighborhood is neither wise nor safe. This is true not only for the residents of the neighborhood but also for the hospital patients and personnel, the children at the nearby elementary school, the senior citizens of the future retirement home at the Villa, the residents of condominiums on both sides of Sand Point Way and nearby apartment buildings, residents of Ronald Macdonald House, and the city housing complex near it.

Environmental impact of noise is only one detrimental factor. Safety of landing and take-off of a helicopter in a high-density population area is a second factor to be taken very seriously. Lowering of property values is yet another factor to be considered. Environmental impact created by COH already is felt via ambulance and traffic generated in the residential neighborhood. This is further institutional encroachment in our neighborhood.

Emergencies to which a helicopter would respond could occur anytime during day or night hours. We in this neighborhood (as in others) experienced the low-flying helicopter during the gypsy moth spraying and know the uneasy feeling and noise factor first hand. To have a helicopter land in one's front yard or atop one's roof, so to speak, would be unbearable. It would create unnecessary upset to the patients at COH and to the children at the elementary school, to senior citizens, and to families nearby.

My request is that you and the Board take the necessary steps immediately to cancel the proposed plans for the helipad. I further request that COH and the University of Washington work in cooperation not competition for a helipad at University Hospital rather than at COH. Two helipads located so close together are not needed and constitute duplication of huge and unnecessary expenditures.

In addition, I request that you honestly pursue the following:

1. Research the difference between present helicopter landing in soccer field, UW, and ambulance taking patient to COH (reportedly three-minute run) vs helicopter landing atop roof, transfer to stretcher and down ramp to emergency entrance. Would three minutes really be saved? No, not really. Would handling of and moving of patient be minimized? No, not really.

   Further question here: How many, if any, patients have been injured or died as a result of present arrangement?

   It is the quality of care in ambulance or helicopter not the mode of transport, not the three-minute time differential that spells the difference between life or death outcome. The quality of care given by Seattle's ambulance service(s) is second to none.

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2. Examine the records of COH. You will find that initially in the building program COH stated there would be no further expansion. This has not been adhered to. In addition, at one time, COH stated that it would not build a helipad. This is now being ignored.

   The application for helipad construction contains incorrect and incomplete data. Also, no certification of need is on record. What is the perceived need?

   Credibility of the COH Board of Trustees is diminished and is at stake. Likewise, citizen support for COH will diminish and be at stake. Thus, even now the projected number of "approximately 15 flights a month" is not believed. Furthermore, the number of flights cannot be controlled once a service is offered, as you know.

3. Consider building an emergency unit on UW soccer field if this is needed to meet helicopter upon landing and before drive to COH by ambulance. There patient could be placed on stretcher, emergency measures administered, then taken to emergency entrance at COH with minimal moving. (Although this is an alternative possibility, this construction is very likely not needed.)

Do you care about what the neighbors of COH think? Do you care about alternatives to helipad at COH? Do you care about saving money by COH working cooperatively with the UW and University Hospital? Do you care that many citizens' rights are being abridged and disregarded?

To reiterate, please know that I am a concerned citizen and a person who loves children and cares about them. I also am concerned and care about the quality of environment and quality of life for the senior citizens as well as the young couples with children who live in close proximity to COH.

Please consider carefully these ideas, these opinions (held by me and many, many others). Please take necessary and positive action. Please contact me. Thank you.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

524-4151

cc: William Justen - Dept. of Construction ç Land Use
Seattle City Council members: [with cover memo]
George Benson — Jim Street
Michael Hildt — Delores Sibonga
Paul Kraabel — Sam Smith
Virginia Galle — Jeannette Williams
Norm Rice
Anita Francis - Laurelhurst Community Club
Laurelon Condominium Board

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Seattle City Council

RECEIVED
NOV 30 1984
Dept. of Construction & Land Use

November 29, 1984

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Carolyn Margon
3650 - 42nd Avenue NE
Seattle, WA 98105

Dear Ms. Margon:

Thank you for your letter regarding the helipad at Chi'dren's Orthopedic Hospital.

As this matter will eventually come before the Council and Councilmember Jim Street's committee as a Council Conditional Use, he is not able to see your letter at this time due to the "Appearance of Fairness" doctrine which governs such matters. The doctrine's purpose is to prevent people representing one side or the other in a disputed case from gaining favor through special access to Councilmembers. No one should attempt to communicate directly with Councilmembers concerning the merits of the case outside open public hearings where all sides have an opportunity to present their views. Violation of the doctrine can result in the courts overturning Council decisions which are appealed.

When the matter comes before the Council for review, the decision will be made on the merits contained in the official record.

I will forward your letter to the Department of Construction and Land Use and ask that it be placed in the file.

Thank you for taking the time to write. If you have any questions regarding the above, do not hesitate to call me.

Sincerely,

Karen L. Campbell

Karen L. Campbell, Assistant to
Councilmember Jim Street

KC:gm

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3650 42nd Ave, N.E.
Seattle, Washington 98105
November 27, 1984

Concilmember Jim Street
Seattle City Council
600 4th Avenue
Seattle, Washington 98104

NOV 2 7 1984

Dear Mr. Street:

I am a friend of Kate and Charles Nelson's and met you at a coffee at their house last year when you were running for office. I am writing on behalf of most of my neighbors regarding the application by COH for a helicopter pad on the hospital grounds for the following reasons:

1. COH has been successfully using an air transport system with an army helicopter which lands on an open field only 3 minutes from the hospital grounds.

2. The landing of the helicopter on the grounds will force the vehicle to fly over a heavily residential neighborhood.

3. The noise from the helicopter will frighten the children who are patients in the hospital.

4. There are 3 other sites within 6 minutes of the helipad where a helicopter can land safely. Therefore, I urge you to reject their application. Thank you.

Sincerely,

Carolyn Margon

Carolyn Margon

THE PENINSULA
HONG KONG

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Seattle City Council

RECEIVED
NOV 20 1984
Dept. of Construction & Land Use

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
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Environmental Management
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Human Services Committee
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Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

November 20, 1984

Patricia Ann Wood
4036 N.E. 45th Street
Seattle, Wa. 98105

Dear Ms. Wood:

Thank you for forwarding a copy of your letter to Mrs. Habegger to Councilmember Paul Kraabel regarding the proposal to build a helipad at Children's Orthopedic Hospital.

I am told that the application is for a Council Conditional Use.permit which will require a decision by the City Council. Such applications are governed by the "Appearance of Fairness" Doctrine whose purpose is to prevent people representing one side or the other in a disputed case from gaining favor through special access to Councilmembers. No one should attempt to communicate directly with Councilmembers concerning the merits of the case outside open public hearings where all sides have an opportunity topresent their views. Violation of the doctrine can result in the courts overturning Council decisions which are appealed.

I am forwarding your letter to the Director of the Department of Construction and Land Use so that it will be placed in the official record for consideration by the Council when the application comes before it. The decision on the proposal will be made on the merits of the case contained in the official record.

If you have any questions regarding the above, do not hesitate to call me at 625-2447.

Respectfully,

Claire McKechnie

CLAIRE McKECHNIE, Assistant to
Councilmember Paul Kraabel

Cc: William Justen, DCLU

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4036 N.E. 45th Street
Seattle, Washington 98105
November 18, 1984

Mrs. Robert J. (Peggy) Habegger
President, Board of Trustees
Children's Orthopedic Hospital
4530 52nd. N.E.
Seattle, Washington 98105

Dear Mrs. Habegger,

I am writing to you about a deep concern I share with many other COH neighbors---the apparent decision of Children's Orthopedic Hospital to install a helipad.

As a resident of Laurelon Terrace since 1955, as a present condominium owner, the immediate past-president of the Laurelon Terrace Homeowner's Board of Directors, and as an individual, I have been aware of the history, mission and growth of the hospital since it moved into our area. During some of the heavy construction phases, which had significant impact on our lives, I felt that the hospital tried to be a good neighbor, to keep us informed of plans and developments. As recently as the June '84 meeting to inform the community of the latest expansion plans (which recently, I hear, have been at least temporarily abandoned) I was impressed with your personal interest in complaints of noise on the walkway just to the west of the hospital. I felt that you were responsive to reasonable requests.

At the same meeting, however, I asked publicly for Mr. Truman Katz to tell us what further plans they had for a helipad which we had first heard mentioned several years ago. Mr. Katz stated at that public meeting that they had no plans for a helipad at the moment. Such answers to direct questions in June----and the imminence of a helipad in mid-November-does not build cred bility. I feel betrayed!

If you have looked at the map showing the plans for the helipad, you will note that Laurelon Terrace---three blocks and 136 residences---will be the most severely impacted by both approach and return of helicopters whose noise level is only 3 decibels below that of a Huey.

We feel that 15 trips (which will be 30 'single' trips) a month---in the beginning----is totally unacceptable. Once the helipad is in place it will undoubtedly be used for emergency and non-emergency alike. Those of us who live in the area will pay for it in noise pollution, lack of safety, lowering of property values, erosion of our living climate. This is a residential area---it was a totally residential area when Children's Orthopedic elected to relocate here.

I have worked at the University of Washington for 35 years, both in medical research and, most recently, as a supervisor in the clinical laboratory. I do not believe that COH has proven the need for this helipad. At present, truly emergency flights can(and do) land in the University of Washington playfield at "5 Corners". The patient can be transported from helicopter to emergency entrance in less than 5 minutes. (I have seen this happen!) I do not believe the patient would be transferred from helicopter to emergency room from the helipad significantly faster.

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It is hard to address this subject because we not only love children, we're proud of the total facility and the wonderful care that COH provides. We want to be good neighbors. But we think the hospital should seriously consider the impact this request will have on all its neighbors and ask themselves "Is it worth the trip?"

I am well aware of the turmoil currently going on in [illegible]al centers in response to DRG's, the Deficit Reduction Act of 198[illegible] and the real struggle of hospitals to survive as we know them. I attended a meeting in September in Nashville with 800 other clinical laboratory directors and I know there are tough times ahead that call for creative strategies. But a helipad should not be used as a marketing tool.

To summarize:

1. COH chose to relocate in a residential area. They should abide with compatible use of our common space.
2. COH's neighbors have been very supportive of the hospital and its mission.
3. We are concerned about the number of trips, the noise pollution, the hazards and the undoubted proliferation of use.
4. Who is going to assume responsibility and reimbursement for property damage? (They do crash!)
5. Who will compensate Laurelon Terrace and other close neighbors for diminished property value? You should be aware that Laurelon has many owners who are not affluent, who would be seriously affected if they lost their investment. Many have worked all their lives to acquire their modest home and do not have the luxury to walk away and relocate.
6. We do not feel that the hospital has proven that a helipad is necessary to survival of any type of patient.
7. There will be a helipad at the University Hospital on its new building which will be finished next spring. We don't need helipads a mile apart.
8. COH has access to a "helipad" within 5 minutes of its door.

I invite your comments on my concerns and would be happy to discuss any of these points with you in depth. Laurelon is my home, which I have worked for many years to secure. I don't want to see its peaceful, liveable climate vanish through unnecessary "progress".

Sincerely

Patricia Ann Wood

Patricia Ann Wood

Home phone 524-2721
Work phone 545-0064

cc: William Justen, Director
Department of Construction and Land Use

Jeannette Williams
George Benson
Michael Hildt
✓Paul Kraabel
Virginia Galle
Norm Rice
Jim Street
Delores Sibonga
Sam Smith

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Seattle City Council

RECEIVED
NOV 20 1984
Dept. of Construction & Land Use

Norman B. Rice
President of the City Council
625-2436

George E. Benson
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625-2441

Virginia Galle
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Jim Street
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Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

November 20, 1984

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Wa. 98105

Dear Mrs. Spangler:

Thank you for your recent note to Mr. Kraabel and the copy of your letter to Mrs. Habegger regarding the proposal for a helipad at Children's Orthopedic Hospital.

The application is for a Council Conditional Use which will require a decision by the City Council. Such applications are governed by the "Appearance of Fairness Doctrine" whose purpose is to prevent people representing one side or the other in a disputed case from gaining favor through special access to Council-members. No one should attempt to communicate directly with Councilmembers concerning the merits of the case outside open public hearings where all sides have an opportunity to present their views. Violation of the doctrine can result in the courts overturning Council decisions which are appealed.

I am forwarding your letter to the Director of the Department of Construction and Land Use so that it may be placed in the official record for consideration by the Council when the application comes before it. The decision on the proposal will be made on the merits of the case contained in the official record.

If you have any questions regarding the above, do not hesitate to call me at 625-2447.

Respectfully,

CLAIRE McKECHNIE, Assistant to
Councilmember Paul Kraabel

Cc: William Justen, DCLU

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November 15, 1984

To: Paul Kraabel, Council Member

From: Maryann E. Spangler

Re: Proposed plan for helipad at Children's Orthopedic Hospital

---

1. Attached is copy of my letter to the president of the Board of Trustees COH.

2. Please read and consider carefully.

3. I appeal to you as my representative to use the power of your elected office to stop this <u>further institutional encroachment in our neighborhood</u>.

4. Please file an injunction--or whatever other legal instrument you have available--to halt proceedings of this ill-conceived plan immediately.

5. Thank you.

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

524-4151

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

November 15, 1984

Mrs. Robert J. Habegger
President, Board of Trustees
The Children's Orthopedic Hospital
4530 52nd N.E.
Seattle. Washington 98105

Re: Proposed helipad COH

Dear Mrs. Habegger:

Please bear in mind as you read the following that I write to you as a concerned citizen and that I love children for whom I want the best possible care.

Are you aware of the extreme enmity and disapproval created by the COH and deeply felt by neighbors of COH relative to the proposed plans for a helipad and the method in which these plans have been handled? This is undesirable and unnecessary. Neither you nor I want this.

A helipad at COH in the heart of a residential, densely populated neighborhood is neither wise nor safe. This is true not only for the residents of the neighborhood but also for the hospital patients and personnel, the children at the nearby elementary school, the senior citizens of the future retirement home at the Villa, the residents of condominiums on both sides of Sand Point Way and nearby apartment buildings, residents of Ronald Macdonald House, and the city housing complex near it.

Environmental impact of noise is only one detrimental factor. Safety of landing and take-of of a helicopter in a high-density population area is a second factor to be taken very seriously. Lowering of property values is yet another factor to be considered. Environmental impact created by COH already is felt via ambulance and traffic generated in the residential neighborhood. This is further institutional encroachment in our neighborhood.

Emergencies to which a helicopter would respond could occur anytime during day or night hours. We in this neighborhood (as in others) experienced the low-flying helicopter during the gypsy moth spraying and know the uneasy feeling and noise factor first hand. To have a helicopter land in one's front yard or atop one's roof, so to speak, would be unbearable. It would create unnecessary upset to the patients at COH and to the children at the elementary school, to senior citizens, and to families nearby.

My request is that you and the Board take the necessary steps immediately to cancel the proposed plans for the helipad. I further request that COH and the University of Washington work in cooperation not competition for a helipad at University Hospital rather than at COH. Two helipads located so close together are not needed and constitute duplication of huge and unnecessary expenditures.

In addition, I request that you honestly pursue the following:

1. Research the difference between present helicopter landing in soccer field, UW, and ambulance taking patient to COH (reportedly three-minute run) vs helicopter landing atop roof, transfer to stretcher and down ramp to emergency entrance. Would three minutes really be saved? No, not really. Would handling of and moving of patient be minimized? No, not really.

Further question here: How many, if any, patients have been injured or died as a result of present arrangement?

It is the quality of care in ambulance or helicopter not the mode of transport, not the three-minute time differential that spells the difference between life or death outcome. The quality of care given by Seattle's ambulance service(s) is second to none.

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2. Examine the records of COH. You will find that initially in the building program COH stated there would be no further expansion. This has not been adhered to. In addition, at one time, COH stated that it would not build a helipad. This is now being ignored.

   The application for helipad construction contains incorrect and incomplete data. Also, no certification of need is on record. What is the perceived need?

   Credibility of the COH Board of Trustees is diminished and is at stake. Likewise, citizen support for COH will diminish and be at stake. Thus, even now the projected number of "approximately 15 flights a month" is not believed. Furthermore, the number of flights cannot be controlled once a service is offered, as you know.

3. Consider building an emergency unit on UW soccer field if this is needed to meet helicopter upon landing and before drive to COH by ambulance. There patient could be placed on stretcher, emergency measures administered, then taken to emergency entrance at COH with minimal moving. (Although this is an alternative possibility, this construction is very likely not needed.)

Do you care about what the neighbors of COH think? Do you care about alternatives to helipad at COH? Do you care about saving money by COH working cooperatively with the UW and University Hospital? Do you care that many citizens' rights are being abridged and disregarded?

To reiterate, please know that I am a concerned citizen and a person who loves children and cares about them. I also am concerned and care about the quality of environment and quality of life for the senior citizens as well as the young couples with children who live in close proximity to COH.

Please consider carefully these ideas, these opinions (held by me and many, many others). Please take necessary and positive action. Please contact me. Thank you.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

524-4151

cc: William Justen - Dept. of Construction ç Land Use
Seattle City Council members: [with cover memo]
George Benson — Jim Street
Michael Hildt — Delores Sibonga
Paul Kraabel — Sam Smith
Virginia Galle — Jeannette Williams
Norm Rice
Anita Francis - Laurelhurst Community Club
Laurelon Condominium Board

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

4036 N.E. 45th Street
Seattle, Washington 98105
November 18, 1984

Mrs. Robert J. (Peggy) Habegger
President, Board of Trustees
Children's Orthopedic Hospital
4530 52nd. N.E.
Seattle, Washington 98105

RECEIVED
NOV 2 0 1984

Dear Mrs. Habegger,

I am writing to you about a deep concern I share with many other COH neighbors---the apparent decision of Children's Orthopedic Hospital to install a helipad.

As a resident of Laurelon Terrace since 1955, as a present condominium owner, the immediate past-president of the Laurelon Terrace Homeowner's Board of Directors, and as an individual, I have been aware of the history, mission and growth of the hospital since it moved into our area. During some of the heavy construction phases, which had significant impact on our lives, I felt that the hospital tried to be a good neighbor, to keep us informed of plans and developments. As recently as the June '84 meeting to inform the community of the latest expansion plans (which recently, I hear, have been at least temporarily abandoned) I was impressed with your personal interest in complaints of noise on the walkway just to the west of the hospital. I felt that you were responsive to reasonable requests.

At the same meeting, however, I asked publicly for Mr. Truman Katz to tell us what further plans they had for a helipad which we had first heard mentioned several years ago. Mr. Katz stated at that public meeting that they had no plans for a helipad at the moment. Such answers to direct questions in June----and the imminence of a helipad in mid-November-does not build cred bility. I feel betrayed!

If you have looked at the map showing the plans for the helipad, you will note that Laurelon Terrace---three blocks and 136 residences---will be the most severely impacted by both approach and return of helicopters whose noise level is only 3 decibels below that of a Huey.

We feel that 15 trips (which will be 30 'single' trips) a month---in the beginning----is totally unacceptable. Once the helipad is in place it will undoubtedly be used for emergency and non-emergency alike. Those of us who live in the area will pay for it in noise pollution, lack of safety, lowering of property values, erosion of our living climate. This is a residential area---it was a totally residential area when Children's Orthopedic elected to relocate here.

I have worked at the University of Washington for 35 years, both in medical research and, most recently, as a supervisor in the clinical laboratory. I do not believe that COH has proven the need for this helipad. At present, truly emergency flights can(and do) land in the University of Washington playfield at "5 Corners". The patient can be transported from helicopter to emergency entrance in less than 5 minutes. (I have seen this happen!) I do not believe the patient would be transferred from helicopter to emergency room from the helipad significantly faster.

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It is hard to address this subject because we not only love children, we're proud of the total facility and the wonderful care that COH provides. We want to be good neighbors. But we think the hospital should seriously consider the impact this request will have on all its neighbors and ask themselves "Is it worth the trip?"

I am well aware of the turmoil currently going on in medical centers in response to DRG's, the Deficit Reduction Act of 1984 and the real struggle of hospitals to survive as we know them. I attended a meeting in September in Nashville with 800 other clinical laboratory directors and I know there are tough times ahead that call for creative strategies. But a helipad should not be used as a marketing tool.

To summarize:

1. COH chose to relocate in a residential area. They should abide with compatible use of our common space.
2. COH's neighbors have been very supportive of the hospital and its mission.
3. We are concerned about the number of trips, the noise pollution, the hazards and the undoubted proliferation of use.
4. Who is going to assume responsibility and reimbursement for property damage? (They do crash!)
5. Who will compensate Laurelon Terrace and other close neighbors for diminished property value? You should be aware that Laurelon has many owners who are not affluent, who would be seriously affected if they lost their investment. Many have worked all their lives to acquire their modest home and do not have the luxury to walk away and relocate.
6. We do not feel that the hospital has proven that a helipad is necessary to survival of any type of patient.
7. There will be a helipad at the University Hospital on its new building which will be finished next spring. We don't need helipads a mile apart.
8. COH has access to a "helipad" within 5 minutes of its door.

I invite your comments on my concerns and would be happy to discuss any of these points with you in depth. Laurelon is my home, which I have worked for many years to secure. I don't want to see its peaceful, liveable climate vanish through unnecessary "progress".

Sincerely

Patricia Ann Wood

Patricia Ann Wood
Home phone 524-272:
Work phone 545-006!

cc: William Justen, Director
Department of Construction and Land Use

Jeannette Williams
George Benson
Michael Hildt
Paul Kraabel
Virginia Galle
Norm Rice
Jim Street
Delores Sibonga
Sam Smith

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7/e cc 8K022

RECEIVED
DEC 10 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

December 6, 1984

William J. Justen, Director
Department of Construction and Land Use
600 4th Avenue
Seattle, Washington 98104

Dear Mr. Justen,

Enclosed you will find a copy of a letter I have sent to all city Councilmembers to reflect my feelings about the Helipad requested by Children's Orthopedic Hospital. As you compile information for the use of your office or any other involed in this decision-making process, I hope you will keep in mind the questions I raise and their genuine impact on the whole Northend community that would be affected by the construciton of a Helipad in this location.

Sincerely,

Elizabeth L. Morrison
3643 42nd N.E.
Seattle, Wa. 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

December 3, 1984

Councilmember ----------
Seattle City Council
600 4th Avenue
Seattle, Washington 98104

Dear Councilmember ----------,

Please add the following letter to the comments you have received reccommending further study, analysis, and consideration of alternate options for the Helipad requested by Children's Orthopedic Hospital. Since COH is such a vital and commendable institution in our community I want to acknowledge my respect for the services they deliver, but I am also anxious to urge you as a councilmember to remember that any strong, viable community is the result of more than one institution. To you goes the unenviable task of keeping a harmonious balance between all the elements that make Seattle the desirous community it is at present, and I plead with you to keep that balance in mind as you consider this request from COH.

When you make your decision on this helipad, I ask for analysis of its impact in four different categories: will this facility significantly improve the life-saving emergency care over the current procedure; will its influence on the surrounding residential neighborhood be acceptable; will the logistics, safety, and coordination of several helipads within one and a half miles of one another (one projected at the University Hospital and one at Sandpoint) be in conflict with the city's published desire to limit congestion in the University/Northend areas, as well as the desire to promote balanced growth in other parts of the city; and will the installation of a helipad at COH further concentrate care at that hospital to the exclusion and detriment of other hospitals whose facillities would be that much less than COH and less capable of attracting research monies and staff?

As an amateur in all these categories, I can do nothing more than speculate that the answers will corroborate the feeling I have that the request for the helipad is more a luxury than a necessity. No doubt each of us would like all the latest conveniences at our doorsteps, but would forego those for which the pricetag comes in irreversible, environmental damage. The challenge that tests all of us is striking the "quality of life" balance that will preserve our community.

Sincerely,

Elizabeth L. Morrison
3643 42nd N.E. Ave.
Seattle, Washington 98105

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JOY SCOTT

MBA Programmes
The Chinese University of Hong Kong
Shatin, N.T.
Hong Kong

Business/Asia
4339 NE 45 Street
Seattle, WA 98105
USA

November 30, 1984

RECEIVED
DEC 3 - 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justen, Director
Dept. of Construction and Land Use
600 4th Avenue
Seattle, WA 98104

Dear Mr. Justen,

As a parent of four children and as a neighbor of the Children's Orthopedic Hospital for more than twenty years, I am writing to protest the hospital's application for permission to build a helipad.

My reasons for this protest are

1. There is no need for the helipad at the hospital because
   a. there is already a helipad only three minutes (by private car, stopping at stop lights) or 8/10 mile away from the hospital on 45 Street

   b. Dr. Copass, the director of medical flight service, has admitted that transfer by ambulance from the 45 Street pad does <u>not</u> present undue risk to the patient.

2. There is potential harm, both to the children in the hospital and to the children and adults living in the surrounding communities because of
   a. the ever present and high potential for a copter crash

   b. the frightening and constantly increasing noise of the copter itself, which is counter to any hospital rules. The ambulance driver can turn off the siren, once he nears the hospital, but the copter blades can't stop just because there are many other sick children just a few yards away.

3. Once the pad is in, there would be no control over the flights. Who knows who's flying in or out? A sick child or an administrator on an errand?

4. Granted: a helicopter is an impressive marketing device in these days of increasing competition between hospitals, but the one to 1.5 million dollars that COH will have to

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spend annually to install and maintain a copter service could be better and more effectively spent for the care of low income children.

No one in our community has anything but praise and support for the fine care that children receive in the hospital, but we firmly believe that the installation of a helicopter service will not only fail to improve the care that the hospital gives but will cause irreparable damage to the hospital itself and to the surrounding communities.

Sincerely,

Joy Scott Dupl.

Joy Scott

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Seattle City Council

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NOV 26 1984
Dept. of Construction & Land Use

November 26, 1984

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Mrs. Maryann E. Spangler
4013 N. E. 46th Street
Seattle, Washington 98105

Dear Mrs. Spangler:

Thank you for your recent letter to Councilmember Williams and the accompanying letter you sent to Mrs. Robert J. Habegger concerning a proposed Children's Orthopedic Hospital (COH) helipad.

Since the meeting of the Laurelhurst Community Club, we have been informed the City Council will be the final decision maker on this application for a helipad. When considering specific land use issues, the City Councilmembers sit as a quasi-judicial body. They are required to maintain an appearance of fairness to all parties and must limit their review of the issue to the official record and testimony received at an open, public hearing. For this reason, Councilmember Williams is unable to read your letters at this time.

Once the initial environmental review is completed by the City's Department of Construction and Land Use, a public hearing will be scheduled before the City's Hearing Examiner. A sign will be placed at the proposed helipad site, and notice will be sent to those who reside 300 feet from the Hospital boundaries 30 days prior to the public hearing. The community is encouraged to participate in the hearing because the testimony received will comprise a portion of the official record. I am forwarding a copy of your letter to Mr. William Justen, Director of the Department of Construction and Land Use to ensure it is included in the record and a hearing notice is sent to you.

The Hearing Examiner will recommend to the City Council whether or not the helipad should be approved, with the Council making the final decision. Even though Councilmember Williams is unable to read your letter at this time, thank you again for forwarding your position.

Sincerely,

Lori Mayfield

Lori Mayfield, Assistant
Councilmember Jeanette Williams

cc: William Justen, Director, Department of Construction and Land Use

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November 15, 1984

To: Jeannette Williams, Council Member

From: Maryann E. Spangler

Re: Proposed plan for helipad at Children's Orthopedic Hospital

---

1. Attached is copy of my letter to the president of the Board of Trustees COH.

2. Please read and consider it carefully.

3. I appeal to you as my representative to use the power of your elected office to stop this <u>further institutional encroachment in our neighborhood</u>.

4. Please file an injunction--or whatever other legal instrument you have available--to halt proceedings of this ill-conceived plan immediately.

5. Thank you.

Maryann E. Spangler

NOV 19 1984

Mrs. Maryann E. Spangler
4013 N.E. 46th Street.
Seattle, WA. 98105

524-4151

Thank you for coming to the Laurelhurst Community meeting, 11-14-84. NES

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November 15, 1984

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President, Board of Trustees
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4530 52nd N.E.
Seattle. Washington 98105

Re: Proposed helipad COH

Dear Mrs. Habegger:

Please bear in mind as you read the following that I write to you as a concerned citizen and that I love children for whom I want the best possible care.

Are you aware of the extreme enmity and disapproval created by the COH and deeply felt by neighbors of COH relative to the proposed plans for a helipad and the method in which these plans have been handled? This is undesirable and unnecessary. Neither you nor I want this.

A helipad at COH in the heart of a residential, densely populated neighborhood is neither wise nor safe. This is true not only for the residents of the neighborhood but also for the hospital patients and personnel, the children at the nearby elementary school, the senior citizens of the future retirement home at the Villa, the residents of condominiums on both sides of Sand Point Way and nearby apartment buildings, residents of Ronald Macdonald House, and the city housing complex near it.

Environmental impact of noise is only one detrimental factor. Safety of landing and take-off of a helicopter in a high-density population area is a second factor to be taken very seriously. Lowering of property values is yet another factor to be considered. Environmental impact created by COH already is felt via ambulance and traffic generated in the residential neighborhood. This is further institutional encroachment in our neighborhood.

Emergencies to which a helicopter would respond could occur anytime during day or night hours. We in this neighborhood (as in others) experienced the low-flying helicopter during the gypsy moth spraying and know the uneasy feeling and noise factor first hand. To have a helicopter land in one's front yard or atop one's roof, so to speak, would be unbearable. It would create unnecessary upset to the patients at COH and to the children at the elementary school, to senior citizens, and to families nearby.

My request is that you and the Board take the necessary steps immediately to cancel the proposed plans for the helipad. I further request that COH and the University of Washington work in cooperation not competition for a helipad at University Hospital rather than at COH. Two helipads located so close together are not needed and constitute duplication of huge and unnecessary expenditures.

In addition, I request that you honestly pursue the following:

1. Research the difference between present helicopter landing in soccer field, UW, and ambulance taking patient to COH (reportedly three-minute run) vs helicopter landing atop roof, transfer to stretcher and down ramp to emergency entrance. Would three minutes really be saved? No, not really. Would handling of and moving of patient be minimized? No, not really.

Further question here: How many, if any, patients have been injured or died as a result of present arrangement?

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2. Examine the records of COH. You will find that initially in the building program COH stated there would be no further expansion. This has not been adhered to. In addition, at one time, COH stated that it would not build a helipad. This is now being ignored.

   The application for helipad construction contains incorrect and incomplete data. Aiso, no certification of need is on record. What is the perceived need?

   Credibility of the COH Board of Trustees is diminished and is at stake. Likewise, citizen support for COH will diminish and be at stake. Thus, even now the projected number of "approximately 15 flights a month" is not believed. Furthermore, the number of flights cannot be controlled once a service is offered, as you know.

3. Consider building an emergency unit on UW soccer field if this is needed to meet helicopter upon landing and before drive to COH by ambulance. There patient could be placed on stretcher, emergency measures administered, then taken to emergency entrance at COH with minimal moving. (Although this is an alternative possibility, this construction is very likely not needed.)

Do you care about what the neighbors of COH think? Do you care about alternatives to helipad at COH? Do you care about saving money by COH working cooperatively with the UW and University Hospital? Do you care that many citizens' rights are being abridged and disregarded?

To reiterate, please know that I am a concerned citizen and a person who loves children and cares about them. I also am concerned and care about the quality of environment and quality of life for the senior citizens as well as the young couples with children who live in close proximity to COH.

Please consider carefully these ideas, these opinions (held by me and many, many others). Please take necessary and positive action. Please contact me. Thank you.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

524-4151

cc: William Justen - Dept. of Construction ç Land Use
Seattle City Council members: [with cover memo]
George Benson — Jim Street
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Laurelon Condominium Board

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NOV 19 1984
Dept. of Construction & Land Use

To: William Justen

From: Maryann E. Spangler

Re: Proposed plan for helipad at Children's Orthopedic Hospital

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1. Attached is copy of my letter to the president of the Board of Trustees COH.
2. Please read and consider it carefully.
3. You will note that a copy with memo was sent to each member of the City Council.
4. Please halt proceedings of this further institutional encroachment in our neighborhood -- a very ill-conceived plan.
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Maryann E. Spangler

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Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

524-4151

cc: William Justen - Dept. of Construction ç Land Use
Seattle City Council members: [with cover memo]

George Benson	Jim Street
Michael Hildt	Delores Sibonga
Paul Kraabel	Sam Smith
Virginia Galle	Jeannette Williams
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Anita Francis - Laurelhurst Community Club
Laurelon Condominium Board

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CITY COUNCIL TRANSMITTAL

C. F. #

TO: William Juster, Director
DCLU

Date Sent: 11/20/84

Reply Requested By:

FROM: Jim Street, Chair, Land Use

Subject: Helpiad - Children's Orthopedic Hospital

ACTION required

	Review and Return File With Your Answer to Sender
	Review and Answer Petitioner, Return File and Copy of Answer to Sender
	Review and Make Recommendations, Return File and Recommendations to Sender ( ) In Duplicate
	Prepare Legislation and Return File to Sender

RECEIVED
NOV 20 1984
Dept. of Construction & Land Use

Additional Information: Please place in file - we understand this is a Council Conditional Use & will be coming before the Land Use Committee

Karen Campbell
Signature

LDI - 110-5002 CS 20.19

Seattle City Council

December 4, 1984

RECEIVED
DEC 05 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA 98105

Dear Ms. Spangler:

Thank you for your note to Councilmember Hildt expressing your concern about the proposal by Children's Orthopedic Hospital to install a helipad.

As you may know, this request under the zoning code is for a Council Conditional Use permit. The courts have ruled that in site-specific zoning decisions of this type, the City Council sits in a "quasi-judicial" capacity and may not prejudice their decision on the merits of the case by having contact with individuals outside the open, public decision process. To do so could jeopardize the decision in a court challenge. It is for this reason that I am responding on Mr. Hildt's behalf.

I am taking the liberty of forwarding your letter to Nanette Mozeika, the land use analyst working on the COH application, and asking that it be included in the official record on the case. I am also asking Ms. Mozeika to add your name to the mailing list so that you may be notified of the date and time of the Public Hearing before the Hearing Examiner.

Thank you again for taking the time to write.

Sincerely,

Dewey Potter, Assistant to
Michael Hildt, Member
Seattle City Council

DP:ec

cc: Nanette Mozeika, DCLU

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November 15, 1984

RECEIVED
NOV 1 [illegible] 1984
MICHAEL HILDT
SEATTLE CITY COUNCIL

To: Michael Hildt, Council Member

From: Maryann E. Spangler

Re: Proposed plan for helipad at Children's Orthopedic Hospital

---

1. Attached is copy of my letter to the president of the Board of Trustees COH.

2. Please read and consider it carefully.

3. I appeal to you as my representative to use the power of your elected office to stop this further institutional encroachment in our neighborhood.

4. Please file an injunction--or whatever other legal instrument you have available--to halt proceedings of this ill-conceived plan immediately.

5. Thank you.

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, WA. 98105

524-4151

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

November 15, 1984

Mrs. Robert J. Habegger
President, Board of Trustees
The Children's Orthopedic Hospital
4530 52nd N.E.
Seattle. Washington 98105

Re: Proposed helipad COH

Dear Mrs. Habegger:

Please bear in mind as you read the following that I write to you as a concerned citizen and that I love children for whom I want the best possible care.

Are you aware of the extreme enmity and disapproval created by the COH and deeply felt by neighbors of COH relative to the proposed plans for a helipad and the method in which these plans have been handled? This is undesirable and unnecessary. Neither you nor I want this.

A helipad at COH in the heart of a residential, densely populated neighborhood is neither wise nor safe. This is true not only for the residents of the neighborhood but also for the hospital patients and personnel, the children at the nearby elementary school, the senior citizens of the future retirement home at the Villa, the residents of condominiums on both sides of Sand Point Way and nearby apartment buildings, residents of Ronald Macdonald House, and the city housing complex near it.

Environmental impact of noise is only one detrimental factor. Safety of landing and take-off of a helicopter in a high-density population area is a second factor to be taken very seriously. Lowering of property values is yet another factor to be considered. Environmental impact created by COH already is felt via ambulance and traffic generated in the residential neighborhood. This is further institutional encroachment in our neighborhood.

Emergencies to which a helicopter would respond could occur anytime during day or night hours. We in this neighborhood (as in others) experienced the low-flying helicopter during the gypsy moth spraying and know the uneasy feeling and noise factor first hand. To have a helicopter land in one's front yard or atop one's roof, so to speak, would be unbearable. It would create unnecessary upset to the patients at COH and to the children at the elementary school, to senior citizens, and to families nearby.

My request is that you and the Board take the necessary steps immediately to cancel the proposed plans for the helipad. I further request that COH and the University of Washington work in cooperation not competition for a helipad at University Hospital rather than at COH. Two helipads located so close together are not needed and constitute duplication of huge and unnecessary expenditures.

In addition, I request that you honestly pursue the following:

1. Research the difference between present helicopter landing in soccer field, UW, and ambulance taking patient to COH (reportedly three-minute run) vs helicopter landing atop roof, transfer to stretcher and down ramp to emergency entrance. Would three minutes really be saved? No, not really. Would handling of and moving of patient be minimized? No, not really.

Further question here: How many, if any, patients have been injured or died as a result of present arrangement?

It is the quality of care in ambulance or helicopter not the mode of transport, not the three-minute time differential that spells the difference between life or death outcome. The quality of care given by Seattle's ambulance service(s) is second to none.

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2. Examine the records of COH. You will find that initially in the building program COH stated there would be no further expansion. This has not been adhered to. In addition, at one time, COH stated that it would not build a helipad. This is now being ignored.

   The application for helipad construction contains incorrect and incomplete data. Also, no certification of need is on record. What is the perceived need?

   Credibility of the COH Board of Trustees is diminished and is at stake. Likewise, citizen support for COH will diminish and be at stake. Thus, even now the projected number of "approximately 15 flights a month" is not believed. Furthermore, the number of flights cannot be controlled once a service is offered, as you know.

3. Consider building an emergency unit on UW soccer field if this is needed to meet helicopter upon landing and before drive to COH by ambulance. There patient could be placed on stretcher, emergency measures administered, then taken to emergency entrance at COH with minimal moving. (Although this is an alternative possibility, this construction is very likely not needed.)

Do you care about what the neighbors of COH think? Do you care about alternatives to helipad at COH? Do you care about saving money by COH working cooperatively with the UW and University Hospital? Do you care that many citizens' rights are being abridged and disregarded?

To reiterate, please know that I am a concerned citizen and a person who loves children and cares about them. I also am concerned and care about the quality of environment and quality of life for the senior citizens as well as the young couples with children who live in close proximity to COH.

Please consider carefully these ideas, these opinions (held by me and many, many others). Please take necessary and positive action. Please contact me. Thank you.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

524-4151

cc: William Justen - Dept. of Construction ¢ Land Use
Seattle City Council members: (with cover memo)
George Benson — Jim Street
Michael Hildt — Delores Sibonga
Paul Kraabel — Sam Smith
Virginia Galle — Jeannette Williams
Norm Rice
Anita Francis - Laurelhurst Community Club
Laurelon Condominium Board

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Seattle City Council

December 4, 1984

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DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Norman B. Rice
President of the City Council
625-2436

George E. Benson
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Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Patricia Ann Wood
4036 - N.E. 45th Street
Seattle, Wshington 98105

Dear Ms. Wood:

Thank you for sending Councilmember Hildt a copy of your letter to COH Board President Peggy Habegger regarding COH's proposal to install a helipad.

As you may know, this request under the zoning code is for a Council Conditional Use permit. The courts have ruled that in site-specific zoning decisions of this type, the City Council sits in a "quasi-judicial" capacity and may not prejudice their decision on the merits of the case by having contact with individuals outside the open, public decision process. To do so could jeopardize the decision in a court challenge. It is for this reason that I am responding on Mr. Hildt's behalf.

I am taking the liberty of forwarding your letter to Nanette Mozeika, the land use analyst working on the COH application, and asking that it be included in the official record on the case. I am also asking Ms. Mozeika to add your name to the mailing list so that you may be notified of the date and time of the Public Hearing before the Hearing Examiner.

Thank you again for taking the time to write.

Sincerely,

Dewey Potter, Assistant to
Michael Hildt, Member
Seattle City Council

DP:ec

cc: Nanette Mozeika, DCLU

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4036 N.E. 45th Street
Seattle, Washington 98105
November 18, 1984

Mrs. Robert J. (Peggy) Habegger
President, Board of Trustees
Children's Orthopedic Hospital
4530 52nd. N.E.
Seattle, Washington 98105

Dear Mrs. Habegger,

I am writing to you about a deep concern I share with many other COH neighbors---the apparent decision of Children's Orthopedic Hospital to install a helipad.

As a resident of Laurelon Terrace since 1955, as a present condominium owner, the immediate past-president of the Laurelon Terrace Homeowner's Board of Directors, and as an individual, I have been aware of the history, mission and growth of the hospital since it moved into our area. During some of the heavy construction phases, which had significant impact on our lives, I felt that the hospital tried to be a good neighbor, to keep us informed of plans and developments. As recently as the June '84 meeting to inform the community of the latest expansion plans (which recently, I hear, have been at least temporarily abandoned) I was impressed with your personal interest in complaints of noise on the walkway just to the west of the hospital. I felt that you were responsive to reasonable requests.

At the same meeting, however, I asked publicly for Mr. Truman Katz to tell us what further plans they had for a helipad which we had first heard mentioned several years ago. Mr. Katz stated at that public meeting that they had no plans for a helipad at the moment. Such answers to direct questions in June----and the imminence of a helipad in mid-November-does not build cred bility. I feel betrayed!

If you have looked at the map showing the plans for the helipad, you will note that Laurelon Terrace---three blocks and 136 residences---will be the most severely impacted by both approach and return of helicopters whose noise level is only 3 decibels below that of a Huey.

We feel that 15 trips (which will be 30 'single' trips) a month---in the beginning----is totally unacceptable. Once the helipad is in place it will undoubtedly be used for emergency and non-emergency alike. Those of us who live in the area will pay for it in noise pollution, lack of safety, lowering of property values, erosion of our living climate. This is a residential area---it was a totally residential area when Children's Orthopedic elected to relocate here.

I have worked at the University of Washington for 35 years, both in medical research and, most recently, as a supervisor in the clinical laboratory. I do not believe that COH has proven the need for this helipad. At present, truly emergency flights can(and do) land in the University of Washington playfield at "5 Corners". The patient can be transported from helicopter to emergency entrance in less than 5 minutes. (I have seen this happen!) I do not believe the patient would be transferred from helicopter to emergency room from the helipad significantly faster.

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It is hard to address this subject because we not only love children, we're proud of the total facility and the wonderful care that COH provides. We want to be good neighbors. But we think the hospital should seriously consider the impact this request will have on all its neighbors and ask themselves "Is it worth the trip?"

I am well aware of the turmoil currently going on in medical centers in response to DRG's, the Deficit Reduction Act of 1984 and the real struggle of hospitals to survive as we know them. I attended a meeting in September in Nashville with 800 other clinical laboratory directors and I know there are tough times ahead that call for creative strategies. But a helipad should not be used as a marketing tool.

To summarize:

1. COH chose to relocate in a residential area. They should abide with compatible use of our common space.
2. COH's neighbors have been very supportive of the hospital and its mission.
3. We are concerned about the number of trips, the noise pollution, the hazards and the undoubted proliferation of use.
4. Who is going to assume responsibility and reimbursement for property damage? (They do crash!)
5. Who will compensate Laurelon Terrace and other close neighbors for diminished property value? You should be aware that Laurelon has many owners who are not affluent, who would be seriously affected if they lost their investment. Many have worked all their lives to acquire their modest home and do not have the luxury to walk away and relocate.
6. We do not feel that the hospital has proven that a helipad is necessary to survival of any type of patient.
7. There will be a helipad at the University Hospital on its new building which will be finished next spring. We don't need helipads a mile apart.
8. COH has access to a "helipad" within 5 minutes of its door.

I invite your comments on my concerns and would be happy to discuss any of these points with you in depth. Laurelon is my home, which I have worked for many years to secure. I don't want to see its peaceful, liveable climate vanish through unnecessary "progress".

Sincerely

Patricia Ann Wood

Patricia Ann Wood
Home phone 524-2721
Work phone 545-0064

cc: William Justen, Director
Department of Construction and Land Use

Jeannette Williams
George Benson
Michael Hildt
Paul Kraabel
Virginia Galle
Norm Rice
Jim Street
Delores Sibonga
Sam Smith

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cc 8/0122 D

4714 - 44th Avenue NE
Seattle, Washington 98105
December 3, 1984

RECEIVED
DEC 6 1984
GEORGE E. BENSON

Councilmember George Benson
Seattle City Council
600 - 4th Avenue
Seattle, Washington 98104

Dear Mr. Benson:

I am writing to let you know of my opposition to the proposed helipad at the Children's Orthopedic Hospital. I can't believe the administration of this hospital is asking our community to be subjected to such an unjust ordeal.

I feel there are other aternatives that are satisfactory. There are homes not more than 200 feet from the proposed landing site to the east, and a large group of condominiums one block west. These condominiums are occupied by a majority of senior citizens. I have enclosed a copy of a booklet published by the Environmental Protection Agency which states the health hazard noise can be to the elderly.

I have seen all of COH's slides of these tiny infants and have heard their same, rehearsed speeches. I find this an insult. As if one of our community would not want those children to live. I myself have suffered the loss of my seven day old daughter. To say I am not sympathetic and understanding of these babies and their families is ridiculous. But, because of money and politics this hospital is determined to disrupt our lives, destroy the character of our neighborhood, inflict possible health hazards to the elderly, and cause unknown havoc to the residents of Laurelhurst. Children's made a promise in the 1940's to be a small cottage hospital, with lots of lawn and flowering cherry trees. They have continuously lied to the community of their intentions of growth and will continue to do so.

I can only hope that you will see your way clear to deny them the helipad. I can't believe COH is asking this of the community. There are viable options that they refuse to even consider. I also find it interesting the Mr. Katz, Dr. Coppas, and the other proponents of the helipad are neatly tucked away as residents of Mercer Island and the like.

Please read the enclosed literature. It contains only a small portion of the booklet put out by the EPA. I did not include the portions of the booklet detailing the effects noise has on the unborn, learning in young children, and the effects disrupted sleep has on the physical and emotional well being of all age groups. This helipad is definately not meant for a neighborhood surrounded by homes, filled with aged, sick, young, and so varied residents.

Sincerely,

Ramy Hardwick

Ramy Hardwick
527-1610

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Seattle City Council

December 10, 1984

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DEC 12 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
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Housing, Recreation &
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Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Ms. Ramy Hardwick
4714 - 44 Avenue, N.E.
Seattle, WA 98105

Dear Ms. Hardwick:

Thank you for your recent letter addressed to Councilmember Williams in opposition to Children's Orthopedic Hospital's (COH) proposed helicopter landing pad.

The City Council has learned that it will be the final decision maker on COH's application for a helipad. When considering specific land use issues, the Councilmembers sit as a quasi-judicial body. They are required to maintain an appearance of fairness to all parties and must limit their review of the issue to the official record and testimony received at an open, public hearing. For this reason, Councilmember Williams is unable to read your letter at this time.

Once the initial environmental review is completed by the City's Department of Construction and Land Use, a public hearing will be scheduled on the helipad application before the City's Hearing Examiner. A sign will be placed at the proposed helipad site, and notice will be sent to those who reside 300 feet from the Hospital boundaries 30 days prior to the public hearing. The community is encouraged to participate in the hearing because the testimony received will comprise a portion of the official record. I am forwarding a copy of your letter to Mr. William Justen, Director of the Department of Construction and Land Use to ensure it is included in the record and a hearing notice is sent to you.

The Hearing Examiner will recommend to the City Council whether or not the helipad should be approved, with the Council making the final decision. Even though Councilmember Williams is unable to read your letter at this time, thank you again for forwarding your views.

Sincerely,

Tom Rasmussen

Tom Rasmussen, Assistant
Councilmember Jeanette Williams

cc: William Justen, Director, Department of Construction and Land Use

TR/tlg

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4714 - 44th Avenue NE
Seattle, Washington 98105
December 3, 1984

Councilmember Jeannette Williams
Seattle City Council
600 - 4th Avenue
Seattle, Washington 98104

DEC 7 1984

Dear Mrs. Williams:

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I feel there are other aternatives that are satisfactory. There are homes not more than 200 feet from the proposed landing site to the east, and a large group of condominiums one block west. These condominiums are occupied by a majority of senior citizens. I have enclosed a copy of a booklet published by the Environmental Protection Agency which states the health hazard noise can be to the elderly.

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Ramy Hardwick

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527-1610

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December 10, 1984

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City Operations Committee
625-2453

Ms. Elizabeth L. Morrison
3643 - 42 N.E. Avenue
Seattle, WA 98105

Dear Ms. Morrison:

Thank you for your recent letter addressed to Councilmember Williams in opposition to Children's Orthopedic Hospital's (COH) proposed helicopter landing pad.

The City Council has learned that it will be the final decision maker on COH's application for a helipad. When considering specific land use issues, the Councilmembers sit as a quasi-judicial body. They are required to maintain an appearance of fairness to all parties and must limit their review of the issue to the official record and testimony received at an open, public hearing. For this reason, Councilmember Williams is unable to read your letter at this time.

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Sincerely,

Tom Rasmussen, Assistant
Councilmember Jeanette Williams

cc: William Justen, Director, Department of Construction and Land Use

TR/tlg

An equal employment opportunity—affirmative action employer

Eleventh Floor, Municipal Building, Seattle, Washington 98104

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December 3, 1984

DEC 10 1984

Councilmember Jeanette Williams
Seattle City Council
600 4th Avenue
Seattle, Washington 98104

Dear Councilmember Williams,

Please add the following letter to the comments you have received reccommending further study, analysis, and consideration of alternate options for the Helipad requested by Children's Orthopedic Hospital. Since COH is such a vital and commendable institution in our community I want to acknowledge my respect for the services they deliver, but I am also anxious to urge you as a councilmember to remember that any strong, viable community is the result of more than one institution. To you goes the unenviable task of keeping a harmonious balance between all the elements that make Seattle the desirous community it is at present, and I plead with you to keep that balance in mind as you consider this request from COH.

When you make your decision on this helipad, I ask for analysis of its impact in four different categories: will this facility significantly improve the life-saving emergency care over the current procedure; will its influence on the surrounding residential neighborhood be acceptable; will the logistics, safety, and coordination of several helipads within one and a half miles of one another (one projected at the University Hospital and one at Sandpoint) be in conflict with the city's published desire to limit congestion in the University/Northend areas, as well as the desire to promote balanced growth in other parts of the city; and will the installation of a helipad at COH further concentrate care at that hospital to the exclusion and detriment of other hospitals whose facillities would be that much less than COH and less capable of attracting research monies and staff?

As an amateur in all these categories, I can do nothing more than speculate that the answers will corroborate the feeling I have that the request for the helipad is more a luxury than a necessity. No doubt each of us would like all the latest conveniences at our doorsteps, but would forego those for which the pricetag comes in irreversible, environmental damage. The challenge that tests all of us is striking the "quality of life" balance that will preserve our community.

Sincerely,

Elizabeth L. Morrison
3643 42nd N.E. Ave.
Seattle, Washington 98105

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Seattle City Council

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Jeanette Williams
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City Operations Committee
625-2453

December 11, 1984

Elizabeth L. Morrison
3643 - 42nd Avenue Northeast
Seattle, Washington 98105

Dear Ms. Morrison:

Thank you for your letter to Councilmember Hildt expressing your concern about the proposal by the Children's Orthopedic Hospital to install a helipad, and suggesting further analysis.

As you may know, this request under the zoning code is for a Council Conditional Use permit. The courts have ruled that in site-specific zoning decisions ofthis type, the City Council sits in a "quasi-judicial" capacity and may not prejudice their decision on the merits of the case by having contact with individuals outside the open, public decision process. To do so could jeopardize the decision in a court challenge. It is for this reason that I am responding on Mr. Hildt's behalf.

I am taking the liberty of forwarding your letter to Nanette Mozeika, the land use analyst working on the COH application, and asking that it be included in the official record on the case. I am also asking Ms. Mozeika to add your name to the mailing list so that you may be notified of the time and date of the public hearing before the Hearing Examiner.

Thank you again for taking the time to write.

Sincerely,

DEWEY POTTER, Assistant to
Michael Hildt, Member
Seattle City Council

cc: Nanette Mozeika, DCLU

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RECEIVED
DEC 1 1984
MICHAEL HILDT
SEATTLE CITY COUNCIL

December 3, 1984

Councilmember Michael Hildt
Seattle City Council
600 4th Avenue
Seattle, Washington 98104

Dear Councilmember Hildt,

Please add the following letter to the comments you have received recommending further study, analysis, and consideration of alternate options for the Helipad requested by Children's Orthopedic Hospital. Since COH is such a vital and commendable institution in our community I want to acknowledge my respect for the services they deliver, but I am also anxious to urge you as a councilmember to remember that any strong, viable community is the result of more than one institution. To you goes the unenviable task of keeping a harmonious balance between all the elements that make Seattle the desirous community it is at present, and I plead with you to keep that balance in mind as you consider this request from COH.

When you make your decision on this helipad, I ask for analysis of its impact in four different categories: will this facility significantly improve the life-saving emergency care over the current procedure; will its influence on the surrounding residential neighborhood be acceptable; will the logistics, safety, and coordination of several helipads within one and a half miles of one another (one projected at the University Hospital and one at Sandpoint) be in conflict with the city's published desire to limit congestion in the University/Northend areas, as well as the desire to promote balanced growth in other parts of the city; and will the installation of a helipad at COH further concentrate care at that hospital to the exclusion and detriment of other hospitals whose facillities would be that much less than COH and less capable of attracting research monies and staff?

As an amateur in all these categories, I can do nothing more than speculate that the answers will corroborate the feeling I have that the request for the helipad is more a luxury than a necessity. No doubt each of us would like all the latest conveniences at our doorsteps, but would forego those for which the pricetag comes in irreversible, environmental damage. The challenge that tests all of us is striking the "quality of life" balance that will preserve our community.

Sincerely,

Elizabeth L. Morrison
3643 42nd N.E. Ave.
Seattle, Washington 98105

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CITY COUNCIL TRANSMITTAL

C.F.# application 84-22

TO: William Justen, Director DCLU

Date Sent: 12/14/84

Reply Requested By:

Subject: Childrens Orthopedic Helipad

FROM: Jim Street

ACTION — required

	Review and Return File With Your Answer to Sender
	Review and Answer Petitioner, Return File and Copy of Answer to Sender
	Review and Make Recommendations, Return File and Recommendations to Sender ( ) In Duplicate
	Prepare Legislation and Return File to Sender

RECEIVED DEC 17 1984 DEPT OF CONSTRUCTION & LAND USE LAND USE DIVISION

Additional Information: Please add to file on Childrens Orthopedic Helipad

Karen Campbell
Signature

110-5002 CS 20.19

Please do not allow Children's Orthopedic Hospital to build a helicopter landing pad near their entrance. The existing site, 3 minutes away, is adequate!! COH has already impacted Laurelhurst greatly. The noise & potential danger of landing helicopters is just too much! We ask you to share our community & neighborhood concerns & to vote against the landing pad.

Thank you.

Mrs. Wayne J. Timberlake
(Christy M.)
11-24-84

Dr. & Mrs. Wayne J. Timberlake
3335-43 N. E.
Seattle, WA 98105

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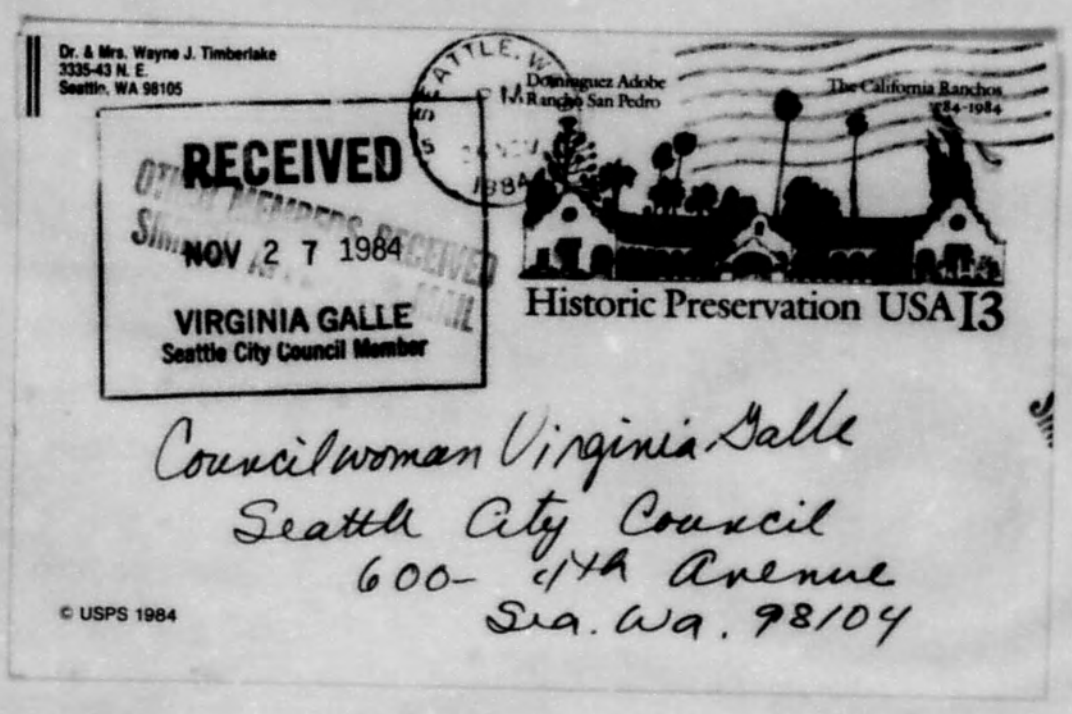

CITY COUNCIL TRANSMITTAL

C. F. # 84-22

TO: William Juster, Director
DCLU

Date Sent: 12/11/84

Reply Requested By:

FROM: Jim Sturt

Subject: Orthopedic - Heli-pad

ACTION required

	Review and Return File With Your Answer to Sender
	Review and Answer Petitioner, Return File and Copy of Answer to Sender
	Review and Make Recommendations, Return File and Recommendations to Sender ( ) In Duplicate
	Prepare Legislation and Return File to Sender

RECEIVED
DEC 11 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Additional Information: Please place in file

Karen Campbell
Signature

LDI – 110–5002 CS 20.19

4714 - 44th Avenue NE
Seattle, Washington 98105
December 3, 1984

Councilmember Jim Street
Seattle City Council
600 - 4th Avenue
Seattle, Washington 98104

DEC 6 1984

Dear Mr. Street:

I am writing to let you know of my opposition to the proposed helipad at the Children's Orthopedic Hospital. I can't believe the administration of this hospital is asking our community to be subjected to such an unjust ordeal.

I feel there are other aternatives that are satisfactory. There are homes not more than 200 feet from the proposed landing site to the east, and a large group of condominiums one block west. These condominiums are occupied by a majority of senior citizens. I have enclosed a copy of a booklet published by the Environmental Protection Agency which states the health hazard noise can be to the elderly.

I have seen all of COH's slides of these tiny infants and have heard their same, rehearsed speeches. I find this an insult. As if one of our community would not want those children to live. I myself have suffered the loss of my seven day old daughter. To say I am not sympathetic and understanding of these babies and their families is ridiculous. But, because of money and politics this hospital is determined to disrupt our lives, destroy the character of our neighborhood, inflict possible health hazards to the elderly, and cause unknown havoc to the residents of Laurelhurst. Children's made a promise in the 1940's to be a small cottage hospital, with lots of lawn and flowering cherry trees. They have continuously lied to the community of their intentions of growth and will continue to do so.

I can only hope that you will see your way clear to deny them the helipad. I can't believe COH is asking this of the community. There are viable options that they refuse to even consider. I also find it interesting the Mr. Katz, Dr. Coppas, and the other proponents of the helipad are neatly tucked away as residents of Mercer Island and the like.

Please read the enclosed literature. It contains only a small portion of the booklet put out by the EPA. I did not include the portions of the booklet detailing the effects noise has on the unborn, learning in young children, and the effects disrupted sleep has on the physical and emotional well being of all age groups. This helipad is definately not meant for a neighborhood surrounded by homes, filled with aged, sick, young, and so varied residents.

Sincerely,

Ramy Hardwick

Ramy Hardwick
527-1610

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Seattle City Council

December 10, 1984

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Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Ms. Elizabeth L. Morrison
3643 42nd N.E. Ave.
Seattle, WA 98105

Dear Ms. Morrison:

Our office received your letter concerning the proposed plan for a helipad at Children's Orthopedic Hospital.

This is a Council Conditional Use question and presents an "Appearance of Fairness" issue. All letters concerning this subject are being sent to William Justen, Director of the Department of Construction and Land Use, to be made part of the record.

Thank you for taking the time to write.

Sincerely,

Lucy Steers
Administrative Assistant for
Councilmember George Benson

LS/s

cc: William Justen

December 3, 1984

DEC 10 1984

ouncilmember Jim Street
eattle City Council
00 4th Avenue
eattle, Washington 98104

ear Councilmember Street,

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Sincerely,

Elizabeth L. Morrison
3643 42nd N.E. Ave.
Seattle, Washington 98105

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December 3, 1984

Councilmember George Benson
Seattle City Council
600 4th Avenue
Seattle, Washington 98104

Dear Councilmember Benson,

Please add the following letter to the comments you have received reccommending further study, analysis, and consideration of alternate options for the Helipad requested by Children's Orthopedic Hospital. Since COH is such a vital and commendable institution in our community I want to acknowledge my respect for the services they deliver, but I am also anxious to urge you as a councilmember to remember that any strong, viable community is the result of more than one institution. To you goes the unenviable task of keeping a harmonious balance between all the elements that make Seattle the desirous community it is at present, and I plead with you to keep that balance in mind as you consider this request from COH.

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Sincerely,

Elizabeth L. Morrison
3643 42nd N.E. Ave.
Seattle, Washington 98105

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Seattle City Council

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DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

December 10, 1984

Ms. Elizabeth L. Morrison
3643 42nd Ave. N.E.
Seattle, Wa. 98105

Dear Ms. Morrison:

Thank you for your letter to Mr. Kraabel regarding the proposal to build a helipad at Children's Orthopedic Hospital.

I am told that the application is for a Council Conditional Use permit which will ultimately require a decision by the City Council. Such applications are governed by the "Appearance of Fairness" Doctrine whose purpose is to prevent people representing one side or the other in a disputed case from gaining favor through special access to Councilmembers. No one should attempt to communicate directly with Councilmembers concerning the merits of the case outside open public hearings where all sides have an opportunity to present their views. Violation of the doctrine can result in the courts overturning Council decisions which are appealed.

So that your comments will be placed in the official record for consideration by the Councilmembers when the application comes before them, I am forwarding your letter to the Director of the Department of Construction and Land Use. The decision on the proposal will be made on the merits of the case contained in the official record.

If you have any questions regarding the above, do not hesitate to call be at 625-2447.

Respectfully,

Claire McKechnie

Claire McKechnie, Assistant to
Councilmember Paul Kraabel

Cc: William Justen, Director, DCLU

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Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
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Environmental Management Committee
625-2445

Michael Hildt
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Paul Kraabel
Chair
Urban Redevelopment Committee and Public Safety Committee
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Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation & Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

An equal employment opportunity--affirmative action employer
Eleventh Floor, Municipal Building, Seattle, Washington 98104

December 3, 1984

Councilmember Paul Kraabel
Seattle City Council
600 4th Avenue
Seattle, Washington 98104

Dear Councilmember Kraabel,

Please add the following letter to the comments you have received reccommending further study, analysis, and consideration of alternate options for the Helipad requested by Children's Orthopedic Hospital. Since COH is such a vital and commendable institution in our community I want to acknowledge my respect for the services they deliver, but I am also anxious to urge you as a councilmember to remember that any strong, viable community is the result of more than one institution. To you goes the u..enviable task of keeping a harmonious balance between all the elements that make Seattle the desirous community it is at present, and I plead with you to keep that balance in mind as you consider this request from COH.

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Sincerely,

Elizabeth L. Morrison
3643 42nd N.E. Ave.
Seattle, Washington 98105

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CC 84-022 File

D

Seattle City Council

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

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Environmental Management
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Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

November 21, 1984

Ms. Patricia Ann Wood
4036 N.E. 45th
Seattle, WA 98105

Dear Ms. Wood:

Our office received a copy of your letter to Mrs. Habegger concerning the proposed plan for a helipad at Children's Orthopedic Hospital.

This is a Council Conditional Use question and presents an "Appearance of Fairness" issue, which means that we are not allowed to show your letter to Councilmembers.

The proper procedure for Council staff is to forward all correspondence on this issue to William Justen of the Department of Construction and Land Use to be made part of the official record. I note that you have already sent a copy to Mr. Justen so I will not do so.

Thank you for taking the time to write.

Sincerely,

Lucy Steers
Administrative Assistant for
Councilmember George Benson

LS/s

cc: William Justen

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Dept. of Construction & Land Use

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Seattle City Council

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President of the City Council
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Transportation Committee
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December 10, 1984

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DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Ms. Ramy Hardwick
4714 44th Avenue N.E.
Seattle, Washington 98105

Dear Ms. Hardwick:

Thank you for your letter to Mr. Kraabel regarding the proposal to build a helipad at Children's Orthopedic Hospital.

I am told that the application is for a Council Conditional Use permit which will ultimately require a decision by the City Council. Such applications are governed by the "Appearance of Fairness" Doctrine whose purpose is to prevent people representing one side or the other in a disputed case from gaining favor through special access to Councilmembers. No one should attempt to communicate directly with Councilmembers concerning the merits of the case outside open public hearings where all sides have an opportunity to present their views. Violation of the doctrine can result in the courts overturning Council decisions which are appealed.

So that your comments will be placed in the official record for consideration by the Councilmembers when the application comes before them, I am forwarding your letter to the Director of the Department of Construction and Land Use. The decision on the proposal will be made on the merits of the case contained in the official record.

If you have any questions regarding the above, do not hesitate to call me at 625-2447.

Respectfully,

Claire McKechnie

Claire McKechnie, Assistant to
Councilmember Paul Kraabel

Cc: William Justen, Director, DCLU

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4714 - 44th Avenue NE
Seattle, Washington 98105
December 3, 1984

Councilmember Paul Kraabel
Seattle City Council
400 - 4th Avenue
Seattle, Washington 98104

Dear Mr. Kraabel:

I am writing to let you know of my opposition to the proposed helipad at the Children's Orthopedic Hospital. I can't believe the administration of this hospital is asking our community to be subjected to such an unjust ordeal.

I feel there are other aternatives that are satisfactory. There are homes not more than 200 feet from the proposed landing site to the east, and a large group of condominiums one block west. These condominiums are occupied by a majority of senior citizens. I have enclosed a copy of a booklet published by the Environmental Protection Agency which states the health hazard noise can be to the elderly.

I have seen all of COH's slides of these tiny infants and have heard their same, rehearsed speeches. I find this an insult. As if one of our community would not want those children to live. I myself have suffered the loss of my seven day old daughter. To say I am not sympathetic and understanding of these babies and their families is ridiculous. But, because of money and politics this hospital is determined to disrupt our lives, destroy the character of our neighborhood, inflict possible health hazards to the elderly, and cause unknown havoc to the residents of Laurelhurst. Children's made a promise in the 1940's to be a small cottage hospital, with lots of lawn and flowering cherry trees. They have continuously lied to the community of their intentions of growth and will continue to do so.

I can only hope that you will see your way clear to deny them the helipad. I can't believe COH is asking this of the community. There are viable options that they refuse to even consider. I also find it interesting the Mr. Katz, Dr. Coppas, and the other proponents of the helipad are neatly tucked away as residents of Mercer Island and the like.

Please read the enclosed literature. It contains only a small portion of the booklet put out by the EPA. I did not include the portions of the booklet detailing the effects noise has on the unborn, learning in young children, and the effects disrupted sleep has on the physical and emotional well being of all age groups. This helipad is definately not meant for a neighborhood surrounded by homes, filled with aged, sick, young, and so varied residents.

Sincerely,

Ramy Hardwick

Ramy Hardwick
527-1610

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File 840022

4714 - 44th Avenue NE
Seattle, Washington 98105
December 3, 1984

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DOLORES SIBONGA
SEATTLE CITY COUNCIL MEMBER

Councilmember Delores Sibonga
Seattle City Council
600 - 4th Avenue
Seattle, Washington 98104

Dear Mrs. Sibonga:

I am writing to let you know of my opposition to the proposed helipad at the Children's Orthopedic Hospital. I can't believe the administration of this hospital is asking our community to be subjected to such an unjust ordeal.

I feel there are other aternatives that are satisfactory. There are homes not more than 200 feet from the proposed landing site to the east, and a large group of condominiums one block west. These condominiums are occupied by a majority of senior citizens. I have enclosed a copy of a booklet published by the Environmental Protection Agency which states the health hazard noise can be to the elderly.

I have seen all of COH's slides of these tiny infants and have heard their same, rehearsed speeches. I find this an insult. As if one of our community would not want those children to live. I myself have suffered the loss of my seven day old daughter. To say I am not sympathetic and understanding of these babies and their families is ridiculous. But, because of money and politics this hospital is determined to disrupt our lives, destroy the character of our neighborhood, inflict possible health hazards to the elderly, and cause unknown havoc to the residents of Laurelhurst. Children's made a promise in the 1940's to be a small cottage hospital, with lots of lawn and flowering cherry trees. They have continuously lied to the community of their intentions of growth and will continue to do so.

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Sincerely,

Ramy Hardwick

Ramy Hardwick
527-1610

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File C-84F-022

Seattle City Council

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
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RECEIVED
DEC 10 1984
DEPT. OF CONSTRUCTION & LAND USE
LAND USE DIVISION

December 6, 1984

Ramy Hardwick
4714 - 44th Avenue Northeast
Seattle, Washington 98105

Dear Ms. Hardwick:

Thank you for your letter to Councilmember Hildt expressing your concern about the proposal by Children's Orthopedic Hospital to install a helipad.

As you may know, this request under the zoning code is for a Council Conditional Use permit. The courts have ruled that in site-specific zoning decisions of this type, the City Council sits in a "quasi-judicial" capacity and may not prejudice their decision on the merits of a case by having contact with individuals outside the open, public decision process. To do so could jeopardize the decision in a court challenge. It is for this reason that I am responding on Mr. Hildt's behalf.

I am taking the liberty of forwarding your letter to Nanette Mozeika, the land use analyst working on the COH application, and asking that it be included in the official record on the case. I am also asking Ms. Mozeika to add your name to the mailing list so that you may be notified of the date and time of the public hearing before the Hearing Examiner.

Thank you again for taking the time to write.

Sincerely,

Dewey Potter, Assistant to
Michael Hildt, Member
Seattle City Council

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4714 - 44th Avenue NE
Seattle, Washington 98105
December 3, 1984

Councilmember Michael Hildt
Seattle City Council
600 - 4th Avenue
Seattle, Washington 98104

RECEIVED
DEC 6 1984
MICHAEL HILDT
SEATTLE CITY COUNCIL

Dear Mr. Hildt:

I am writing to let you know of my opposition to the proposed helipad at the Children's Orthopedic Hospital. I can't believe the administration of this hospital is asking our community to be subjected to such an unjust ordeal.

I feel there are other aternatives that are satisfactory. There are homes not more than 200 feet from the proposed landing site to the east, and a large group of condominiums one block west. These condominiums are occupied by a majority of senior citizens. I have enclosed a copy of a booklet published by the Environmental Protection Agency which states the health hazard noise can be to the elderly.

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Ramy Hardwick
527-1610

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NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Pliase do not allow Childrens Orthopedic Hospital to build a helicopter landing pad near their entrance. The existing site, 3 minutes away, is adequate! COH has already impacted Laurelhurst greatly. The noise & potential danger of helicopters is just too much! We ask you to share our Community & neighborhood concerns, & to vote against the landing pad.

Thank you,

Mrs. Wayne J. Timberlake
(Christy M.)

11-24-84

Dr. & Mrs. Wayne J. Timberlake
3335-43 N. E.
Seattle, WA 98105

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Dr. & Mrs. Wayne J. Timberlake
3335-43 N. E.
Seattle, WA 98105

SEATTLE WA
PM
JUN
1984

RECEIVED
NOV 27 1984
GEORGE B. BENSON



Historic Preservation USA 13

Councilman George Benson
Seattle City Council
600-4th Avenue
Sea Wa 98104

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Please do not allow Children's Orthopedic Hospital to build a helicopter landing pad near their emergency entrance. COH is impacting Laurelhurst far more than was their avowed original intention. We residents protest strongly their proposed helicopter pad: Noise, danger, are too much & their existing site is adequate.

Sincerely yours, Mrs. Wayne D. Simpenlake

11-24-84 (Christy M.)

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Dr. & Mrs. Wayne J. Timberlake
3335-43 N. E.
Seattle, WA 98105



Historic Preservat[illegible] USA 13

William J. Justen, Director
Dept. of Construction & Land Use
600- 4th Avenue
Seattle Wa. 98104

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Seattle City Council

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
Chair
Urban Redevelopment
Committee and Public
Safety Committee
625-2447

Dolores Sibonga
Chair
Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

November 27, 1984

RECEIVED
NOV 28 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mrs. Wayne J. Timberlake
3335 43rd N.E.
Seattle, WA 98105

Dear Mrs. Timberlake:

Our office received a copy of your postcard concerning the proposed plan for a helipad at Children's Orthopedic Hospital.

This is a Council Conditional Use question and presents an "Appearance of Fairness" issue, which means that we are not allowed to show your postcard to Councilmembers.

Council staffmembers are required to forward all correspondence on this issue to William Justen, Director of the Department of Construction and Land Use, to be made part of the official record. Therefore, your postcard is being sent along to him.

Thank you for taking the time to write.

Sincerely,

Lucy Steers
Administrative Assistant for
Councilman George Benson

LS/s

cc: William Justen

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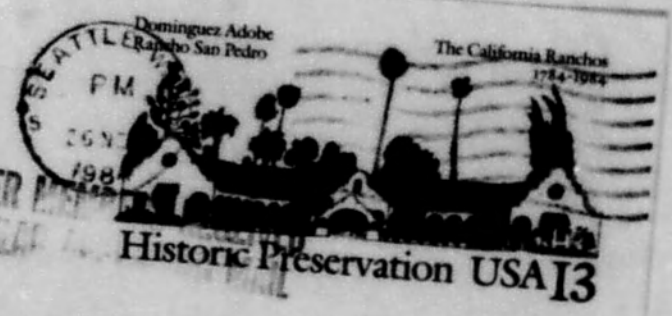
Dr. & Mrs. Wayne J. Timberlake
3335-43 N. E.
Seattle, WA 98105



Councilman Paul Kraabel
Seattle City Council
600 - 4th Avenue
Sea. Wa. 98104

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Please do not allow Children's Orthopedic Hospital to build a helicopter landing pad near their entrance. The existing site, 3 minutes away, is adequate. COH has already impacted Laurelhurst greatly. The noise & potential danger of landing helicopters is just too much. Please share our community's neighborhood concerns & vote against the landing pad.

Thank you
Mrs. Wayne J. Timberlake
(Christy M.) 11-24-84

Dr. & Mrs. Wayne J. Timberlake
3335-43 N. E.
Seattle, WA 98105

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Seattle City Council

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NOV 28 1984
DEPT OF CONSTRUCTION & LAND USE
AND USE DIVISION

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
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Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

November 27, 1984

Dr. and Mrs. Wayne J. Timberlake
3335 43rd N.E.
Seattle, Washington 98105

Dear Dr. and Mrs. Timberlake:

Thank you for your postcard to Mr. Kraabel regarding the proposal to build a helipad at Children's Orthopedic Hospital.

I am told that the application is for a Council Conditional Use permit which will require a decision by the City Council. Such applications are governed by the "Appearance of Fairness" Doctrine whose purpose is to prevent people representing one side or the other in a disputed case from gaining favor through special access to Councilmembers. No one should attempt to communicate directly with Councilmembers concerning the merits of the case outside open public hearings where all sides have an opportunity to present their views. Violation of the doctrine can result in the courts overturning Council decisions which are appealed.

I am forwarding your letter to the Director of the Department of Construction and Land Use so that it will be placed in the official record for consideration by the Council when the application comes before it. The decision on the proposal will be made on the merits of the case contained in the official record.

If you have any questions regarding the above, do not hesitate to call me at 625-2447.

Respectfully,

Claire McKechnie

CLAIRE McKECHNIE, Assistant to
Councilmember Paul Kraabel

Cc: William Juste, Director, DCLU

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Hermia Ip Copy

Seattle
Department of Construction and Land Use

William J. Justen, P.E., Director
Charles Royer, Mayor

December 21, 1984

Patricia Ann Wood
4036 N. E. 45th Street
Seattle, Washington 98105

Dear Ms. Wood:

Thank you for your letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. I believe that providing emergency care for children is a City-wide concern, but there have been numerous phone calls and letters from COH neighbors who are concerned about the particular location of the helistop, which they feel may adversely affect their neighborhood.

My staff is currently reviewing the merits of the proposal, and we have required the COH to put up a large sign to alert the community about the proposal and to submit a checklist on potential environmental impacts of the project. Before a permit can be issued, there must be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by City Council. Your letter and letters of other citizens of the community are included in the official file (CC 84-022), and you will be notified of future hearing schedules and decisions.

I appreciate your interest, and I am glad you took the time to write. If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Very truly yours,

Katy Chaney

FOR WILLIAM J. JUSTEN, P. E.
Director

HI:lld

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CITY COUNCIL TRANSMITTAL

C. F. #

TO:

William J. Justen, Director
Department of Construction and Land Use
01-04-03

Date Sent: Nov. 21, 1984

Reply Requested By: Dec. 10, 1984

Subject:

Patricia Ann Wood

FROM:

Councilman Sam Smith
01-11-01

ACTION — required

	Review and Return File With Your Answer to Sender
	Review and Answer Petitioner, Return File and Copy of Answer to Sender
	Review and Make Recommendations, Return File and Recommendations to Sender ( ) In Duplicate
	Prepare Legislation and Return File to Sender
XXX	Please provide me with a copy of your response to the attached letter.

Additional Information: _____

Ginny Stevenson, Legis. Asst. x2455
Signature

LDI—110—5002 CS 20.19

4036 N.E. 45th Street
Seattle, Washington 98105
November 18, 1984

Mrs. Robert J. (Peggy) Habegger
President, Board of Trustees
Children's Orthopedic Hospita
4530 52nd. N.E.
Seattle, Washington 98105

Dear Mrs. Habegger,

I am writing to you about a deep concern I share with many other COH neighbors---the apparent decision of Children's Orthopedic Hospital to install a helipad.

As a resident of Laurelon Terrace since 1955, as a present condominium owner, the immediate past-president of the Laurelon Terrace Homeowner's Board of Directors, and as an individual, I have been aware of the history, mission and growth of the hospital since it moved into our area. During some of the heavy construction phases, which had significant impact on our lives, I felt that the hospital tried to be a good neighbor, to keep us informed of plans and developments. As recently as the June '84 meeting to inform the community of the latest expansion plans (which recently, I hear, have been at least temporarily abandoned) I was impressed with your personal interest in complaints of noise on the walkway just to the west of the hospital. I felt that you were responsive to reasonable requests.

At the same meeting, however, I asked publicly for Mr. Truman Katz to tell us what further plans they had for a helipad which we had first heard mentioned several years ago. Mr. Katz stated at that public meeting that they had no plans for a helipad at the moment. Such answers to direct questions in June----and the imminence of a helipad in mid-November-does not build cred bility. I feel betrayed!

If you have looked at the map showing the plans for the helipad, you will note that Laurelon Terrace---three blocks and 136 residences---will be the most severely impacted by both approach and return of helicopters whose noise level is only 3 decibels below that of a Huey.

We feel that 15 trips (which will be 30 'single' trips) a month---in the beginning----is totally unacceptable. Once the helipad is in place it will undoubtedly be used for emergency and non-emergency alike. Those of us who live in the area will pay for it in noise pollution, lack of safety, lowering of property values, erosion of our living climate. This is a residential area---it was a totally residential area when Children's Orthopedic elected to relocate here.

I have worked at the University of Washington for 35 years, both in medical research and, most recently, as a supervisor in the clinical laboratory. I do not believe that COH has proven the need for this helipad. At present, truly emergency flights can(and do) land in the University of Washington playfield at "5 Corners". The patient can be transported from helicopter to emergency entrance in less than 5 minutes. (I have seen this happen!) I do not believe the patient would be transferred from helicopter to emergency room from the helipad significantly faster.

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It is hard to address this subject because we not only love children, we're proud of the total facility and the wonderful care that COH provides. We want to be good neighbors. But we think the hospital should seriously consider the impact this request will have on all its neighbors and ask themselves "Is it worth the trip?"

I am well aware of the turmoil currently going on in medical centers in response to DRG's, the Deficit Reduction Act of 1984 and the real struggle of hospitals to survive as we know them. I attended a meeting in September in Nashville with 800 other clinical laboratory directors and I know there are tough times ahead that call for creative strategies. But a helipad should not be used as a marketing tool.

To summarize:

1. COH chose to relocate in a residential area. They should abide with compatible use of our common space.
2. COH's neighbors have been very supportive of the hospital and its mission.
3. We are concerned about the number of trips, the noise pollution, the hazards and the undoubted proliferation of use.
4. Who is going to assume responsibility and reimbursement for property damage? (They do crash!)
5. Who will compensate Laurelon Terrace and other close neighbors for diminished property value? You should be aware that Laurelon has many owners who are not affluent, who would be seriously affected if they lost their investment. Many have worked all their lives to acquire their modest home and do not have the luxury to walk away and relocate.
6. We do not feel that the hospital has proven that a helipad is necessary to survival of any type of patient.
7. There will be a helipad at the University Hospital on its new building which will be finished next spring. We don't need helipads a mile apart.
8. COH has access to a "helipad" within 5 minutes of its door.

I invite your comments on my concerns and would be happy to discuss any of these points with you in depth. Laurelon is my home, which I have worked for many years to secure. I don't want to see its peaceful, liveable climate vanish through unnecessary "progress".

Sincerely

Patricia Ann Wood

Patricia Ann Wood
Home phone 524-27[illegible]
Work phone 545-00[illegible]

cc: William Justen, Director
Department of Construction and Land Use

Jeannette Williams
George Benson
Michael Hildt
Paul Kraabel
Virginia Galle
Norm Rice
Jim Street
Delores Sibonga
Sam Smith

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Please do not allow Children's Orthopedic Hospital to build a helicopter landing pad near their entrance. Their existing landing site, 3 minutes away, is adequate. COH already impacts Laurelhurst greatly. But the noise & potential danger of helicopters is too much! We ask you to hear our neighborhood & Community concerns & to vote against the landing pad.

Thank you, Mrs. Wayne J.
(Christy M.) Timberlake

Dr. & Mrs. Wayne J. Timberlake
3335-43 N. E.
Seattle, WA 98105

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Dr. & Mrs. Wayne J. Timberlake
3335-43 N. E.
Seattle, WA 98105



Historic Preservation USA 13

Councilman Jim Street
Seattle City Council
600 - 4th Ave.
Sea. Wa. 98104

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Dr. & Mrs. Wayne J. Timberlake
3335-43 N. E.
Seattle, WA 98105



Historic Preservation USA 13

Councilman Michael Hildt
Seattle City Council
600-4th Ave.
Sea. Wa. 98104

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Pliase do not allow Childrens Orthopedic Hospital to build a helicopter landing pad near their entrance. The existing site, 5 minutes away, is adequate! COH has already impacted Laurelhurst greatly. The noise & potential danger of helicopters is just too much. We ask you to share our neighborhood and community concerns and to vote against the proposed landing pad. Thank you!

Mrs. Wayne J. Timberlake
(Christy M.)
11-24-84

Dr. & Mrs. Wayne J. Timberlake
3335-43 N. E.
Seattle, WA 98105

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Seattle City Council

RECEIVED
NOV 30 1984
Dept. of Construction & Land Use

November 29, 1984

Dept.

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
Chair
Energy Committee
625-2443

Paul Kraabel
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Urban Redevelopment
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625-2447

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Finance Committee
625-2451

Sam Smith
Chair
Housing, Recreation &
Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Christy M. Timberlake
3335 - 43rd NE
Seattle, WA 98105

Dear Mrs. Timberlake:

Thank you for your letter regarding the helipad at Children's Orthopedic Hospital.

As this matter will eventually come before the Council and Councilmember Jim Street's committee as a Council Conditional Use, he is not able to see your letter at this time due to the "Appearance of Fairness" doctrine which governs such matters. The doctrine's purpose is to prevent people representing one side or the other in a disputed case from gaining favor through special access to Councilmembers. No one should attempt to communicate directly with Councilmembers concerning the merits of the case outside open public hearings where all sides have an opportunity to present their views. Violation of the doctrine can result in the courts overturning Council decisions which are appealed.

When the matter comes before the Council for review, the decision will be made on the merits contained in the official record.

I will forward your letter to the Department of Construction and Land Use and ask that it be placed in the file.

Thank you for taking the time to write. If you have any questions regarding the above, do not hesitate to call me.

Sincerely,

Karen L. Campbell

Karen L. Campbell, Assistant to
Councilmember Jim Street

KC:gm

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Seattle City Council

December 4, 1984

RECEIVED
DEC 05 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Norman B. Rice
President of the City Council
625-2436

George E. Benson
Chair
Transportation Committee
625-2441

Virginia Galle
Chair
Environmental Management
Committee
625-2445

Michael Hildt
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Human Services Committee
625-2455

Jim Street
Chair
Land Use Committee
625-2438

Jeanette Williams
Chair
City Operations Committee
625-2453

Christy M. Timberlake
3335 - 43rd Northeast
Seattle, WA 98105

Dear Ms. Timberlake:

Thank you for your note to Councilmember Hildt expressing your concern about the proposal by Children's Orthopedic Hospital to install a helipad.

As you may know, this request under the zoning code is for a Council Conditional Use permit. The courts have ruled that in site-specific zoning decisions of this type, the City Council sits in a "quasi-judicial" capacity and may not prejudice their decision on the merits of the case by having contact with individuals outside the open, public decision process. To do so could jeopardize the decision in a court challenge. It is for this reason that I am responding on Mr. Hildt's behalf.

I am taking the liberty of forwarding your letter to Nanette Mozeika, the land use analyst working on the COH application, and asking that it be included in the official record on the case. I am also asking Ms. Mozeika to add your name to the mailing list so that you may be notified of the date and time of the Public Hearing before the Hearing Examiner.

Thank you again for taking the time to write.

Sincerely,

Dewey Potter, Assistant to
Michael Hildt, Member
Seattle City Council

DP:ec

cc: Nanette Mozeika, DCLU

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Fk 840222

RECEIVED
DEC 07 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Nov. 26, 1984

TO William Juster, Director
Dept of Construction & Land Use
600 - 4th Ave.
Seattle WA 98104

Dear Mr. Juster,

I vehemently oppose the establishment of a helipad at C.O.H. for several reasons; the noise is deafening for those of us who live near the hospital in a residential neighborhood, there may be night-time landings, interrupting sleep and there is a danger of crashing into our heavily populated area. The VA field is already in use - continue it.

Thank you,

Mrs Frank C. Lull III
4123 - 42nd NE
Seattle WA 98105

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November 28, 1984

RECEIVED
NOV 29 1984
DEPT OF CONSTRUCTION & LAND USE
LAND USE DIVISION

Mr. William Justen, Director
Department of Construction and Land Use
600 4th Avenue
Seattle, Wa. 98104

Dear Mr. Justen,

Re: Helipad proposed for Childrens' Orthopedic Hospital

As a resident of the area near the hospital I wish to express my concern regarding the placing of a helipad at the hospital. It will be noisy and dangerous. This is a residential neighborhood. The hospital chose to locate here, and must not continue to encroach on the rights of the citizens and property owners.

The present arrangement of landing on the intramural field with an aid car standing by has proven very successful, and should be continued. The University Hospital will have a helipad on its roof in the near future and is only 5 minutes from Childrens Orthopedic.

Once built flights are apt to become more frequent with larger and noisier helicopters used. A crash on a densely populated neighborhood is a distinct possibility of this is allowed to go through.

Please give this matter very careful consideration, and help preserve our residential neighborhood.

Sincerely,

Lillian J. Mills

Mrs. H. C. Mills
3921 47th Avenue N.E.
Seattle, Wa. 98105

524 0209

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Cleo

Holly/Ashley Ap

FYI

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

December 19, 1984

Ms. Nancy Lawrence
10660 Lakeside Avenue N.E.
Seattle, Washington 98125

Dear Ms. Lawrence:

Thank you for your recent letter regarding the Children's Orthopedic Hospital (COH) application for a permit to install a helistop on the hospital grounds. I agree that providing emergency care for children is a City-wide concern, but there have been numerous phone calls and letters from COH neighbors who are concerned about the particular location of the helistop, which they feel may adversely affect their neighborhood.

William Justen, Director of the Department of Construction and Land Use (DCLU), tells me that before a permit can be issued, there must be an environmental review, a public hearing conducted by the Hearing Examiner, and a Conditional Use approval by City Council. DCLU has required the COH to put up a large sign to alert the community about the proposal and to submit a checklist on potential environmental impacts of the project. Your letter and letters of other citizens of the community are included in the official file (CC 84-002), and you will be notified of future public hearing schedules and decisions.

I appreciate your interest, and I am glad you took the time to write. If you have any other questions, please call Mrs. Hermia Ip, the Land Use Specialist assigned to this project, at 625-4509. She will be glad to help you.

Sincerely,

(SGD) CHARLES ROYER

Charles Royer

CR:hir

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Nov 25 1984
~~2345~~ 3305 - 43rd Ave
Seattle

Dear Mr Rice:

As Laqueduct residents
at 3305 - 43rd St. NEast (across
from Gideons where we met you
before your campaign) we strongly
oppose the COH Helicopter
Landing pad. The present
site / landing is very adequate
& only because the Swedish
Hospital & other private care
centers that COH is facing stiff
competition. We are trying
to keep this neighborhood a
residential area not
commercial as our daughter

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and our children have just
purchased a house 2
blocks from 60th as you
would expect we are concerned
about the issue. As a long
member & long standing + here
supported Colt for 30 years
& various mayor & fire
chiefs time they are overstepping
the authority & good will of
the neighbor We do NOT
want any helicopter pad on
that site

Very truly
Sherley & Bill Gorman

NOTICE: IF T[illegible]OCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE,
IT [illegible]UE TO THE QUALITY OF THE DOCUMENT.

November 15, 1984

Mrs. Robert J. Habegger
President, Board of Trustees
The Children's Orthopedic Hospital
4530 52nd N.E.
Seattle. Washington 98105

Re: Proposed helipad COH

Dear Mrs. Habegger:

Please bear in mind as you read the following that I write to you as a concerned citizen and that I love children for whom I want the best possible care.

Are you aware of the extreme enmity and disapproval created by the COH and deeply felt by neighbors of COH relative to the proposed plans for a helipad and the method in which these plans have been handled? This is undesirable and unnecessary. Neither you nor I want this.

A helipad at COH in the heart of a residential, densely populated neighborhood is neither wise nor safe. This is true not only for the residents of the neighborhood but also for the hospital patients and personnel, the children at the nearby elementary school, the senior citizens of the future retirement home at the Villa, the residents of condominiums on both sides of Sand Point Way and nearby apartment buildings, residents of Ronald Macdonald House, and the city housing complex near it.

Environmental impact of noise is only one detrimental factor. Safety of landing and take-off of a helicopter in a high-density population area is a second factor to be taken very seriously. Lowering of property values is yet another factor to be considered. Environmental impact created by COH already is felt via ambulance and traffic generated in the residential neighborhood. This is further institutional encroachment in our neighborhood.

Emergencies to which a helicopter would respond could occur anytime during day or night hours. We in this neighborhood (as in others) experienced the low-flying helicopter during the gypsy moth spraying and know the uneasy feeling and noise factor first hand. To have a helicopter land in one's front yard or atop one's roof, so to speak, would be unbearable. It would create unnecessary upset to the patients at COH and to the children at the elementary school, to senior citizens, and to families nearby.

My request is that you and the Board take the necessary steps immediately to cancel the proposed plans for the helipad. I further request that COH and the University of Washington work in cooperation not competition for a helipad at University Hospital rather than at COH. Two helipads located so close together are not needed and constitute duplication of huge and unnecessary expenditures.

In addition, I request that you honestly pursue the following:

1. Research the difference between present helicopter landing in soccer field, UW, and ambulance taking patient to COH (reportedly three-minute run) vs helicopter landing atop roof, transfer to stretcher and down ramp to emergency entrance. Would three minutes really be saved? No, not really. Would handling of and moving of patient be minimized? No, not really.

Further question here: How many, if any, patients have been injured or died as a result of present arrangement?

It is the quality of care in ambulance or helicopter not the mode of transport. not the three-minute time differential that spells the difference between life or death outcome. The quality of care given by Seattle's ambulance service(s) is second to none.

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2. Examine the records of COH. You will find that initially in the building program COH stated there would be no further expansion. This has not been adhered to. In addition, at one time, COH stated that it would not build a helipad. This is now being ignored.

   The application for helipad construction contains incorrect and incomplete data. Also, no certification of need is on record. What is the perceived need?

   Credibility of the COH Board of Trustees is diminished and is at stake. Likewise, citizen support for COH will diminish and be at stake. Thus, even now the projected number of "approximately 15 flights a month" is not believed. Furthermore, the number of flights cannot be controlled once a service is offered, as you know.

3. Consider building an emergency unit on UW soccer field <u>if</u> this is needed to meet helicopter upon landing and before drive to COH by ambulance. There patient could be placed on stretcher, emergency measures administered, then taken to emergency entrance at COH with minimal moving. (Although this is an alternative possibility, this construction is very likely not needed.)

Do you care about what the neighbors of COH think? Do you care about alternatives to helipad at COH? Do you care about saving money by COH working cooperatively with the UW and University Hospital? Do you care that many citizens' rights are being abridged and disregarded?

To reiterate, please know that I am a concerned citizen and a person who loves children and cares about them. I also am concerned and care about the quality of environment and quality of life for the senior citizens as well as the young couples with children who live in close proximity to COH.

Please consider carefully these ideas, these opinions (held by me and many, many others). Please take necessary and positive action. Please contact me. Thank you.

Sincerely,

Maryann E. Spangler

Mrs. Maryann E. Spangler
4013 N.E. 46th Street
Seattle, Washington 98105

524-4151

cc: William Justen - Dept. of Construction & Land Use
Seattle City Council members: [with cover memo]

George Benson	Jim Street
Michael Hildt	Delores Sibonga
Paul Kraabel	Sam Smith
Virginia Galle	Jeannette Williams
Norm Rice	

Anita Francis - Laurelhurst Community Club
Laurelon Condominium Board

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EASTERN PENNSYLVANIA
EMERGENCY MEDICAL SERVICES COUNCIL

1405 N. Cedar Crest Boulevard
Suite 104, Allentown, PA 18104

(215) 820-9212

Serving the Counties of Berks • Carbon • Lehigh • Monroe • Northampton • Schuylkill

George H. St. George
President

A. J. Heightman
Executive Director

December 17, 1981

(215) 820-9212

A. J. HEIGHTMAN
EXECUTIVE DIRECTOR

EASTERN PENNSYLVANIA
EMERGENCY MEDICAL SERVICES COUNCIL
1405 N. CEDAR CREST BOULEVARD
ALLENTOWN, PA 18104

Mr. Ellwyn Spiker, Administrator
Allentown and Sacred Heart Hospital C
P. O. Box 689
Allentown, PA 18105

Dear Mr. Spiker:

On Wednesday, November 18, 1981, the Board of Directors of the Eastern Pennsylvania EMS Council accepted the enclosed document and conditions as presented by the EMS Council Staff and Committee Chairmen for the approval of the Pre-Hospital Medevac Helicopter Proposal of the Allentown and Sacred Heart Hospital Center.

A twenty-eighth condition was added by the Board of Directors along with the approval of the review document. This twenty-eighth condition was that "the EMS Council's conditional approval of the helicopter madevac proposal would become effective upon Allentown and Sacred Heart Hospital Center's acceptance of conditions set forth by the Pennsylvania Department of Health for provisional designation of the Allentown and Sacred Heart Hospital Center as a trauma center". I have received a copy of your facility's December 10th letter to the Department of Health, formally assuring the Department of Health that the Hospital Center will meet all conditions in the designated time frames. Therefore, I assume that the Hospital Center will soon receive trauma center designation from the Department of Health.

The purpose of the EMS Council's review of your proposal was to insure this program's compatability with the Eastern Pennsylvania EMS System being developed within the counties of Berks, Carbon, Lehigh, Monroe, Northampton, and Schuylkill.

The EMS Council's approval of the Allentown and Sacred Heart Hospital Center Pre-Hospital Medevac Program is conditional upon our receipt of a written assurance from you, as the Chief Administrator of Allentown and Sacred

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Heart Hospital Center, that the hospital center will meet all twenty-eight conditions specified.

I realize that some of the conditions set forth will take some time to implement and some may need further clarification to be acceptable to, and implemented by, your institution. I am available to meet with you and any members of your staff to further discuss any of the conditons specified in the EMS Council's approval of the medevac program.

I await your reply.

Sincerely,

A. J. Heightman
Executive Director

AJH/dmm

cc: George H. St. George
William C. Dethlefs
H. Arnold Muller, M.D.
Charles Wolferth, M.D.
Peter Archey
John Stafford, M.D.
George E. Moerkirk, M.D.
Donald H. Gaylor, M.D.

Enclosures

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Allentown and Sacred Heart Hospital Center

P.O. Box 689 • 1200 South Cedar Crest Boulevard, Allentown, PA 18105

December 22, 1981

Mr. A.J. Heightman
Executive Director
Eastern Pennsylvania Emergency
Medical Services Council
1405 N. Cedar Crest Boulevard
Suite #104
Allentown, PA 18104

Dear Mr. Heightman:

I am in receipt of your letter of December 17, 1981, with attachments including the document "Eastern Pennsylvania Emergency Medical Services Council Review of Allentown and Sacred Heart Hospital Center Pre-Hospital Helicopter Proposal", with a revision date of December 17, 1981. The later document lists the twenty-eight conditions specified for EMS Council approval.

As Chief Executive Officer of the Allentown and Sacred Heart Hospital Center, I give you my assurance that the Hospital Center will meet all the conditions specified. It is understood that some of the conditions set forth will take some time to implement and some may need further clarification to be acceptable to the Hospital Center. We accept your invitation to meet with you and your staff to further discuss the conditions specified.

Mr. Gary Steinberg will coordinate this activity for the Hospital Center.

Sincerely yours,

Ellwyn D. Spiker
Administrator

EDS:emf

cc: Mr. George H. St. George
Mr. William C. Dethlefs
H. Arnold Muller, M.D.
Charles Wolferth, M.D.
Mr. Peter Archey
John Stafford, M.D.
George E. Moerkirk, M.D.
Donald H. Gaylor, M.D.

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EASTERN PENNSYLVANIA EMERGENCY MEDICAL SERVICES COUNCIL
REVIEW OF ALLENTOWN AND SACRED HEART HOSPITAL CENTER
PRE-HOSPITAL HELICOPTER PROPOSAL

The following committees of the Eastern Pennsylvania EMS Council have reviewed the Allentown and Sacred Heart Hospital Center proposal which was submitted to the Eastern Pennsylvania Health Systems Council for establishment and operation of a pre-hospital helicopter medevac program:

Pre-Hospital Care and Transportation Committee
EMT Training Subcommittee
Communications Technical Advisory Subcommittee
Categorization Committee
Medical Command Subcommittee
Special Chairman's Ad-Hoc Committee

The main intent in the EMS Council's review and comment on this proposal was to insure that the pre-hospital phase of the program was developed, or would be modified, to be compatible with the Eastern Pennsylvania EMS System being developed with the Counties of Berks, Carbon, Lehigh, Monroe, Northampton, and Schuylkill. Although considered important, it was not the EMS Council's intent to review the cost effectiveness of this program, since it was realized that this would be carried out by the Eastern Pennsylvania Health Systems Council during its review of the Allentown and Sacred Heart Hospital Center CON Application.

The Eastern Pennsylvania EMS Council has been charged by the State and Federal Government with developing a total Emergency Care System within Eastern Pennsylvania. During the development of such a system, the EMS Council must follow State and Federal guidelines. The guidelines established for the development of an EMS System require that primary and secondary modes of transportation be developed and available for use within the system. Secondary transportation includes mobile intensive care units, water vehicles, snowmobiles, helicopters, fixed wing aircraft, etc. Therefore, the EMS Council review of proposals for development and implementation of secondary transportation systems which will impact a large portion of the Eastern Pennsylvania EMS Region is appropriate.

Each committee, and the EMS Council Staff, following their review of this project, has recommended conditional approval of this project.

EMS Council approval of the Allentown and Sacred Heart Hospital Center Pre-Hospital Helicopter Medevac is conditional upon the Council's receipt of a written assurance from the Chief Administrator of the Allentown and Sacred Heart Hospital Center that the hospital center will meet all conditions specified.

The EMS Council's Categorization Committee, on October 7, 1981, approved a motion (11 to 3) to support the medevac program with all concerns which had been expressed by the committee forwarded to the EMS Council Board of Directors along with the recommendation for support. The concerns of the Categorization Committee were included in detailed minutes of the October 7th

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Categorization Committee Meeting. Principle concerns expressed at the Categorization Committee level have been: the service area for the proposed medevac service; impact of this service on the Reading Hospital and Medical Center when this facility is designated as a trauma center; the feeling that all Category 1 trauma patients do not have to be transported directly to a trauma center; and possible delays in patient care if helicopter transport is selected in cases where ground transport resources are readily available to transport the patient to a trauma facility more rapidly.

It is important to note that in 1980, the Categorization Committee, EMS Council Board of Directors and the region's hospitals approved the EMS Council's "Patient Triage and Hospital Classification Guidelines" which recommend the transport of severe multiple systems injury patients directly to one of two facilities classified within Eastern Pennsylvania as Advanced in the area of trauma care if the pre-hospital emergency services can reach either facility within twenty minutes after leaving the scene off an incident. It is understood that, as one of the two facilities recognized as advanced in the area of trauma care, the Allentown and Sacred Heart Hospital Center proposes to utilize the medevac helicopter to assist in getting severe multiple system trauma patients to their facility within twenty minutes after leaving the scene of an incident.

These triage guidelines further recommend that if a pre-hospital emergency service cannot get the patient to one of these facilities within twenty minutes, the patient should be taken to the closest most appropriate hospital facility that can provide care for the patient. It is at this point that arrangements for transfer to a higher level facility are to be made according to other EMS Council and hospital approved guidelines.

The Categorization Committee's revised (May 1981) Acute Trauma Transfer and Treatment Protocols are recommended for use "if the physician performing the initial patient assessment determines a transfer to a more advanced facility or trauma center is necessary". These guidelines further recommend that:

1. If feasible, transfers should occur within the first hour following injury.

2. Land transfers should utilize, if possible, a Mobile Intensive Care Unit with personnel capable of providing ALS care during transport.

3. Air transfer may be considered by the receiving physician.

4. The trauma center may assist with providing transportation.

With these facts presented, and to keep the helicopter program within the framework of the existing Eastern Pennsylvania EMS System, the conditions given for EMS approval of the Allentown and Sacred Heart Hospital Center Project are:

1. The Allentown and Sacred Heart Hospital Center Medevac Helicopter be utilized to transport serious multiple system injury patients directly from the scene of an incident within the response zones presented by the Allentown and Sacred Heart Hospital Center to the closest designated Trauma Center, unless a specific Trauma Center

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is requested by the patient/family or a ground transportation unit can transport the patient to a trauma center in less time than it would take to mobilize the Allentown and Sacred Heart Hospital Center Helicopter and have the patient airlifted to a trauma center.

2. The Allentown and Sacred Heart Hospital Center Medevac Helicopter be made available to transfer serious multiple systems injury trauma victims from Schuylkill County hospital facilities to the Reading Hospital and Medical Center, when that facility is designated as a Trauma Center, utilizing the same rate plan as will be used for patients transferred to the Allentown and Sacred Heart Hospital Center Trauma Unit via helicopter.

3. The Allentown and Sacred Heart Hospital Center Medevac Helicopter respond (if available) and transport Class 1 trauma patients directly from a pre-hospital setting when:

   Requested by a field unit for a patient which is to be transported to the Allentown and Sacred Heart Hospital Center, the transport time (air time) from a scene or rendezvous area to the Allentown and Sacred Heart Hospital Center will not exceed 20 minutes and a ground transportation unit cannot transport the patient to the Allentown and Sacred Heart Hospital Center in less time than it will take to mobilize the helicopter and have the patient transported to that facility.

4. Allentown and Sacred Heart Hospital Center develop a written procedure in conjunction with the Eastern Pennsylvania EMS Council for helicopter rendezvous at hospitals and at locations convenient for ambulances already enroute to the Allentown and Sacred Heart Hospital Center, whenever the helicopter has been requested and it is known that:

   a. The patient is ready for transport and the helicopter will be delayed in arriving at the scene.

   b. The ambulance unit, with the patient stabilized as much as possible, can transport the patient to a nearby hospital facility in a shorter amount of time than it will take for the helicopter to meet that unit.

   (This will insure that unnecessary delays in patient care or transport do not occur due to field units waiting for the helicopter's arrival, and will, in many cases, allow the closest hospital to provide additional patient care, such as IV therapy, prior to the arrival of the helicopter.)

5. Allentown and Sacred Heart Hospital Center agree to enter into written agreements with specialty centers developed within the Eastern Pennsylvania EMS Region, if and when these centers request to have helicopter transfer capabilities available to them.

6. Allentown and Sacred Heart Hospital Center develop a "fly-by" policy with the Reading Hospital and Medical Center, when that facility is designated as a Trauma Center, to insure that multiple systems injury trauma patients normally transported to the Allen-

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town and Sacred Heart Hospital Center would be airlifted to Reading Hospital whenever the critical care capabilities at the Allentown and Sacred Heart Hospital Center are over-taxed.

7. Allentown and Sacred Heart Hospital Center agree to develop a procedure to be utilized for the transport of blood or blood components to any Eastern Pennsylvania Hospital or disaster scene in critical need of these supplies.

8. Allentown and Sacred Heart Hospital Center agree to prepare quarterly reports which will provide the following information on all trauma patients transported to the Allentown and Sacred Heart Hospital Center:

   a. Patient Origin Information

   b. Method of transport to Allentown and Sacred Heart Hospital Center (name of ambulance service or helicopter).

   c. Helicopter flight times to scene, time spent at scene, and flight time to hospital facility.

   d. Patient diagnosis

   e. Type of surgical interventions performed.

   f. Patient outcome and length of stay.

   These quarterly reports will maintain patient confidentiality and be made available for review by a review committee designated by the Eastern Pennsylvania EMS Council.

9. Allentown and Sacred Heart Hospital Center develop an educational program for pre-hospital care providers concerning how to:

   a. Properly utilize the helicopter in conjunction with the region's Patient Triage and Hospital Classification Guidelines.

   b. Mobilize the helicopter.

   c. Function safely near the helicopter.

   d. Set-up proper landing areas for the helicopter.

   e. Obtain patient information and any equipment airlifted with the patient.

10. Allentown and Sacred Heart Hospital Center utilize a name other than "Paramedic" to designate the pre-hospital technicians employed on the medevac helicopter since these technicians are reportedly going to act as agents of the Allentown and Sacred Heart Hospital Center and not be functioning within the existing Eastern Pennsylvania Medical Command and Control System for Paramedics.

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11. Allentown and Sacred Heart Hospital Center work with the region's Advanced Life Support Medical Control Officer to develop a mechanism whereby personnel employed by the Allentown and Sacred Heart Hospital Center Medevac Program and holding Pennsylvania State Paramedic certification within Eastern Pennsylvania could maintain their State certification through involvement with other volunteer or paid Paramedic units operating within the Eastern Pennsylvania Medical Command/Control System, if they so desire.

12. Allentown and Sacred Heart Hospital Center develop a mechanism acceptable to the EMS Council which will allow for the quick return or replacement of equipment and/or supplies utilized by field crews on a medevac case or transported along with the patient via helicopter to a Trauma Center. This includes the return of items such as backboards, as well as arrangements to replace items such as endotracheal tubes and intravenous supplies used by ALS units prior to the transport of the patient by helicoptar.

13. Allentown and Sacred Heart Hospital Center Medevac Program have each county's central dispatch center serve as the activation agency for the helicopter whenever it is requested by a field unit.

14. Allentown and Sacred Heart Hospital Center Helicopter operate through each county's communications network in a manner identical to other existing EMS response units. The helicopter will sign-in service with the county communications center in the county where the mission is located; sign-off at the scene; sign enroute to its hospital destination; sign-off when at the destination hospital and notify the communications center when the helicopter is ready for another mission.

15. If it is decided in the future that the Allentown and Sacred Heart Hospital Center pre-hospital technicians will work within the region's Paramedic Medical Command/Control System, the Allentown and Sacred Heart Hospital Center will work in conjunction with the EMS Council and the Region's Medical Control Officer to insure conformance to the ALS system policies, procedures, and protocols.

16. A cardiac defibrillator be added to the capabilities of the helicopter.

17. The medevac helicopter, serving as a pre-hospital EMS patient transportation vehicle, participate in the Eastern Pennsylvania regional standard recordkeeping system, with a reportform completed by the crew following each mission. These forms are to be returned to EMS through currently established procedures.

18. All nurses assigned to the medevac helicopter become certified to the Pennsylvania Department of Health Emergency Medical Technician (EMT) I level within one year after the start of the pre-hospital helicopter program. Additionally, all new nurses entering the medevac program will hold current EMT-I certification.

19. Allentown and Sacred Heart Hospital Center develop a more acceptable method which will allow pre-hospital personnel who have had an at-scene/helicopter interface and whose patient was transported via the Allentown and Sacred Heart Hospital Center Medevac Helicopter, to obtain necessary patient information . it cannot be obtained prior to the helicopter transport of the patient.

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20. Allentown and Sacred Heart Hospital Center attempt to have hoist capabilities on the helicopter to assist in removing victims from inaccessible locations.

21. The medevac helicopter will only respond to emergency scenes when requested and will return to service when cancelled by at-scene personnel.

22. Allentown and Sacred Heart Hospital Center will work with each Eastern Pennsylvania hospital facility to insure that predetermined, easily accessible and safe helicopter landing facilities are available within close proximity to each hospital on a 24-hour basis.

23. The Allentown and Sacred Heart Hosptial Medevac Helicopter carry a set of Adult and Child Size Jobst Three-Section Medical Anti-Shock Trousers, with single control gauges, for exchange with pre-hospital crews that apply MAST prior to the arrival of the helicopter. The emergency crews' own pair of MAST, if utilized on a patient that is airlifted, shall be returned in a timely fashion to that crew following their removal from the patient.

24. If the helicopter medevac service is cancelled while enroute to a scene due to a reassessment which indicates that helicopter transport of a patient is not necessary and the mission is terminated, neither the patient or the emergency crews at that scene shall be billed for use of the helicopter.

25. Allentown and Sacred Heart Hospital Center shall work in conjunction with the EMS Council to attempt to have Pennsylvania Turnpike helicopter coverage areas (ie., between the Lehigh Tunnel area and the Pocono Exit of the Northeast Extension) re-evaluated and reassigned to the closest available helicopter and/or Paramedic response service so that unnecessary delays in the delivery of advanced emergency medical care and transport are avoided.

26. The geographic boundaries for helicopter coverage of the Eastern Pennsylvania EMS Region are recognized as those exhibited (Primary and Secondary Zones) on the attached map provided by Allentown and Sacred Heart Hospital Center, with it understood that medevac service to all parts of the Eastern Pennsylvania EMS Region would be available upon the request of Eastern Pennsylvania pre-hospital units and hospital facilities. It is to be understood that patients picked up in the secondary zone area of the map will be transported to the Reading Hospital and Medical Center when that facility is designated as a trauma center by the Pennsylvania Department of Health.

27. Special educational programs be developed and implemented by Allentown and Sacred Heart Hospital Center for Eastern Pennsylvania police departments, particularly the Pennsylvania State Police, to orient them about the medevac program and the need for proper scene control during medevac missions.

28. The EMS Council conditional approval of the helicopter medevac proposal would become effective upon Allentown and Sacred Heart Hospital Center's acceptance of conditions set forth by the

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Pennsylvania Department of Health for provisional designation of the Allentown and Sacred Heart Hospital Center as a trauma center.

Prepared in compliance with recommendation made by the EMS Council Staff, Eastern Pennsylvania EMS Council Committees, and EMS Council Committee Chairmen.

A. J. Heightman
Executive Director

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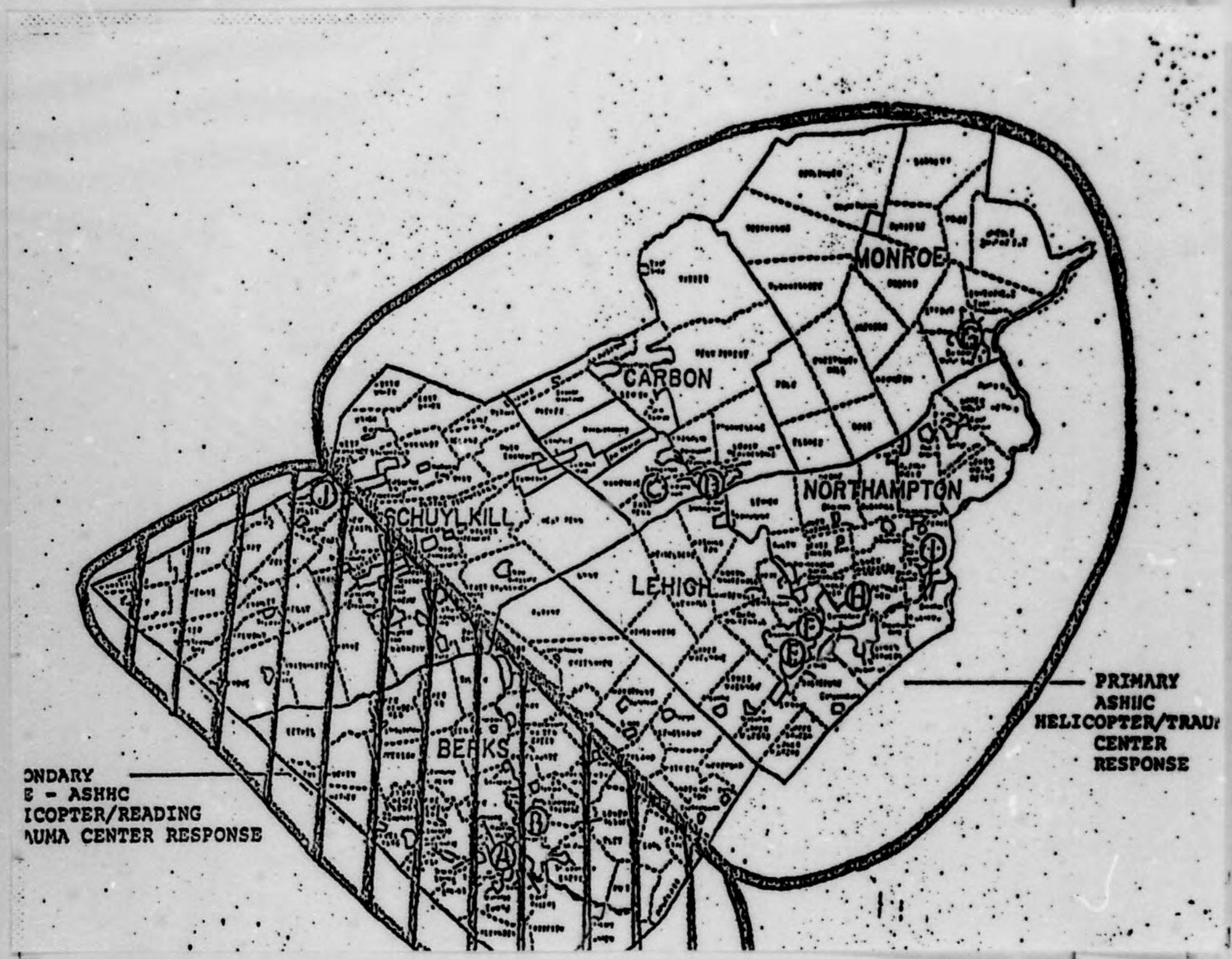
MONROE
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E - ASHHC
ICOPTER/READING
AUMA CENTER RESPONSE

Allentown and Sacred Heart Hospital Center

P.O. Box 689 • 1200 South Cedar Crest Boulevard, Allentown, PA 18105

December 10, 1981

Donald Reid, M.D.
Executive Deputy Secretary
Department of Health
Commonwealth of Pennsylvania
P.O. Box 90
Harrisburg, Pennsylvania 17120

DEC 14 1981

EASTERN PE... EMS COUNCIL

Dear Doctor Reid:

Let me express my appreciation to you and your staff for assisting the Allentown and Sacred Heart Hospital Center in its efforts to achieve designation as a trauma center.

The Allentown and Sacred Heart Hospital Center formally accepts the Department of Health's designation as an areawide trauma center. In accordance with your recommendation that the Hospital Center define its area of service, the Hospital Center is prepared to provide this important service to residents of the ten-county area delineated in our response to the request for proposal.

With respect to the specific conditions attached to the offer of designation, we are providing formal assurance that the Hospital Center will meet all conditions in the designated time frames. As you may know, we have received approval of our project from the Emergency Medical Services Council subject to clarification of some operational details. These operating details will be worked out in the next few months.

Our understanding based on our discussion with you is that the only item that limits the Allentown and Sacred Heart Hospital Center from achieving designation as a regional trauma center at this time is lack of a formal active research program. Within the next year our trauma program, under the direction of Donald Gaylor M.D., Chief of Surgery, and Michael Rhodes, M.D., traumatologist, will be expanded to increase the amount of research performed at the Hospital Center. As a result, we will seek designation as a regional center within a year.

Finally, as you may be aware, the Hospital Center has submitted a Certificate of Need Application for a 16-bed shock trauma unit and the purchase of a helicopter to carry out this responsibility to our ten-county area.

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Again, let me express my thanks for your assistance and cooperation in this process.

Sincerely yours,

Gary Steinberg
Associate Administrator

GS:klb

enclosure

cc: Health Systems Council
of Eastern Pennsylvania, Inc.
546 Hamilton Street
Fourth Floor
Allentown, Pennsylvania 18101

Eastern Pennsylvania
Emergency Medical Services Council
1401 Cedar Crest Boulevard
Suite 53
Allentown, Pennsylvania 18104

Mr. Richard Fleming, Chairman of the Board
Mr. Ellwyn D. Spiker, Administrator

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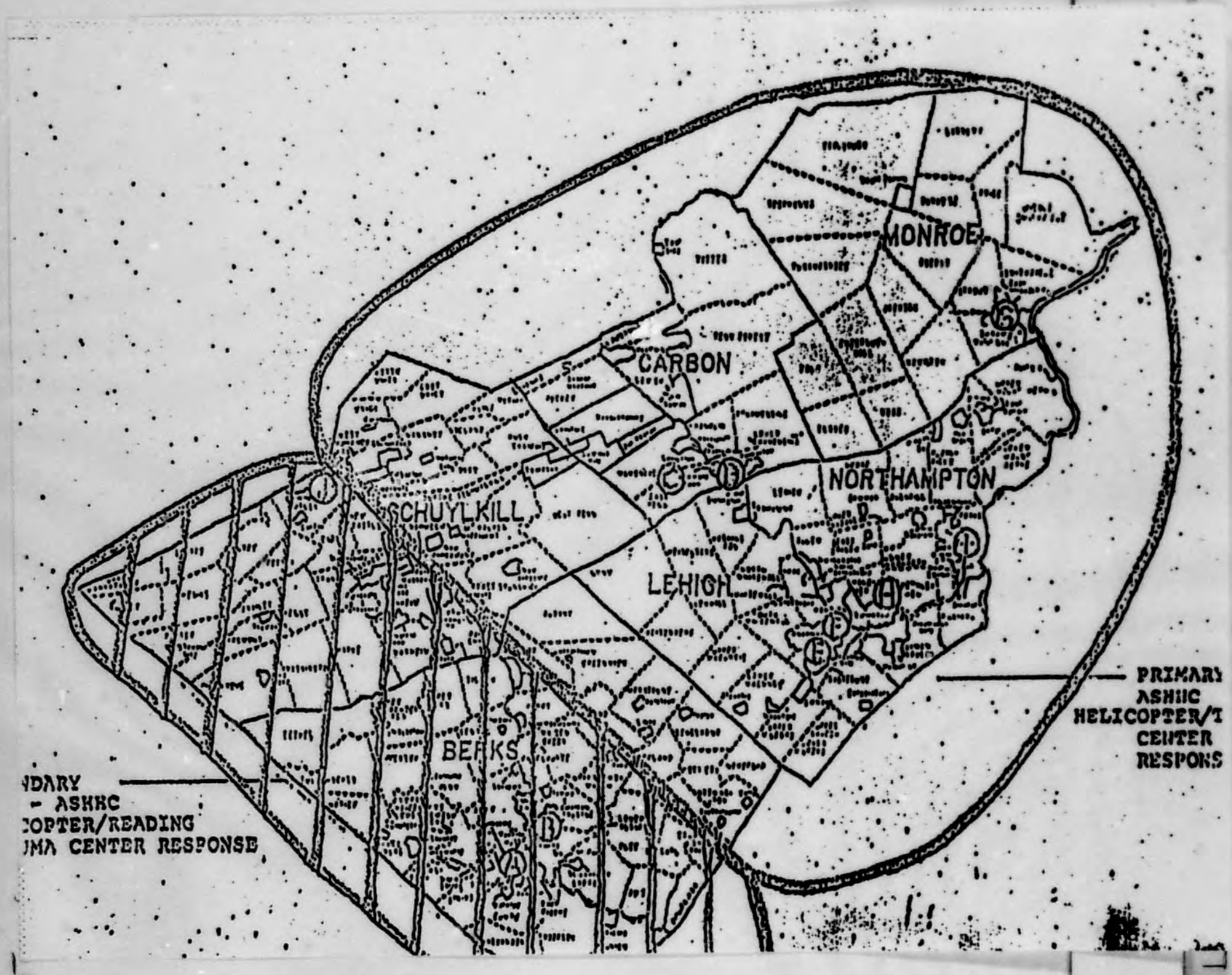
MONROE
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SCHUYLKILL
LEHIGH
BERKS
PRIMARY
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HELICOPTER/T
CENTER
RESPONS
NDARY
- ASHRC
COPTER/READING
JMA CENTER RESPONSE

MEDEVAC

FLIGHT NO. _____

On – Scene Call Information

Patient I. D. Number	Age	Sex M F	Date / /
BLS UNIT	Pick-Up Location		
ALS UNIT			

INITIAL	TIME	INITIAL	TIME
CALL RECEIVED AT COMM. CENTER		MEDEVAC PUT ON STANDBY	
AMBULANCE DISPATCH	BLS ALS	MEDEVAC REQUEST	
AMBULANCE ENROUTE	BLS ALS	MEDEVAC ENROUTE	
AMBULANCE ARRIVE SCENE	BLS ALS	MEDEVAC ARRIVE SCENE	
TIME PT. READY FOR TRANSPORT		MEDEVAC DEPART SCENE	
AMBULANCE DEPART SCENE		MEDEVAC ARRIVE HOSPITAL	
AMBULANCE ARRIVE RENDEZVOUS/HOSPITAL		Patient Trapped YES NO	Length Of Entrapment / Time Pt. Was Extricated

VITAL SIGNS

INITIAL VITALS AT SCENE BY BLS/ALS	TIME:	INITIAL VITALS AT SCENE BY MEDEVAC	TIME:	INITIAL VITALS AT TRAUMA UNIT	TIME:
LOC	BP	LOC	BP	LOC	BP
PULSE	RR	PULSE	RR	PULSE	RR
Apparent Injuries:		Apparent Injuries:		Injuries Found:	
		RX BY FLIGHT CREW: IV ET TUBE MAST OTHER _____			

CLOSEST APPROPRIATE HOSPITAL TO SCENE: _____ APPROX. MILEAGE: _____ APPROX. MINS. BY LAND: _____

REASON MEDEVAC REQUESTED AND SCENE HISTORY (i.e., Patient Status, Time, Weather, Access, Road Conditions)

TOTAL TIME:
1. Pre-Hospital care arrival to MedEvac arrival at scene: _____ minutes
2. Ambulance dispatch to patient's arrival at Trauma Unit: _____ minutes
3. MedEvac requested to patient's arrival at Trauma Unit: _____ minutes

HOSPITAL'S PATIENT CLASSIFICATION: ☐ MULTI-TRAUMA ☐ MAJOR ☐ MINOR

SURGICAL INTERVENTION: YES NO IF YES, within: 1 HR 2 HRS 3 HRS 4 HRS > 24 HRS RESUSC THORACOTOMY

DISPOSITION:
- A Admitted ICU p Surgery
- B Admitted ICU
- C Admitted House
- D Died ECU
- E Died in O. R.
- F Died in ICU
- G Died Inhouse
- H D. O. A.
- I Transferred: _____

LENGTH OF STAY: _____ DAYS ☐ DISCHARGED

EASTERN PENNSYLVANIA E. M. S. COUNCIL (215) 820-9212

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DRAFT

EASTERN PENNSYLVANIA
EMERGENCY MEDICAL SERVICES COUNCIL
TRAUMA REVIEW COMMITTEE

DRAFT

Lehigh Valley Hospital Center Board Room
Friday, August 30, 1985
1:00 P.M.

MINUTES

PRESENT

Lois Altemose, R.N.
Mr. Leon Bergstresser
Mr. Michael Emery
Mr. Rick Frazier
Mr. Oscar Heinbach
George E. Moerkirk, M.D.
Joan Krammes, R.N.
Evan C. Reese, Jr., M.D.
Judy Roberts, R.N.
Joseph Stella, D.O.
Charlotte Yeager, R.N.

STAFF

A.J. Heightman, Executive Director
Annamarie T. Robertone, EMS Representative

GUEST

Mr. Charles Hafer

The meeting was called to order at 1:10 P.M. by Dr. Evan Reese, Committee Chairman. Minutes from the May 17, 1985 meeting were discussed. No addition or corrections were made. A motion was made by Dr. Stella, seconded by Dr. Moerkirk to approve the minutes as read.

Dr. Reese informed this committee that the Pre-Hospital Care and Transportation Committee was charged by the Council's Executive Committee with reviewing the current MedEvac Dispatch procedures. The committee addressed the MedEvac Dispatch Procedures at their August 5, 1985 meeting and made the following recommendations.

> "To recommend to the EMS Executive Committee and Board of Directors that the Eastern Pennsylvania Region return to the original dispatch system for MedEvac".

In addition, the following additional recommendations were unanimously recommended by the committee.

1. EMS work with MedEvac Administrative staff to create a reminder checklist similar to the Bally example, to be provided to services interested in utilising it.

2. Whenever possible, physician input be maintained by at-scene personnel after MedEvac has been dispatched.

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3. A brief checklist or decal be prepared by EMS and MedEvac for use by communication center personnel to encourage presentation of all necessary information when using MedEvac.

   a. Is oxygen being administered?
   b. Are MAST applied on the patient?
   c. Will MAST command be utilized?
   d. Will the patient be packaged and ready for airlift when MedEvac lands?

4. The Trauma Review Committee set parameters for cases valid false positive, non-valid and valid trauma/non-valid means of transportation which the system should not exceed. Also, have letters sent to services whose cases are declared non-valid trauma/non-valid means of transportation by the Trauma Review Committee.

5. The existing command physician MedEvac cancellation reporting system be maintained and followed up on whenever MedEvac reports a flight which was cancelled by a command physician.

The committee also recommended that Geisinger Medical Center be contacted and asked to participate in our Trauma Review Process for all cases they handle in the Eastern Pennsylvania EMS Region.

Dr. Reese informed the committee he would contact Life Flights' director and ask for their participation in the review. Dr. Reese also informed the committee that the Council's Executive Committee approved these recommendations pending the Trauma Review Committee's approval.

Discussion was called for. Being none, a motion was made by Dr. Moerkirk and seconded by Lois Altemose to accept the Pre-Hospital Care and Transportation Committee's recommendations as read. The motion was unanimously approved with Charlotte Yeager abstaining.

Mr. Heightman commented that in reviewing past MedEvac cases, the staff questioned if the patient needed to be transported to the landing site, how it was being shown on the sheet? Rick Frazier informed Mr. heightman that if the "Ambulance Depart Scene" section is filled in, then the patient was loaded and transported to the helicopter.

Mr. Heightman also commented that a problem exists with the patient not being ready for flight when the helicopter arrives. A copy of the MedEvac Alert - Summer 1985 newsletter addressing this issue was distributed to the committee members.

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MEDEVAC REVIEW 10/05/84 THROUGH 03/31/85:

CASE NO. 1012:

This case was not classified by the EMS Council staff. The staff felt not enough information was presented to determine the validity of this flight. Dr. Moerkirk informed the committee this was an accident at Pocono Raceway and he felt it should not be reviewed. Dr. Moerkirk felt the flight should be classified as an inter-hospital transfer.

CASE NO. 1014:

The EMS Council staff classified this case as valid false positive due to entrapment, hypotension and alcohol level of 251. The committee concurred with the staff classification of this case of VALID FALSE POSITIVE.

CASE NO. 1021:

The EMS Council staff classified this case as a Valid flight for MedEvac. However, because there was no entrapment, BLS waited 19 minutes for ALS to arrive, 26 minutes before requesting MedEvac and MedEvac's on-scene time of 34 minutes that BLS should have called for MedEvac sooner and had the patient ready for flight when MedEvac arrived. The committee concurred with the staff comments of this case.

CASE NO. 1031:

The EMS Council staff classified Patient A as being Non-Valid Transport and Patient B as Valid False Positive because of entrapment, unconsciousness and an alcohol level of 205.

Dr. Reese asked if we knew that Patient A was absolutely entrapped for 45 minutes. Dr. Moerkirk informed him, yes Patient A was entrapped for that length of time. He also commented medical records were giving only Patient B's chart, that attributed to the fact that Patient A's sheet was without information.

Dr. Reese recommended that Patient A be classified as Valid False Positive and Patient B as Valid.

Dr. Moerkirk felt if the patient's transport was not delayed he saw no problem in transporting both patients.

The committee changed Patient A's classification to VALID FALSE POSITIVE and Patient B to VALID.

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CASE NO. 1038:

This case was classified by the EMS Council staff as Valid False Positive. Due to the BLS on-scene blood pressure of 70/40 and entrapment, the committee concurred with this classification of Valid False Positive.

CASE NO. 1043:

The EMS Council staff classified this case as Valid Trauma/Non-Valid Means of Transportation because there was no entrapment, BLS/ALS waited 13 minutes before calling MedEvac and the 14 minute MedEvac at-scene time. The staff also felt that a total of 47 minutes by using MedEvac was too long when the patient could have been transported by ground to Lehigh Valley Hospital Center in less than 20 minutes. The staff also felt that patient could have been managed at St. Luke's Hospital. Dr. Reese also felt the patient could have been transported by ground faster.

Rick Frazier stated the crew waited approximately 5 minutes for the patient to arrive by ground transport to the landing site. The committee's concurrence with classification of VALID TRAUMA/NON VALID MEANS OF TRANSPORTATION.

CASE NO. 1047:

This case was classified by the EMS Council staff as Non-Valid/Dead-At-Scene. The committee concurred with this classification.

CASE NO. 1062:

This case was classified by the EMS Council staff as Valid False Positive due to initial BP 90/60 and injuries reported. Dr. Reese classified the flight as Non-Valid. A.J. asked if the patient had been struck by a car. Rick Frazier stated there were two (2) victims found in the road. He also commented that the patient was ready for flight upon MedEvac's arrival. The committee concurred with this classification of VALID FALSE POSITIVE.

CASE NO. 1065:

This case was classified by the EMS Council staff as Valid False Positive due to long entrapment, BP of 80/palpation and suspected chest trauma. The committee concurred with this classification of VALID FALSE POSITIVE.

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CASE NO. 1067:

The EMS Council staff classified this case as a Valid Trauma/Non-Valid Means Of Transportation. The staff felt the patient could have been moved rapidly to Lehigh Valley Hospital Center by ground ambulance. The committee concurred with this classification of VALID TRAUMA/NON VALID MEANS OF TRANSPORTATION.

CASE NO. 1069:

The EMS Council staff classified this case as Valid False Positive due to the fact that the patient was entrapped 38 minutes and had been unconscious. A.J. commented it was probably poor assessment on the part of the BLS crew. Mike Emery and Dr. Reese had no problem with this flight. Mr. Emery commented he felt Lehigh Valley Hospital Center was the closest facility considering the location and ground transport time. After the review of this case, the committee reclassified this case as VALID.

CASE NO. 1072:

The EMS Council staff classified this case as Non-Valid. There was no entrapment, E.T.A. by ground to Lehigh Valley Hospital Center 10-12 minutes. There appeared to be no special circumstances, the fact that 25 minutes lapsed from the time MedEvac was requested to the time MedEvac arrived at Lehigh Valley Hospital center and minor injuries sustained by the patient. Dr. Reese and Mike Emery commented they agreed with the staff's classification, that the only justification for calling MedEvac was the unconsciousness of the patient. The committee concurred with this classification of NON-VALID.

CASE NO. 1075:

The EMS Council staff classified this case as Valid False Positive because of prolonged entrapment (56 minutes) and multiple injuries. Dr. Reese felt only patient B was justified. Mike Emery if the EMS Council staff had classified the case as valid-false positive because of the entrapment and A.J. informed him the staff had. After the review of this case, the committee concurred with this classification of VALID FALSE POSITIVE.

CASE NO. 1086:

The EMS Council staff classified this case as Valid, but felt the patient should have been taken to Coaldale Hospital then transferred via MedEvac to Lehigh Valley Hospital Center. Mike Emery commented he found the flight as being non-valid means of transportation. Dr. Moerkirk felt the flight was valid. After the review of this case, the committee concurred with this classification of VALID.

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CASE NO. 1088

The EMS Council staff classified this case as Valid. The staff commented the trauma code was witnessed and medEvac times were good. The committee concurred with this classification of VALID.

CASE NO. 1091:

The EMS Council staff classified this case as Valid False Positive. The patient was entrapped and the initial BP was 86/palpation. The staff also noted the 23 minute delay in calling for MedEvac. Rick Frazier asked if Dr. Henriques requesting the helicopter to fly would make a difference in the classification of valid false positive and valid? A.J. and Dr. Reese explained that the end result still fooled everyone. After the review of this case, the committee concurred with this classification of VALID FALSE POSITIVE.

CASE NO. 1098:

The EMS Council staff classified this case as valid, but noted the 23 minute delay in calling for MedEvac was too long. Dr. Moerkirk noted that ALS requested the helicopter upon arrival to the scene, where BLS on the scene first felt the helicopter was not needed. After the review of this case, the committee concurred with this classification of VALID.

CASE NO. 1099:

The EMS Council staff classified this case as Non-Valid due to the fact there was no entrapment and 20 minutes land travel to Lehigh Valley Hospital Center which the staff felt would have been a faster mode of transporting these patients. A.J. asked if there was entrapment. Dr. Moerkirk read the flight report to the committee. After the review of this case, the committee concurred with this classification of NON-VALID.

CASE NO. 1104:

The EMS Council staff classified this case as valid, but commented that BLS waited too long (27 minutes) to call for MedEvac. The committee concurred with the classification of VALID.

CASE NO. 1121:

The EMS Council staff classified this case as Non-Valid. The staff commented that despite a physician being at the scene, there was no real indication for the helicopter except entrapment. Mike Emery stated that just because a physician says it is okay to fly, doesn't necessarily mean it is okay to fly. The committee concurred with the classification of NON-VALID.

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CASE NO. 1123:

The EMS Council staff classified this case as Non-Valid/Dead-At-Scene. A.J. asked for some background on the case. After the review of this case, the committee concurred with the classification of NON-VALID/DEAD-AT-SCENE.

CASE NO. 1129:

The EMS Council staff classified this case as NON-VALID. Other than flail chest, the staff found no other indications for MedEvac. Dr. Moerkirk commented on the poor Pre-Hospital assessment. After the review of this case, the committee concurred with the classification of NON-VALID.

CASE NO. 1131:

The EMS Council staff classified this case Valid Trauma/Non-Valid Means Of Transportation. The staff felt it was a valid trauma but the patient could have been handled just as well by the ALS ground transport. Dr. Reese felt the case proved to be a valid false positive, because MedEvac was on-scene with the patients extrication and the helicopter was then the fastest mode of transportation. The committee re-classified this case to VALID FALSE POSITIVE.

CASE NO. 1136:

The EMS Council staff classified this case Non-Valid/Dead-At-Scene. The committee concurred with this classification.

CASE NO. 1141:

The EMS Council staff classified this case as valid, but commented that Lehigh Valley Hospital Center is not the closest hospital as noted. Mike Emery stated Quakertown Hospital is less than five minutes, but he knows Quakertown Hospital does not perform cardiac surgery. For this reason, he felt the flight was valid. The committee concurred with the classification of VALID.

CASE NO. 1156:

The EMS Council staff classified this case as Non-Valid. The staff commented the flight may have been valid for MedEvac to initially respond for the Class I patient who was entrapped. However, this patient could and was taken to Pocono Hospital by ground. MedEvac should not have transported the second patient. This patient should have been sent to Pocono Hospital. The committee concurred with this classification of NON-VALID.

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CASE NO. 1157:

The EMS Council staff classified this case as Non-Valid/Dead-At-Scene. Mike Emery asked if a patient is dead would resuscitative methods be used? Dr. Moerkirk informed him that in certain cases like witnessed codes, resuscitative methods would be used. Rick Frazier informed the committee that the first responder to the scene noted the patient as being verbal. After the review of this case, the committee re-classified the case as VALID.

CASE NO. 1161:

The EMS Council staff classified this case as Valid False Positive. The staff commented that despite a long entrapment and unconscious state, the patient's condition did not end up serious. The committee concurred with the classification of VALID FALSE POSITIVE.

CASE NO. 1163:

The EMS Council staff classified this case as Non-Valid/Dead-At-Scene. The committee concurred with this classification.

CASE NO. 1167:

The EMS Council staff classified this case as Valid False Positive. The staff felt there was entrapment, but the injuries were not significant. The committee concurred with the classification of Valid False Positive.

CASE NO. 1172:

The EMS Council staff questioned the circumstance. The committee was informed by Dr. Moerkirk that the patient was found in the canal. The classification remained as VALID.

CASE NO. 1180:

The EMS Council staff classified this case as Non-Valid/Dead-At-Scene. The committee concurred with this classification.

CASE NO. 1185:

The EMS Council staff classified this case as Valid False Positive. The staff felt the only indication was the low blood (88/palpation) and the fact the patient was trapped. The committee concurred with the classification of Valid False Positive.

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CASE NO. 1188:

The EMS Council staff classified this case as Valid False Positive. The staff commented that the patient being tapped, the low BP (70/palpation) and the fact the patient was unconscious were the reasons for this classification. The committee concurred with the classification of VALID FALSE POSITIVE.

CASE NO. 1193:

The EMS Council staff did not classify this case because of lack of information. Dr. Moerkirk informed the committee the scenario was a car accident in Hunterdon County, New Jersey. The patient was entrapped 33 minutes. The committee concurred and classified the flight as being VALID.

CASE NO. 1194:

The EMS Council staff classified this case as Valid False Positive. The staff commented that despite facial lacerations and right ear avulsion, the injuries were not serious. Dr. Reese felt the flight was non-valid. A correction was noted that there was entrapment. The committee concurred with the classification of VALID FALSE POSITIVE.

CASE NO. 1195:

The EMS Council staff classified this case as Valid, but questioned the two (2) day hospital stay. Dr. Moerkirk informed the committee the patient had been transferred to the University of Pennsylvania. The classification of this case remained VALID.

CASE NO. 1200:

The EMS Council staff classified this case as Valid False Positive. The staff felt the injuries did not end up critical. The committee concurred with the classification of VALID FALSE POSITIVE.

CASE NO. 1210:

The EMs Council staff classified this case as Non-Valid/Dead-At-Scene. The committee concurred with this classification.

CASE NO. 1217:

The EMs Council staff classified this case as Valid False Positive. The staff commented this fact the three year old patient was originally unconscious after the accident attributed to the case classification. The committee concurred with the classification of this case. VALID FALSE POSITIVE.

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CASE NO. 1230:

The EMS Council staff classified this case as Non-Valid/Dead-At-Scene. The committee concurred with this classification.

CASE NO. 1237:

The EMS Council staff classified this case as Valid False Positive. The staff felt the injuries did not end up being critical. The committee concurred with the classification of VALID FALSE POSITIVE.

CASE NO. 1240:

The EMS Council staff classified this case as Valid Trauma/Non-Valid Means Of Transportation. The staff felt the patient could have been transported by ground with BLS and ALS in the 47 minutes they waited before calling for MedEvac. The committee concurred with the classification of VALID TRAUMA/NON VALID MEANS OF TRANSPORTATION.

CASE NO. 1248:

The EMS Council staff classified this case as Non-Valid. The committee concurred with this classification.

CASE NO. 1257:

The EMS Council staff classified this case as Non-Valid/Dead-At-Scene. The committee concurred with this classification.

CASE NO. 1258:

The EMS Council staff classified this case as Non-Valid. The committee concurred with this classification.

Dr. Evan Reese requested the following cases be reviewed.

CASE NO. 1260:

Dr. Reese asked why the staff had not declared this case as a Non-Valid. He questioned why the patient was not transported by ground to Grandview.

Mike Emery commented that Grandview has a good trauma team. If the BLS requests a team they will be awaiting the patients arrival. Since the doctor is involved in the MedEvac request process Mike felt it must have been an approved flight. After the review of this case, the classification remained as VALID.

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CASE NO. 1111:

Dr. Reese questioned the land travel time to St. Luke's. A.J. informed Dr. Reese that St Luke's is a medical command facility. The classification remained VALID.

CASE NO. 1093:

Dr. Reese felt that ground transport by land was quicker then by air. Land travel: 8 minutes. Air travel: 11 minutes. Dr. Reese felt the case should have been classified VALID FALSE POSITIVE. However, after reviewing the circumstances the committee concurred with the initial classification of VALID.

CASE NO. 1261:

Dr. Reese questioned why this patient was taken by air transport. After reviewing the circumstances: Class 5 patient, 2 Class 1 patients, initial BP 50/palpation, possible abdominal injuries and flail chest. The committee concurred with the initial classification of VALID.

CASE NO. 1178:

Dr. Reese the means of transportation for this patient. After reviewing the circumstances, the committee felt someone must have been at-scene to request MedEvac and concurred with the initial classification of VALID.

Mike Emery requested the following case be reviewed.

CASE NO. 1052:

Mike questioned whether the patient was truly in need of a trauma center. After reviewing the circumstances, the committee concurred with the initial classification of VALID.

This concluded the committee's review of cases for the period referenced. Mr. Heightman then provided a summary of the case categories which had been reviewed and described upon the committee.

These included the following:

Valid False Positive	17 Of 120 Cases 14%
Valid Trauma/Non-Valid Means of Transportation	3 Of 120 Cases 25%
Non-Valid	8 Of 120 Cases 6.6%
Non-Valid/Dead-At-Scene	8 Of 120 Cases 6.6%
Valid Without Questions	84 Of 120 Cases 83%

Dr. Reese commented that the recommendations of the Pre-Hospital Care and Transportation Committee should prove to be helpful in preparing the patient for flight and making sure the necessary pre-hospital care is being carried out.

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Dr. Reese also pointed out the importance of the flight crew receiving the initial patient information.

Trauma scores were discussed, the fact that the material is sizable, the committee may have to look at statistics.

The committee discussed their next meeting date for some time in October and agreed that they would try to complete case reviews from the months of April through August, 1985.

There being no further business, the meeting was adjourned at 3:00 P.M.

Respectfully submitted,

Annamarie T. Robertone
EMS Representative

ATR/dmn

TRAUMA

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EASTERN PENNSYLVANIA
EMERGENCY MEDICAL SERVICES COUNCIL
TRAUMA REVIEW COMMITTEE

Lehigh Valley Hospital Center
Friday, October 5, 1984
1:00 P.M.

MINUTES

PRESENT

Lois Altemose, R.N.
Mr. Leon Bergstresser
Edward Dench, M.D.
David A. Eaton, M.D.
Donald H. Gaylor, M.D.
Mr. Oscar Heinbach
George Kershner, M.D.
Ms. Mary Kinneman
Ronald Lutz, M.D.
George E. Moerkirk, M.D.
John Patterson, M.D.
Eileen Pozzi, R.N.
Evan C. Reese, M.D.
Michael Rhodes, M.D.
Ms. Donna Roth
Joseph Stella, D.O.
Mr. Harvey Yorke

STAFF

A.J. Heightman, Executive Director
Annamarie T. Robertone, EMS Representative

Dr. Evan Reese, Committee Chairman, began the meeting by having all in attendance introduce themselves. Dr. Reese advised the committee that this meeting would cover the review of pre-hospital MedEvac cases handled between September 1, 1983 and December 30, 1983. He noted there were seventy (70) cases during this time period. However, the committee members were asked to be prepared to discuss cases for which they had questions or which would be categorized as anything other than valid.

Dr. Reese handed out a packet prepared by the EMS Council staff which provided definitions of the case categories and staff comments on selected cases (see attached copy in Appendix I).

Dr. Reese began the case review by discussing Case No. 558 which involved a pedestrian accident on Rt. 378 near the Upper Saucon/Lower Saucon line. Dr. Patterson noted that this case was within close transport time to St. Luke's Hospital. Following review, it was felt this was a valid trauma case, but invalid means of transportation (see Appendix I).

Case No. 565

Following review, the committee classified this case as Valid Trauma but Non-Valid Means of Transportation. It was felt that due to their location, the ALS ambulance could have transported this patient by ground ambulance as expeditiously as the helicopter to Lehigh Valley Hospital Center.

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Case No. 576

Classified by the committee as a non-valid flight. Dr. Rhodes had noted to the committee that this case did not meet the criteria for helicopter transport to the trauma center.

Several committee members pointed out that Pocono Hospital does not always have a neurosurgeon available and there was no way to know this status for this case. It was suggested that future reviews take this into account.

Dr. Rhodes told the committee members that the American College of Surgeons recently approved new transport guidelines relative to trauma centers. He pointed out that they include categories such as:

--- A fall of greater than 20 feet.

--- A greater than 30 mph auto accident.

--- Penetrating injuries to the trunk.

He noted that they rely on use of the Trauma Score and stressed that he does not feel use of the Trauma Score in the pre-hospital setting is appropriate. He suggested that the committee look at these new criteria at the next meeting. Dr. Reese asked Dr. Rhodes to send EMS a copy for inclusion on the next meeting agenda.

Dr. Rhodes also advised the committee that he was in the process of conducting a prospective study using two (2) mechanisms of injury and four (4) vital sign parameters, to determine their effectiveness in predicting serious trauma cases. He promised to share his results with the committee.

Case No. 577

Classified as a Valid-False Positive case. (See Appendix I and II). Patient found by MedEvac crew not to be as serious as originally described by pre-hospital basic life support personnel. Patient ended up having minor injuries.

Case No. 582

The committee felt this was a Valid trauma case but an Invalid Means of Transportation. It was felt this patient could have rapidly been transported to North Penn Hospital and then transferred by MedEvac to Lehigh Valley Hospital Center.

Dr. Moerkirk and Eileen Pozzi noted that a time delay was caused by a Montgomery County paramedic at the scene who would not allow the flight crew to intubate the patient. It was noted that this Montgomery

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Dr. Rhodes told the committee that pre-hospital personnel must be conditioned to "load and go" as rapidly as possible because studies have shown this to be critical to patient outcome. Dr. Rhodes asked EMS to emphasize this point to all pre-hospital personnel.

Case No. 626 A & B

The committee questioned this case due to the length of time spent at the scene by all personnel. It was noted that the patient had an unstable airway and had to be re-intubated by the flight crew. It was pointed out that the Bucks County crew had used an esophageal airway (E.O.A.) initially but still could not secure a good airway. Dr. Rhodes noted that Bucks County is moving toward endotracheal intubation as a frontline procedure. Dr. Reese stated the minutes of this meeting would be referred to Bucks County EMS for their review. The case was left as a Valid Flight due to the airway problems.

Case No. 631

Dr. John Patterson questioned the long delay in request for MedEvac on this case. Mr. Bergstresser stated he was aware of this case and that MedEvac had been requested, canceled, then re-requested. This case, after discussion was classified as Valid.

Case No. 644

This case was termed a Valid False Positive. It appeared serious to at-scene personnel, but ended up as minor trauma.

Case No. 646

This case was called a valid trauma, but non-valid means of transportation by EMS staff. However, Dr. Moerkirk told the committee that there was an inaccurate assessment by crews at the scene. He stated the reported that the patient's "foot was blown off". This was not the case. Dr. Moerkirk stated the patient would have done as well with ambulance transport with the paramedic who was at the scene accompanying the patient. Therefore, the committee changed this case to a Non-Valid.

Case No. 649

Dr. Reese noted that there was a sixteen minute delay from the time ALS arrived on scene until MedEvac arrived and the patient was only 5 to 10 minutes from Easton Hospital. He was told the crews had difficulty intubating this patient due to severe head injury. He stated that he felt the crews should have transported the patient to Easton Hospital for airway control. The committee agreed and classified the case as a Valid Trauma but Non-Valid Means of Transportation.

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Case No. 656

EMS staff and MedEvac had labeled this case as Valid False Positive due to the report of partial amputation of the hand. However, Dr. Rhodes told the committee that the cases did not fit MedEvac's criteria and should be called non-valid. Therefore, the committee changed this to a Non-Valid case.

The committee conducted a lengthy discussion about Case No. 658. There were four patients involved and the crew didn't have enough ambulance vehicles. A 41 minute time period was noted until MedEvac reached the scene. However, MedEvac was called as a resource to transport a patient with multiple injuries when another ambulance was not available. Therefore, committee members felt it was appropriate to use MedEvac but were not sure what to classify the case.

A.J. Heightman stated that since it was a valid use of MedEvac it should be called valid. Therefore, the committee agreed and classified the case as Valid.

Case No. 663

The committee discussed this case at length and felt that, although it was a Valid Trauma, it was a Non-Valid Means of Transportation to wait for MedEvac when no entrappment existed. The committee felt that this was a valid trauma case but improper basic life support management. The patient should have gone by ground with ALS/BLS unit.

Case No. 667

This case was termed a Valid False Positive. MedEvac was called to the scene of an ambulance accident. However, another ambulance was available to transport the patient and the patient's condition was not critical.

Case No. 675

MedEvac and the EMS staff labeled this case as Non-Valid. The committee concurred.

A.J. Heightman advised the committee that, of the 70 cases reviewed by the committee, 5 (7%) were termed non-valid, 5 (7%) valid-false positive, and 5 (7%) valid trauma-non-valid means of transportation. (See Attached Summary Sheet.)

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The committee members stressed the need to let BLS and/or ALS crews know when their assessment and/or treatment was either inappropriate or could be improved on. Mr. Heightman noted that the MedEvac crew was in the best position to know this and asked whether they could jot down "helpful hints" to that crew regarding their particular case and have those comments sent to the crew along with the standard format letter sent by Dr. Moerkirk after each flight. The committee felt this would be helpful. Dr. Moerkirk said he would consider this.

The meeting concluded with a discussion of the new MedEvac Dispatch Approval Procedures. Dr. Moerkirk stated that a mechanism was needed to obtain the necessary form when a command physician denies a field request for MedEvac. A.J. Heightman asked that the MedEvac office inform EMS whenever a physician denies MedEvac dispatch to a scene and EMS will contact the command facility involved to obtain the completed cancellation form for review by the committee.

There being no further business to come before the committee, the meeting was adjourned.

Respectfully submitted,

A.J. Heightman
Executive Director

AJH/dmn

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MEDEVAC CASE REVIEW SUMMARY
SEPTEMBER 1, 1983 - DECEMBER 30, 1983

FLIGHT NUMBER	VALID-FALSE POSITIVE	VALID TRAUMA/NON-VALID MEANS OF TRANSPORTATION	NON-VALID
538		X	
565		X	
574			X
577	X		
582		X	
606	X		
609	X		
616			X
644	X		
646			X
649		X	
656			X
663		X	
667	X		
675			X
15 (21%)	5 (7%)	5 (7%)	5 (7%)

TOTAL CASES REVIEWED = 70

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